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OF

MEDICINE AND THE COLLATERAL SCIENCES.

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SATURDAY, OCTOBER 6, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

Lecture I.—Part II.

I have spoken, gentlemen, of those diseases which may affect various parts of the body—inflammation and different structural diseases—and termed them *general* diseases. I have spoken, likewise, of certain diseases which appear to pervade nearly or entirely the whole of the body, and may be called *universal* diseases. I now come to the affections of particular parts; and I said that I should proceed from the head to the foot, *a capite ad calcem*, that being as good an arrangement as any, and much more serviceable than at least an alphabetical arrangement, as diseases are thus considered together which are situated in contiguous parts and thus must have many symptoms in common. Before we begin with the head, it will be better to consider those which affect the surface; and after we have gone over the surface, we can proceed into the interior.

Superiority of Rayer's Work to Willan's and Bateman's.—Now the diseases of the surface of the body are commonly called cutaneous diseases; but they are far more numerous than you would imagine them to be from the works of Dr. Willan and his pupil Dr. Bateman, which may be considered as the same: for the labour and honour was Willan's, and Dr. Bateman added little to what he learnt from his master, who was profoundly read in cutaneous diseases, and had laboriously observed them, though, with vulgar readers, Dr. Bateman's reputation is as great as Willan's; just as smatterers in phrenology speak of Gall and Spurzheim as equal, though the originality and glory is all Gall's, and his pupil, Dr. Spurzheim, learnt the science from him, worked under Gall, as his assistant, and has merely added to and improved upon Gall—if he has added and improved, which I will not deny—and stands at a humble distance from Gall. The best work on cutaneous diseases I conceive to be that of a French writer, Rayer. He treats of all the diseases of the skin and its appendages, thus taking a more enlarged view than Willan; and he treats of a much more considerable number of affections of the skin itself. When I say that Rayer's is altogether a much better book than Willan's, I do not at all wish to depreciate the latter, for a great part of the merit of Rayer's is ascribable to Willan: as far as Willan went, Rayer is under great obligations to him. Willan preceded Rayer, and the arrangements of the latter in reference to the subjects treated of by the former, are grounded altogether on his publication. Rayer's is the best book, on account of its arrangement, the greater number of diseases of which it speaks, and the fuller and more scientific account of the nature, causes, and treatment of the diseases. Whoever would translate Rayer, omitting his cases, so as to lessen the unnecessary size of the work, would find he had entered upon a speculation so successful, that Bateman's superficial work, synopsis only as it is, would be superseded.

General Division of Rayer.—Rayer divides the diseases of the surface of the body, first, into diseases of the skin itself; secondly, into diseases of the appendages of the skin—such as the nails, and the cutis which furnishes the nails—and in which latter diseases are to be found whitlow, and morbid conformations and structure of the nails; and the hair and sebaceous follicles, under the diseases of which he treats of plica polonica, baldness, greyness, &c. Then, thirdly, he

speaks of foreign bodies which sometimes beset the skin, as others do the intestines, and these are divided into inanimate and animate—*inanimate*, such as the stuff on the scalp of new-born infants—*animate*, which I need not say include fleas, bugs, and lice of all kinds, together with certain other animals of which we shall speak; and fourthly, those affections which commence in other parts of the body, and afterwards implicate and disfigure the skin—such as the disease called elephantiasis, in which the skin really becomes implicated only secondarily. You will observe that this is a fine comprehensive view of the diseases of the surface of the body.

Rayer's Division of Diseases of the Skin itself.—Then, when we consider diseases of the skin itself, truly cutaneous diseases, they are arranged by Rayer into six, and this is also a most excellent division. First, all those diseases of the skin which are inflammatory; secondly, those which are mere congestions, and cutaneous and subcutaneous hæmorrhages; thirdly, those which are nervous affections of the skin, such as morbid or deficient sensibility of it; fourthly, changes of colour in the skin, which are not at all dependent upon congestion; fifthly, morbid secretions of the skin; sixthly, diseases of the structure of the skin. This is a very useful view of diseases of the skin itself. They are arranged by Willan without any reference to their real nature. Willan's work (and Bateman's) is rather one of natural history than pathology. His delight and excellence was in the description of appearances. Rayer's work is excellent for deeper matters. This is the natural progress of knowledge. First, perfection is attained in distinguishing the outward appearances of objects and phenomena; and this accomplished, their nature and causes come next to be investigated. Willan accomplished much, though greatly indebted to foreign predecessors; but his labours were only a stepping-stone to what then became important. Again, I entreat you not to think I wish to depreciate his work; but we must not rest contented with progress no greater than he was able to make in the science and treatment of cutaneous diseases.

It is of the greatest importance always to consider whether cutaneous, like other diseases, are inflammatory or not, and we therefore group all those that are inflammatory together; then all those are naturally grouped that depend upon congestion, such as ecchymoses, cutaneous tumors and subcutaneous bloody tumors, sometimes called nævi materni; thirdly, those which are seated in the nerves of the part; fourthly, changes of mere colour; fifthly, morbid secretions; and sixthly, malformations, and structural changes of the skin. In this way we shall bring before us all the diseases of the skin itself.

Cutaneous Disease frequently conjoined with internal affection.—Now it is very important that we should recollect that, although these are all called diseases of the surface of the body, many of them are affections of a much deeper nature—that the affection is frequently connected with, or dependent upon, a general diseased state of the system. Frequently the mucous membranes are affected as much as the skin; for example, the conjunctiva of the eye, the Schneiderian membrane of the nose, and the mucous membranes of the mouth, throat, and of the whole of the air and alimentary passages. All these parts are liable to be affected in some diseases of the skin. I need not tell you that in measles, which is called a disease of the skin, we have frequently inflammation of the various mucous membranes which I have just named. So in the disease which is called purpura, and which is considered a disease of the skin, because there are purple spots on that organ, (I formerly mentioned that this was as much an inflammatory disease as one of congestion, and it may be entirely inflammatory) we have often the same appearances within as upon the surface. You will see the intestines, the lungs, and the liver, beset with black patches, and even parts within the head; so that in this disease blood has been effused in such a quantity that apoplexy has occurred. Although these diseases should particularly affect the skin, yet in many of them, before the affection of the skin appears, there is some internal derangement, which occasionally ceases when the external affection appears, but which sometimes continues throughout. In many there is an internal derangement at a certain time during an affection of the skin. In many of these cutaneous affections, the whole system appears more or less in an inflammatory state; and in others the whole system is in a state of extreme debility—complete exhaustion. Although, therefore, these are called diseases of the skin, from their being particularly prominent in the skin, producing very prominent symptoms there, yet it is to be remembered that many of them are of a more deep and extensive nature. Many, of course, are really local, such as changes of the colour of the skin, called *pityriasis versicolor*, where a person has a yellow appearance of the skin, a thing very common on the necks of young women; and diseases of the appendages of the skin, such as diseases of the nails, various affections of the hair and sebaceous glands. These are pure diseases of the integuments of the body, but many affections, called cutaneous diseases, are only so in one point of view.

Rayer's Arrangement of Inflammatory Affections of the Skin.—Now the inflammatory diseases of the skin are spoken of by Rayer under various classes, accordingly as there is minute or extensive inflammation—according as the inflammation produces a secretion of water or of pus—according as the inflammation is attended by scales, or produces a tubercular appearance. The inflammatory diseases of Rayer are arranged much in the same way that Willan arranges all his diseases of the skin.

Willan's general arrangement.—Willan arranges cutaneous diseases accordingly as there are mere pimples without any contents—*papulæ*. Secondly, accordingly as they are scaly—*squamæ*. Thirdly, accordingly as there are diffused patches of redness—*exanthemata*. Fourthly, as there are collections of water—*bullæ*. Fifthly, as there is a secretion of pus—*pustulæ*. Sixthly, as there are little vesicles—*vesiculæ*. Seventhly, those in which there are tubercular appearances on the skin—*tubercula*. And, eighthly, those in which there are stains—*maculæ*. Now several sets of diseases thus arranged by Willan, come, in the arrangement of Rayer, together, under the one head of inflammatory diseases.

You therefore see, in the first instance, that the diseases of the integuments of the body may be considered accordingly as they are diseases of the skin itself, or of the appendages of the skin—as there are foreign bodies upon the skin, which cases are still allowed to be called diseases of the skin—as the disease begins in other parts, and implicates the skin. And then the diseases of the skin itself may be subdivided in the way I have already stated, as they are inflammatory, congestive, nervous, changes of colour, morbid secretion, and structural change.

The inflammatory diseases of the skin are arranged by Rayer, first, as they occur in patches of inflammation—*exanthemata*; then, as they produce collections of water—*bullæ*; then, as there are minute collections of water—*vesiculæ*; then, as there is suppuration—*pustulæ*; or still larger suppuration—*furunculi*; then, as there are mere specks of inflammation—*papulæ*; then, as there are tubercular appearances,—*tubercula*; then, as there are scales produced—*squamæ*; and then, as there is inflammation in lines—*linear inflammation*; then, as there exists a disposition to gangrene—*gangrænosi*; as plague, malignant pustule, glanders; and then he makes a class called multiform, in which diseases have no fixed appearance, such as syphilis.

It appears to me that the most simple way of considering these *inflammatory* diseases is to consider them first when the inflammation is in the most minute extent—simple inflammation not larger than the point of a pin, papulæ; then we shall come to a more extensive inflammation, exanthemata; then to one which produces a little collection of water, vesiculæ; then to a large collection of water, bullæ; then, where pus is secreted, pustulæ; then, where pus is secreted in larger quantity, furuneuli, or boils; then to where the inflammation proceeds to gangrene; then where there is organic disease, first of the slightest kind—only of the cutis, as in the scaly diseases—then of a more deep kind, as in the tubercula: and so we shall go on in a more natural way than Rayer has adopted.

PAPULÆ.

We will now enter upon the consideration of inflammatory diseases of the skin itself, and, in the first place, speak of those inflammatory affections of the skin which produce no secretion whatever—no pus, no water—but consist simply in inflammation, and that of the most limited extent, producing a little speck of inflammation;—of course there may be a number of these little spots. When inflammation of the skin appears in minute spots, these are called *papulæ*; the English of which is, strictly speaking, *pimples*. The word pimple is commonly used to signify any little elevation or inflammation of the skin, whether there are no contents or whether there is water or pus; but in proper language, and to be very correct, by a *pimple* is meant a minute inflammation of the skin, causing a very small accuminated elevation of the cuticle, without any contents whatever. Dr. Willan's definition of a papula, or a true pimple, is, "a very small accuminated elevation of the cuticle," (I should suppose of the cutis and the cuticle together,) "with an inflamed base; not containing fluid nor tending to suppuration, but for the most part terminating in scurf." The duration is uncertain, but it has a tendency in general to terminate in scurf. If such a slight inflammation be attended by watery contents, it is called a *vesicle*; but if the contents be pus, we call it a *pustule*; so that with respect to the most minute inflammation of the skin, we may have a papula, a vesicle, or a pustule—mere inflammation; inflammation with water; inflammation with pus.

When this minute inflammation (papula) has no contents, it is then that it usually terminates in scurf; scurf being a very minute exfoliation of the cuticle, which will take place not only with evident inflammation, but sometimes with so exceedingly slight a degree of inflammation that we can hardly call it more than a little irritation. A new cuticle is found underneath the exfoliation; there is no rawness produced, but under the minute portion of cuticle which comes off we see a fresh cuticle; no moisture at all—the parts still perfectly dry.

These papulæ are considered, by Dr. Willan, as inflammations of the papillæ of the skin, which he considers to be enlarged, elevated, and indurated, and more or less of a red colour; but I should think, if it be the papillæ which are inflamed, we should be justified in saying, as I have said, that there is something more than elevation of the cuticle. If the papillæ be inflamed, of course we must consider the disease as situated in the cutis, the cuticle being elevated above the skin itself. The inflamed base cannot be in the cuticle; that is out of the question, and therefore it must be situated in the cutis.

Where these papulæ occur there is an uneasiness experienced, which may be called pain; but it is pain of an itching character—a painful itching, we might say.

Inflammation of this description may end in resolution, without any formation of scurf; or it may terminate in a more extensive separation of the cuticle, which is called *desquamation*—a separation of the skin in scales; for the most part, however, the cuticle is separated in such minute portions that it is only a fine dust—a *scurf* which comes off. If this inflammation be increased by the person rubbing or scratching, or by heat improperly applied, you may carry on the inflammation to the formation of water, so that you convert the papula into a vesicle. Again, if you add still more irritation, you may cause it to produce pus; you may easily convert it to a pustule. If the individual scratch himself still more, and great irritation be excited, instead of mere pustules you may have boils—pretty large collections of pus—but all this is not the tendency of the disease itself. These papulæ, which consist of mere spots of inflammation, are not contagious.

Dr. Willan makes three kinds of papulæ, but I think it would be as well to say that there are but two. These are the strophulus, or red gum, of children, the lichen of adults, and the disease called prurigo. I cannot but believe that strophulus and lichen are purely the same disease; and I think it would be a lucky thing if the name of lichen were given to both, or both names were dropped and one term substituted for them. The disease called prurigo is characterized by great itching, and is often mistaken for itch. Neither lichen nor prurigo have any particular name in English. None of these are contagious.

Strophulus.—I shall first speak of the disease called "strophulus." This is peculiar to infants, and is called by the common people *red gum* or *red gown*; it is supposed that gum is a corruption of gown; and in some old Dictionaries it is still written *redde gowne*. It is also occasionally called, by the common people, the *tooth eruption*. It is a very unimportant disease; the least irritation will cause it, whether in the gums, abdomen, &c., and with a very little attention it goes away; in fact, it need never create any alarm. It is divided by the common people into red and white; several parts of the body are affected in succession; it does not come out at once. It chiefly affects the face and extremities, and is sometimes intermittent, not periodical, but it comes and goes.

Species.—Now you will find it divided by authors into a number of tiresome varieties, which only serve to burden the memory, and are soon forgotten when you come to practise. The great point which I would urge upon you at present is, to recollect the characters of diseases in general; and as to the particular varieties, learn them afterwards, as different cases present themselves to your notice, and then do not trouble yourself so much about the names of these varieties, as about remembering the fact that there are some varieties in the appearances of the affections; and still more, what is not enough dwelt upon by subdividers, some varieties in the condition of the system and of the part affected in these diseases. It is impossible to recollect all the minute divisions of these different diseases without seeing patients, and then it is impossible to learn them all at once. It is a work of time, and there can be no doubt but that it would be quite as well if many of them were not so subdivided by authors. You will find this particular affection divided into S. intertinctus, S. albidus, S. confertus, S. volaticus, S. candidus, some of which names I shall forget as soon as I have given the lecture.

It is right, however, that you should know, that the disease which you see in babes, and which is called by old women *red gum*, is called by Dr. Willan *strophulus*.

If you give the child a dose or two of gentle physic, for the most part the affection goes away; there is no difficulty whatever in treating it. If you be aware that it appears under different varieties, you will not be surprised when you see two or three cases with a little variety; but as to its making any essential difference in the disease, or in the treatment, that is out of the question.

You will find most of these cutaneous affections represented extremely well by Drs. Willan and Bateman. Those of which I have just spoken will be found in plates 1, 2, and 3*.

If the papulæ be of a vivid red colour, but are intermixed with red dots or specks called *stigmeta*, it is then called *S. intertinctus*; Willan defines a *stigma* to be a minute, bright red speck, *without* elevation; if the

* The learned professor having principally employed the 4to. plates of these authors for the purpose of illustrating the appearance of cutaneous diseases, we shall in the subsequent lectures merely refer to their numbers, in order to avoid the repetition of their names.

papulæ consist of whitish specks, it is called *S. albidus*—that is to say, white gum, and this is often intermixed with the other; if the papulæ be all united together in the way you observe in plate 3, fig. 1, it is called *S. confertus*, and by the common people *rank* red gum, or tooth rash; it is hardly worth while to give particular names to these little variations of the disease; you will see different varieties in different parts of the same child. If the papulæ of strophulus have no inflammation at their base, (which you see is a contradiction, because a papula, according to Dr. Willan's definition, is an acuminated elevation of the cuticle, *with an inflamed base*)—if there be no inflammation at their base, and if they be of large size, they are called absolutely white, *S. candidus*. This variety usually succeeds acute diseases of children a year old. If they come, and after continuing produce a scurf and then disappear, another crop coming on, it is then called *S. volaticus*, coming and going, continuing but for a short time; the patches are circular, turn brown in a few days, and the whole series ends in a few weeks. The important point, however, will be not to recollect the names of these little particulars, (as I am sure it must be difficult to remember the differences which occasion the diseases now to be called *candidus*, and now *albidus*,) but to remember what I am about to say with regard to the general character of the disease.

This disease is sometimes pretty severe—and a great many papulæ are crowded together, and then the variety is called *S. confertus*; the papulæ are extensive, crowded, smaller, and less vivid. This form will occur in children from seven to eight months old; the patches may be hard, and they usually exfoliate in a fortnight. In this severe form it sometimes begins in the legs, and spreads upwards to the loins and navel with a general redness, the cuticle cracking into large pieces; and this will occur every now and then for two or three months. Some children will labour under it till they have cut all their first teeth.

Causes.—In regard to the causes of it, I believe that any little irritation of the alimentary canal will produce it. The irritation of teething, and very frequently exposure to cold, especially if aided by wet, will induce this and various inflammatory diseases of the skin.

Treatment.—In regard, however, to the treatment, whether the disease appear in this aggravated form or not, one of the best things is to give mild purgatives with some alkaline matter, as, for example, a little liq. potassæ, or carbonate of soda, or magnesia, two or three times a day. There is generally speaking an acidity, which may be corrected by something of this description. Moderate aperients can be given at the same time; and the warm bath is found particularly useful. If the disease should prove obstinate, I would certainly give hydr. c. creta.—mercury in a very innocent form; but for the most part it is not required. Great attention should be paid to the diet, for very frequently the disease arises from some little error in that respect, something having been given accidentally, or regularly, which is improper. If the disease suddenly disappear, you may evidently find the child in want of stimuli; and when that is the case, a few drops of liq. ammoniæ, two or three times a day, will be of use, particularly if it be conjoined with the warm bath, and good nutritious food. The warm bath is one of the most important things that can be had recourse to in diseases of the skin, when you want to bring out an erruption or encourage it. I am told that the warm air bath does as well, but I have no experience of it. To avoid cutaneous irritations, nurses should always wash, and not merely dry, infants' napkins.

In this disease, if you should find a pretty active inflammation of the skin, you would, of course, give stronger purgatives, and there might be no harm in applying leeches. If, on the other hand, you found debility, it would be well to give tonics, iron or quinine, and order nutritious diet. You will find that all cutaneous diseases occur in all states of the body; sometimes there is such debility that you will not be able to cure the affection without meat, wine, and porter, and iron, &c. for a time; and in other cases there is an inflammatory state of the body, making it evident that bleeding must be had recourse to and low diet. So in this disease of children, sometimes there is debility of the whole body, the disease continuing because the whole system is out of order; and then better nourishment and tonics will be required. In other cases local bleeding and stronger purgatives will be necessary; but, in general, all that is wanted is a warm bath and alkaline and aperient substances.

In this disease you should be particularly careful that the child is not exposed to cold; it is dangerous to put a sudden stop to the eruption, by allowing the child to catch cold. It is possible that the eruption may cease, and that the child may fall into a state of depression, in which case the warm bath will be required; but it may fall into an internal inflammatory state, and in that case also the warm bath may be useful, but antiphlogistic measures may be required in addition; for when eruptions suddenly cease, there is often an internal inflammation suddenly set up. It is right you should know that these accidents may happen, but for the most part the disease is a mild insignificant affection, more a matter of curiosity, indeed, than any thing else. Here is a representation of the same affections in Rayer's work. It is copied

from Willan, but the diseases are put in a smaller compass.

LICHEN.

The affection which occurs in adults, and is similar to this, is called *lichen*. There is really scarcely any difference in the appearance of these diseases, and I have always been accustomed to consider them as the same, affecting children, and called strophulis; affecting adults and called lichen; and last year, when I read Rayer for the first time, I was glad to find that he entertained the same opinion as myself. I always spoke of them as the same, but I thought I might be wrong; for I do not pretend to be so skilled in these matters as those who have devoted themselves entirely to them; but Rayer says he should unite them were it not for the fear of introducing a new division in the history of papular diseases, which Dr. Willan has described with minute accuracy. It is only from the fear of introducing more confusion, by altering matters as they stand, that he does not treat them as the same disease. I think it had better be done, and we shall simplify the matter at once, and burthen the memory with one disease and set of names the less.

This disease in adults usually occurs in the extremities, and particularly on the outside and posterior parts of the extremities. The papulæ are of the size of the head of a very small pin, and they generally terminate in scurf. The disease is sometimes acute, sometimes recurrent, sometimes chronic, sometimes general, sometimes pretty partial, and sometimes it is connected with internal disease.

Species.—It is divided by authors into simple lichen—*L. simplex*; that which occurs particularly about the roots of hairs—*L. pilaris*; a form in which the papulæ are clustered together—*L. circumscriptus*; and one form very severe indeed, called *L. agrius*. In the simple form you must expect the papulæ to be larger than when they occur in children. If they be very severe, they cluster together; the skin becomes inflamed, and they form deeply red patches. These affections are represented by Rayer: plate 6, first division.

It is said that the simple form of this complaint generally lasts from ten to twenty days. Sometimes there is a smart degree of feverishness, with headache and nausea before it comes out. It is sometimes rather a sharp disease; there is nothing dangerous in it, only that the general excitement is great. It is said that when it occurs about the hairs—*L. pilaris*, it is often chronic. When it occurs in the severe form, called *L. agrius*, there is a great degree of itching, a great degree of heat, and the inflammation is sometimes so violent that you have vesicles and excoriations. This severer form of the disease is sometimes preceded and accompanied by nausea, pain at the stomach, and pain of the head, and may last several weeks, and is much more frequent in women. It corresponds with *Strophulus confertus*. This variety is sometimes connected with a pustular disease, called *impetigo*, but only locally and temporarily; with another, in which serum is secreted—*eczema*; and another in which scales are formed, called *psoriasis*, and sometimes it will degenerate into them.

Sometimes, though rarely, the papulæ are livid, and the variety is called *lichen lividus*; more frequently it is united with petechiæ, or dark spots of congestion. There is one kind of this affection, called *L. tropicus*, which is attended by a great degree of tingling. You will find this mentioned by all writers on the diseases of hot climates, and it is described by them as a most distressing affection. When a person is subject to this variety of the affection, the moment he goes to bed or takes exercise he has a most violent pricking of the skin, called *prickly heat*; and it is called L. tropicus, from the disease occurring in tropical climates. It is not easily repelled, and its sudden cessation is generally the effect, not the cause, of an internal affection. The prickly heat is thought to be a sign of good health. Sometimes the papulæ in this disease are attended with little bumps, like gnat or bug bites; and then it is called *L. urticatus*, affecting the neck and face, particularly in spring and summer, and attended by stinging pain. But though there are bumps or wheals, still there are papulæ. It chiefly affects the neck, face, and hands. It corresponds with *Strophulus candidus*.

Lichen will sometimes be preceded by nausea, vomiting, and pain of the head, and sometimes these will disappear as soon as it comes, and at other times they will continue with it. It sometimes takes place at the end of certain cutaneous diseases; it particularly occurs after fever and catarrh, and it is said even after peritoneal inflammation. Some persons regularly have it annually; some have it at the beginning of the summer, some in autumn, and some are so unfortunate as to have it in both. I know a young lady who has it every spring and every autumn. It was observed by the Romans, and they called it *Sudamina*; and the Greeks noticed it, and called it Ἰδρῶα. In this country, in hot weather, we often have a great tingling of the skin.

Treatment.—Now in all these forms of the disease, the treatment is to be the same as in the strophulus of children. If there be great excitement of the system and headache, one would bleed. If a patient have a strong pulse, even without excitement, you will find that by far the shortest

way is to take a little blood from him, put him on low diet, purge him well, and order him the warm bath. You must not allow the hot bath; for, if you apply much heat to the skin, you will in a great number of cases make matters worse. Just as in the case of children, purgatives, and especially with alkaline matters, given two or three times a day, and low diet, will usually remove the disease. But if the disease be severe, certainly the shortest way is to bleed in the arm in addition; or, if the severity of the disease do not *indicate* this measure, but the constitution of the patient and his pulse, *justify* it, I should still have recourse to it.

For the relief of the parts themselves, which are tingling and itching, you will, I think, find the chlorides of lime and soda answer better than any thing else. Many persons use vinegar for this purpose, which answers pretty well; but I think that in all cases where there is itching of the skin, if that organ be sound, and the chlorides be properly diluted, they are by far the most serviceable. I have known some persons relieved by the application of prussic acid, of the strength of a drachm to eight ounces of water; sometimes more. I had an old man at St. Thomas's hospital lately with great inflammation of the legs, connected with varicose veins, which is certainly not exactly this disease, but nothing relieved him except prussic acid, one ounce to a pint of water. Sometimes, however, this will produce heat and tingling, and it is best not to use at first more than a drachm or two drachms to a pint; but, if this produce no effect, you may increase it; but now and then there is great heat and dryness induced by applying it in a larger quantity. You will find that bleeding at the arm, low diet, and purging, are the best general means, and, as local remedies, either vinegar, prussic acid, or the chlorides, or plain water, warm or cold.

The next disease belonging to this order is Prurigo, and it may easily be mistaken for the itch, but it is not contagious: its consideration, however, I must defer till the next lecture.

CASES TREATED AT THE HOTEL DIEU, PARIS:

WITH CLINICAL OBSERVATIONS,

By M. DUPUYTREN.

Polypi at the back part of the Nostrils—Ligature applied by a new method.

A. Foubert, aged 17, admitted at the Hotel Dieu, July 4, 1832. Ten years previously, he perceived that the right nostril was less pervious to the air than natural, and the left became similarly affected soon after; finally, about a year ago, the passages of both nostrils became completely obliterated, the mouth being constantly kept open in the performance of respiration. Three months before his admission, two ineffectual attempts had been made at another hospital to apply a ligature, and so much irritation had been produced as to have caused constant headache. On examining him, nothing was perceived at the anterior opening of the nostrils. On the right side, neither inspiration nor expiration could be effected in any degree. On the left side he could draw the breath in imperfectly, but could not force it out again at all. The finger, introduced by the mouth, detected, at the back part of the nasal fossa, a polypus about the size of a nut, rather dense and hard: it could be followed to a considerable distance upwards, but without perceiving the pedicle, the situation of which thus remained uncertain.

The patient was taken to the operating-room July 7th, and the following contrivance adopted:—A sound of gum-elastic was introduced into the right nostril, the finger passed into the mouth, into which cavity the point of the instrument was guided. The two ends of a noose of thread were fixed, by means of a knot, to the eye of the sound; the noose was kept open by a spiral spring of brass, like those which are used for braces, and about six lines in length. To this spring, which moved freely on the loop, was attached a coloured thread, the other end of which was also attached to the eye of the sound; so that, in drawing this outwards by the nostril, the loop and the spring were both carried to the back of the throat, where they were easily directed by the finger already there. Lastly, another thread, attached to the loop, and passing out by the mouth, was ready to reconduct it into this cavity, if the attempt at enclosing the polypus did not succeed. While an assistant pulled gently upon the sound, M. Dupuytren, with the left hand introduced to the back of the mouth, tried to slip the noose over the tumor. The first attempt failed, but a second succeeded. The sound was removed, the extremities of the noose kept apart, and by pulling on the thread attached to the spring, which was recognized by its colour, this was brought out, so that the polypus was grasped by the loop of thread alone. The tightening was effected by means of the serre-nœud of Graefe, modified by M. Dupuytren. The thread which remained in the mouth was tied to the serre-nœud. At the end of eight days, gentle pulling brought away the apparatus with the polypus, which was withered, grey, and about the size of an almond.

M. Dupuytren remarked, that the operation of tying polypi in the posterior part of the nostril was one of the most difficult in surgery; the desideratum being some means of keeping the loop open and directing it properly. The simple method above described tends to obviate much of the inconvenience which has hitherto been experienced. Other difficulties are presented by the position of the polypus. When the pedicle is implanted into the base of the skull, it is sufficiently easy to pass the loop round it horizontally, and the same facility is experienced when it is implanted into the floor of the nasal fossæ; but not so when it has its seat on the internal or external wall of the nostril, and when the loop must be maintained perpendicular. When the situation of the pedicle is unknown, of course the trials must be still more uncertain. But besides these, yet more formidable obstacles are presented by the automatic movements of the patient. The finger has to manœuvre on the most irritable and indocile parts, and hence we have constant efforts at coughing, swallowing, vomiting, &c. or the face becomes blue and tumefied, and suffocation is threatened.

In the case above detailed the polypus was not solitary. On the 30th, M. Dupuytren tried to seize another, but was obliged to give it up. On the 10th of August the attempt was renewed with success, but not till the third trial. The patient still continues in the hospital, and it is to be feared that new polypi will continue to spring up, their prevention being even more difficult than their removal. The last remark also applies particularly to the ear, of which the following case affords a good example.

Polypus of the external Auditory Canal — Various Attempts at Extirpation — Renewed Growth of the Tumors.

—— Nezot, aged 50, perceived about two years ago that he did not hear with the right ear. He took a pin to pick out some hardened wax, and after much trouble removed an indurated portion, about the size of a pea. Still, however, he heard no better, and it now appeared that an excrescence filled the tube, which bled when roughly touched, and caused such pain as to make him faint. The polypus was twice removed at St. Dennis, where he resided, but grew again as often; and, at last, Nezot sought relief at the Hotel Dieu, where he was admitted July 13th. On examination, a reddish excrescence was detected in the auditory canal, smooth on its surface, and bathed in pus at its base. The parotid of the same side was much swollen, and the ear seemed as it were lifted up. By these appearances, M. Dupuytren recognized an affection external to the auditory tube, of which the visible polypus was but a symptom: notwithstanding this, however, he thought it right to practise its extirpation. The patient was bled in the first instance, and (July 16) the excrescence was seized with a peculiar pincers, formerly contrived by M. Dupuytren to extract balls, but the polypus gave way under them, and was torn, so that the portion which remained had to be scooped out. The pedicle appeared to be situated at the anterior and superior part of the auditory canal, near the external orifice. Injections of warm decoction of marshmallow were recommended. July 24th, the polypus had reappeared, and was again removed. The region of the parotid was swollen and painful, and though this was relieved by leeching, yet the excrescence appeared again as before, and pus continued to flow, both from the ear and from an opening which formed behind it.

M. Dupuytren observed that the fleshy excrescences which occupy the auditory canal, and to which the name of polypus is indiscriminately applied, may be derived from very different sources: at one time they are true polypi, growing from the skin, as elsewhere they do from mucous membranes, and they are then easy to seize and extirpate, without their renewed growth being apprehended. These cases, according to M. Dupuytren, are the most uncommon. Sometimes they consist of fungous growths originating in an affection of the cellular membrane of the neighbourhood, which first raise the skin, and subsequently perforate it, so as to project externally. Again, they sometimes arise from diseased bone; and, lastly, they may spring from within the tympanum, only becoming apparent when they have ulcerated through that membrane. In these three last cases, it may easily be imagined that no operation directed against the polypus itself can be of avail, for this is but a symptom of the disease, and will renew itself as long as the cause which produces it is suffered to remain. In the present case, the growth evidently proceeded from the cellular membrane, the diagnostic marks of which were the tumefaction and pain of the parotid region, as well as the raising and projection of the ear, which M. Dupuytren had never seen more marked. As to the rest, though it might possibly be but a simple abscess, yet the slowness of its progress was little favourable to this conjecture, and M. Dupuytren, without positively stating so much, seemed nevertheless inclined to the belief that it was carcinomatous. The departure of the patient prevented the point from being determined. Before the extirpation of the supposed polypus, care was taken to practise bloodletting: this, M. Dupuytren remarked, was an important precaution, for the operation is attended with horrible

pain, and the inflammation is apt to spread to the base of the skull, and death, too, often follows. The lecturer observed that he had several times seen this take place, and, indeed, he said that the patient seldom escaped when the inflammation extended from this quarter to the brain. The injections used ought to be moderately warm; if too cold, they are productive of mischief.

Still, however, we have some resources against polypi accessible to the eye or the finger; but there are others which their situation would seem to render incurable: those of the prostate, for instance, which are developed in its middle portion, with or without any pedicle, and which Sir E. Home regarded as an increase of the third lobe of the gland. It has been recommended to cauterize them; but to those who have seen the size that they acquire, this advice will have little value. M. Amussat proposes tying them, but without dissembling the difficulty: once, indeed, he excised such a tumor after the hypogastric operation for stone; but who would venture to open the bladder solely with a view to search for a disease of such obscure diagnosis? M. Leroy d'Etoilles accidentally discovered a method capable not merely of palliating, but sometimes of curing this affection. He introduces into the bladder a bent metallic sound, which is straightened at will by a particular mechanism. The sound thus used compresses the tumor, and the compression is applied for twenty or twenty-five minutes, and repeated at longer or shorter intervals, and thus often re-establishes the flow of urine in a remarkable degree. M. Dupuytren lately employed this plan in a patient at the Hotel Dieu.

Polypus Tumor of the Prostate—Complete retention of Urine—New method of Treatment—Improvement.

An old man, very far advanced in life, and had been long tormented with complete retention of urine. The catheter had been often applied, and with sufficient ease, for the canal was large and offered a free passage, only that a slight difficulty was experienced at the neck of the bladder, as if the prostate were swollen, and the patient made water readily through the instrument; but when this was withdrawn the retention appeared more complete than before. M. Leroy saw the patient with M. Dupuytren, and, suspecting a tumor of the prostate, which applied itself like a valve to the orifice of the bladder, easily explained all the symptoms. The compressing bougie was twice applied; each time about twenty minutes. There was a manifest improvement, but the old gentleman becoming impatient, did not remain long enough to be cured.

CONGENITAL PUBERTY.

To the Editor of the Medical Gazette.

Chichester, Sept. 7, 1832.

Sir,

The accompanying papers have just reached me from America, and as the facts stated in them are worthy of being recorded, I send them to you for publication. I have not the pleasure of knowing the gentleman who has done me the honor to address this communication to me.—I am, Sir,

Your obedient servant,

John Forbes.

To John Forbes, M.D. F.R.S. Physician to the Chichester Infirmary.

New Orleans, State of Louisiana, May 31, 1832.

Sir,—I take the liberty to acquaint you with an extraordinary case of prematurity in a child, which fell under my observation in this city, and request you to communicate the same to the medical society of your city.

Matilda H. was born of a white family in low circumstances, on the 31st of December, 1827. She came into the world with her mammæ perfectly formed, and the mons veneris covered with hairs, as much as a girl between thirteen and fourteen years old. When precisely three years old, the catamenia made their appearance, and have continued to reappear regularly every month until the present time, and as copious as any woman might have them, each period lasting four days. She is now four years and five months old: she measures 42½ inches in height, French measure; her features are regular; she has a rosy complexion; her hair chesnut colour; her eyes bluish grey; she is what may be termed handsome; the conformation of her body is very strong; her mammæ are now of the size of a full-grown orange; and the dimensions of the pelvis are, in my opinion, such as to enable her to bear children when eight years old, and very likely sooner. She constantly enjoys good health.

With sentiments of the greatest consideration, I have the honour to be, sir,

Your most obedient servant,

Justus Ledseau, M.D.

[The accuracy of the details is gua-

ranteed by the signatures of four physicians of New Orleans, and by those of the Mayor, and the British Consul.—E.G.]

LARGE TUMOR OF THE JAW REMOVED BY OPERATION.

[Communicated by Robert Davidson, Esq.]

Abel, a boy of 7 years of age, from the Isle of Rhond, came into the hospital at Little Bacolet, on the 26th November, 1829, with a hard swelling in the left side of the lower jaw, about the size of a hen's egg. Mercurial friction was used, but without any benefit, when he left the hospital.

On the 15th June, 1830, he again returned to the hospital, with the tumor occupying nearly one half of the lower jaw. Mercurial friction, with small doses of calomel, was again had recourse to, but still without any good effect.

June 22, 1831.—The jaw is now immensely enlarged, with an opening behind the canine tooth, from which there is occasionally slight hæmorrhage.

He had hæmorrhage again July 1st, 8th, and also on the 27th and 30th of December: on the 2d of January the hæmorrhage became great, and the tumor rapidly increased; when, after a consultation on the case, an operation was determined on.

On the 17th of January the operation was performed in the following manner:—The boy being placed on a chair, with his head bent a little backwards, the operator, after having extracted the second biscuspidal tooth, made an incision through the lip, half way between the commissure and the angle of the mouth, continuing it downwards over the base of the jaw, and then connecting it with a second, from the lobe of the ear along the base of the tumor. The flap was dissected up, exposing the front of the tumor, and the masseter muscle and adipose substance being removed, the disease was found to occupy both processes of the jaw. The temporal muscle was then detached

and the capsule opened anteriorly. A chain saw, armed with a large needle, was passed behind the jaw opposite the tooth already extracted, and the bone sawed through, the assistant drawing the tumor obliquely outwards. An incision was made close upon the bone, along the inside of the diseased portion of the jaw, separating it from its muscular detachments; the buccinator being cut through at the same time, the tumor was drawn outwards and downwards, so as to allow the capsule of the joint to be divided by a probe-pointed bistoury. The whole was thus removed.

During the operation only two arte-

ries were tied, namely, the lingual and facial, and the hæmorrhage was trifling. The parotid gland had been absorbed, but the masseter muscle was unusually strong and large. The tumor measured seventeen inches and a half in its longest circumference, and twelve inches and a half transversely: it weighed two pounds and a half.

The boy did well, though of course considerable deformity remained, from the extent of the cicatrix. The annexed sketch represents the appearances before the operation.

STATISTICS OF CHOLERA.

To the Editor of the Medical Gazette.

Sir,

In the Number of the Medico-Chirurgical Review just issued from the press, Dr. James Johnson has done me the honour to notice the paper on the "*Statistics of Cholera*," which appeared in your journal of the 11th August. The concluding remarks, so flattering to myself, personally, and for which I feel very grateful, would have restrained me from any reply, but for an anxious desire to mete out that fair measure of justice which the reviewer seems inclined to refuse. I stated "that the amount of deaths then recorded afforded a pretty satisfactory proof that the precautions of government were not unnecessary, and that the anxiety of the public mind had not overstepped the bounds of reason so far as some *philosophers* would induce us to think." Upon this passage the reviewer argues as follows:—"precautionary measures, if they mean any thing, mean preventive measures, and it remains for Dr. Gregory to shew, that these have effected any good, or lessened mortality. Those actually enforced were chiefly quarantine restrictions. The cholera laughed at *them* and their admirers. The precautionary measures adopted were totally inoperative (as all who have eyes in their heads must see) in preventing the rise or progress of cholera, but very operative indeed in inspiring panic, crushing commerce, and heaping additional poverty and distress on a pauperized population."

If all this be true, the government which sanctioned such measures, and the branch of the executive which carried them into effect, have much to answer for; so much, that it is worth while to inquire whether the critic of other's labours is not himself open to criticism and animadversion.

And first, as to the dogma, "that government precautions, *if they mean any thing*, mean *preventive measures*." The government, as a measure of precaution, sent out Sir W. Russell and Sir D. Barry to St. Petersburgh, to investigate the disease. Was this a *preventive* measure? They next established Boards of Health for the purpose of still further investigating the disease, and mitigating, as far as possible, its evils. This is surely any thing but a *preventive* measure. They next carried rapidly through parliament an act for the purpose of facilitating, if necessary, the taxation of the rich for the relief of their poor neighbours suffering under cholera. This was a measure of *precaution*, but not of *prevention*. Preparations were made for the extension of the metropolitan burying-grounds, if unfortunately such a step had been required. Would the reviewer call this a measure of *prevention*. *Et sic de aliis*. So much for the Johnsonian dogma, that precautionary measures, if they mean any thing, mean measures of *prevention*.

And now let me direct the attention of your readers to the second great doctrine propounded by the reviewer: viz. "that the measures of precaution actually adopted by the government not only did no good, but inspired panic, crushed commerce, and heaped additional poverty upon a pauperized population." The latter clause of the sentence is perhaps only one of those high-flown rhetorical flourishes in which the contributors to Dr. James Johnson's journal are wont to indulge; but if meant in sober earnest, I should like to know how Dr. Johnson reconciles it with the enormous sums of money which have been raised by voluntary subscriptions for the benefit of the poor in every district visited by the cholera? In particular, I beg to call Dr. Johnson's attention to the case of Edinburgh, Bilston, and Marylebone, in each of which places many thousand pounds have been charitably given, and most carefully distributed. How is such a statement reconcileable with the fact, that in every place in Great Britain, without exception, visited by the cholera, *gratuitous*

attendance has been afforded to the poor? How does he reconcile it to the fact, of the London Gazette containing from time to time orders from the privy council for the compulsory levying of rates for the benefit of those afflicted with cholera, in places where the inhabitants are backward to assess themselves?

But then, says the reviewer, "the precautions taken by government have *crushed* commerce. Crushing the commerce of Great Britain, in 1832, is rather a strong expression. The writer probably meant to say cramped, or fettered, but even with this emendation, I doubt whether the principal merchants of London and Liverpool would bear the reviewer out. Quarantine regulations, of great strictness, have been in force in England for the last fifty years, and the modifications made to meet the case of cholera were neither very severe nor very long continued. To take an instance, they never affected the price of coals in the port of London. What then is meant by crushing the commerce of England by precautions against cholera?

But the cup of misery is not yet full. These precautions, so obnoxious to the reviewer, "inspired *panic*." Three days of extra quarantine at Hull or Stangate creek, inspire a national panic! This cannot be the meaning of the reviewer, though ten lines previously he acknowledged no precautionary measures of any importance except quarantine. The reviewer undoubtedly means now to allude to the publication of sick returns, tables, and circulars, the formation of local boards of health, and those other precautionary measures which have reference not to prevention, but to the solace of the afflicted poor. And after all, sir, what did the panic amount to, which, according to Dr. J. Johnson, these measures of government inspired? Were our streets, or our churches, or our theatres, or our promenades, deserted even for one day? Did law cease to be administered in places where the epidemic raged not? The fact is, that what the reviewer calls *inspiring panic*, other people call *causing conversation*. People talked about the cholera, but they all knew as well as Dr. Johnson could tell them, that its chief victims were "the poorest of the poor, and the most debauched of the debauched," and therefore there never was a real panic. To the depression of public feeling in such places as Musselburgh, Bilston, Sligo, and Limerick, the reviewer, we presume, would in charity hardly apply the term panic.

I have now, sir, given you my reasons for distrusting the critique with which I have been honoured in Dr. Johnson's journal. I still firmly believe that the precautions taken by government were urgently called for, prudently undertaken, and steadily and judiciously persevered in; and that Great Britain and Ireland have profited by them far more than would have happened, if the public safety had been entrusted to those, who in the columns of the Courier and Times told the people of England, that the Asiatic cholera would be deprived of all its malignity by the variableness of the climate in which they lived.

Dr. Johnson has taken great umbrage at my use of the term *Philosopher*. His concluding words are—"Dr. G. may suppose that nobody likes now-a-days to be called a philosopher." What rational objection can be made to such a designation I am at a loss to comprehend, and least of all by the learned Author of the work entitled "Change of Air, or the Diary of a Philosopher in pursuit of Health and Recreation." It is hard indeed if a man may not call another that which he calls himself.

I am, sir,
Your very obedient servant,
George Gregory.

31, Weymouth-Street,
Sept. 29, 1832.

MORTALITY FROM CHOLERA IN LONDON.

To the Editor of the Medical Gazette.

Sir,

As there is every reason to believe that the cholera is rapidly declining, it becomes a matter of deep interest to ascertain, with as much precision as possible, what is the real extent of the loss which this metropolis has sustained from so dreaded a visitation. The bills of mortality are certainly not free from ambiguity and error; yet they afford the means of arriving at least at an approximate solution of this question. Forty-two weeks have elapsed since the commencement of the current year on the 13th of December, 1831. A comparison be-

tween the burials in that period, and those in the corresponding forty-two weeks of the previous year, as they are reported in the tables of mortality, will not only enable us to form a fair estimate of the degree in which the deaths have increased, but will also show, with tolerable accuracy, to what diseases that increase is to be ascribed.

With this view I have compiled the following table, presenting a view of the aggregate deaths from each disease, between the 14th of December, 1830, and the 4th of October, 1831; and again between the 13th of December, 1831, and the 2d of October, 1832, as they are given in the weekly tables of mortality.

	1831	1832		1831	1832
Abscess	112	144	Hydrophobia	2	2
Age and Debility	1893	2348	Inflammation	1880	2101
Apoplexy	327	359	Inflammation of the Bowels	81	532
Asthma	729	855	Inflammation of the Brain		37
Cancer	59	65	Inflammation of the Lungs and Pleura	13	60
Cholera	35	2973	Insanity	178	141
Childbirth	202	261	Jaundice	33	37
Consumption	3368	3533	Liver, Diseases of	217	267
Constipation of the Bowels	4	23	Locked Jaw	9	8
Convulsions	2066	1611	Measles	532	508
Croup	83	74	Miscarriage	13	18
Dentition		267	Mortification	217	204
Diabetes	6	11	Palsy and Paralytic	166	187
Diarrhœa	15	32	Rheumatism	40	42
Dropsy	659	780	Scrophula	35	16
Dropsy on the Brain	618	669	Small-Pox	436	523
Dropsy on the Chest	78	98	Sore Throat and Quinsey	3	18
Dysentery	8	17	Spasm	3	86
Epilepsy	29	42	Stone and Gravel	12	19
Erysipelas	58	59	Stricture	11	21
Fever	678	700	Thrush	68	93
Fever, Intermittent	17	22	Tumour	9	21
Fever, Scarlet	90	217	Venereal	2	1
Fever, Typhus	141	223	Worms		2
Fistula		2	Unknown causes	7	691
Gout	58	51	Stillborn	637	695
Hæmorrhage	41	50	Casualties	258	370
Heart, Diseases of	88	96			
Hernia	20	30			
Hooping-Cough	1401	489	Total	17745	22843

It would appear on the face of these returns, that the deaths by cholera in the present year have been 2973; but this is undoubtedly far below the truth.

It is universally allowed that the reports of diseases in the bills of mortality are liable to error from the ignorance of the searchers. The searchers form their reports entirely from information derived from the friends of the deceased; and it cannot be questioned, that when the parties are interested in concealing the true cause of death, the real disease will be frequently disguised under some other name which is less calculated to excite apprehension on the part of the neighbours or the public. That these motives often operate in respect to cholera, is matter of daily experience. It becomes, therefore, highly probable that deaths from cholera are frequently concealed under other names, and this expectation is confirmed, if it is found on examination, that those diseases which in their symptoms most nearly resemble cholera, exhibit a very remarkable increase. In this case it is not unreasonable to attribute the excess over the preceding year to cholera.

Under the head of *age and debility* there is an increase of 455, and as this increase has occurred entirely since the middle of March, that is, during the period of the epidemic, there can be little doubt that the vague term of debility has frequently been used to conceal deaths from cholera.

All practitioners are aware that the

symptoms of *inflammation of the bowels*, especially in the early stages, bear a close resemblance to those of cholera, and that hasty and inexperienced observers have often confounded the one disease with the other. On comparing the reports of death from this cause during the two years, we find an increase from 81 to 532. There can be little question that a large part, if not the whole, of the excess, were really cases of cholera.

The term *spasm* seems to have been introduced as an euphemism for cholera. It occurs but once in the bills of 1831. Since February 1832, it has been established as a regular head, and there have been very few weeks in which it has been left blank. The whole excess under this title is 83.

In order to ascertain the real loss by cholera, some account must also be taken of the deaths from *unknown causes*, which have increased from 7 to 691. We are told that this augmentation has chiefly arisen from the dismissal of the searchers in the parish of St. George in the East, so that in the returns from that parish diseases cannot be distinguished. Of course a portion of these undistinguished deaths must have arisen from cholera. If we allow one-sixth, which appears to have been, as nearly as can be estimated, the general proportion in London, an addition will be made on this account of 115.

If these corrections are admitted, the account will stand thus:

Deaths under the head of cholera	2973
Of age and debility . . .	455
Of inflammation of the bowels	451
Of Spasm	83
One-sixth of the unknown .	115
Total . .	4077

This, then, may be taken as the number of the deaths from cholera out of those which are entered in the bills of mortality; but it is far below the whole number in the metropolis.

The burials entered in the bills of mortality do not contain the whole of the deaths even in the parishes which are included in those bills. A large number of individuals, dissenters, and others, are buried in places which are not connected with the company of parish clerks, and therefore do not report. It is stated in the Population Abstract for 1811, that "it was ascertained by the collector of the then tax on burials, that in the last six months of 1794, 3148 persons were interred in the metropolis without being registered, and it is not likely that the whole number of interments, or even of burial grounds, was discoverable for the purpose of taxation." On these grounds the unentered burials in the metropolis are estimated in the above Population Abstract at no less a number than 7000 annually, or about one-third of the whole number at that period reported in the bills of mortality. If, moreover, it is considered that of the parishes themselves many report very irregularly, and some not at all, it will not appear too much to add one-third more for *unentered burials* in the parishes within the bills.

Again, the bills of mortality do not include the whole of the metropolis. The parishes of St. Marylebone, St. Pancras, Paddington, Chelsea, and Kensington, are omitted. By the last population returns, the inhabitants of these omitted parishes are in number very nearly a fourth of those in the districts included in the bills; the aggregate population of the latter being 1,180,502, and that of the former 293,567. One-fourth, therefore, must be added for those parts of the metropolis which are omitted.

On the whole, therefore, the deaths from cholera in London may be estimated as follows:—

Deaths entered in the bills .	4077
Add one-third for unentered	1359
Making the deaths in the parishes within the bills . .	5436
Add one-fourth for parishes omitted	1359
Total	6795

It is probable that some of your readers may object to the above mode of extracting from the weekly bills the number of deaths which have really happened from cholera. They may think the object may be attained more readily and more certainly by comparing the totals; and when they find that the burials in 1832 have exceeded those in the same part of 1831, by 5098, they may inquire why the whole of this excess is not to be attributed to cholera?

But there are sources of error in this reasoning. The reports from the parishes are made with extreme irregularity. The parish authorities, from sheer laziness, often defer their report, not only for weeks, but for months. A large proportion of the deaths of the year are usually brought into the last quarter, and even into the last week. The number of burials reported in the last week of 1831 was no less than 3611. Now the general alarm, and perhaps some awe of the public eye, seem to have partly checked during the current year, this dilatory disposition, so that the reports, though far from regular, are brought up somewhat more closely than usual. The real excess, therefore, of burials is not, as it would appear on the face of the bills, 5098, since that number includes several reports which in the year 1831 were given in at a later period.

That this is a true representation may be shown by a comparison of the christenings. The christenings reported in the first 41 weeks of 1832, considerably exceed those given in the same portion of the previous year; the former being 20,500, while the latter are only 19,178. No adequate reason can be assigned for this excess, except the greater regularity of the reports of the present year. If, therefore, we really wish to compare the totals during the two periods, we must allow for this disparity, and compare the burials of 1832, not with the actual number entered in the bills during the first 42 weeks of 1831, but with this number increased in proportion to the increase of christenings. Thus, if 20,500 christenings had been reported in the first 42 weeks of 1831, the burials would not have been 17,745 but 18,968, and the difference would not be 5098 but 3875 only.

The ultimate result, therefore, would not be greatly altered. It would stand thus:—

Deaths entered in the bills	3875
Add one-third for unentered deaths	1292
	5167
Add one-fourth for parishes omitted	1292
Total deaths from cholera .	6459

Thus, by a different process, we arrive at a result but little differing from that of the previous calculation. It is difficult to say which is most accurate. However, I incline to the larger number, chiefly from observing that the diseases of infants have been much less fatal in the present year. It follows that the total excess will be below the actual ravages of the epidemic.

Whichever number we adopt, it will not appear large, if we take into consideration the vast size of the metropolis. The whole population of London, by the last returns, is 1,474,069. The above mortality will therefore amount to about 4½ in every thousand, or somewhat less than one-half per cent., a rate which is believed to be nearly the lowest which has prevailed in any large town that has been really visited by this malady.

Your obedient servant,

G. G. Babington.

Oct. 4, 1832.

MORTALITY FROM CHOLERA IN PARIS.

Extract of a Letter from M. Moreau de Jonnès, to a Physician in London, dated Paris, Sept. 28, 1832.

"Le nombre des décès dans les tems ordinaires a été surpassé, du 24 Mars au 1er Septembre, de 19,723."

SALINE TREATMENT.

[The following Papers have been transmitted by the Central Board of Health.]

Letter *addressed by the Central Board of Health to the Boards of Health in* Dublin *and* Cork; *with the* Replies *of these Boards.*

Central Board of Health, Council Office, Whitehall, Sept. 11, 1832.

Sir,

On the 5th May last, by order of the Central Board of Health, I enclosed to you a copy of a letter addressed to this Board by Mr. Wakefield, surgeon of the Cold-Bath-Fields Prison in this metropolis, covering details of three cases, in various stages of cholera, treated by the saline powders recommended by Dr. Stevens, with a view to a trial being made of that plan in Ireland.

I am now desired to request, that you

will have the kindness to transmit to me, at your earliest convenience, a short outline of any information you may have obtained as to the result of the saline practice in Ireland.—I am, &c.

(Signed) W. Maclean.

To the Secretary of the Central Board of Health, Dublin.

Do. do. Cork.

Cork Board of Health,
Sept. 18, 1832.

Sir,—I have had the honour to receive your letter of the 11th instant, requesting information as to the result of the saline practice in cases of cholera, and I now beg to enclose for the information of the Central Board of Health of London, the statements of the Medical Secretary attached to this Board, and of the Physicians of the only hospital we have now open for the treatment of this disease, by which you will perceive that the powders recommended by Dr. Stevens have not had the good effects anticipated from them.

I am, &c.

T. Wilson Newsom, Sec.

I have tried the saline powders in many cases, and my experience does not lead me to place much (if any) confidence in their efficacy; at the same time I cannot say that I have seen them produce any inconvenience. The opinions of the medical men whom I have consulted about them, exactly coincide with mine.

P. Kehoe, M.D.
Med. Inspector.

North Cholera Hospital,
Sept. 15, 1832.

Sir,—We have employed, in the treatment of several cases of cholera in this hospital, the saline powders recommended by Dr. Stevens, and have not observed them to produce any good effect. They have, in some instances, caused a great increase of vomiting, but without advantage. We do not think them entitled to any degree of confidence, and have rejected them from the practice of the hospital as entirely useless, if not injurious.

Thomas Casey, M.D.
Denis B. Bullen, M.D.
Physicians to the North Cholera Hospital.

Central Board of Health for Ireland,
Council Office, Dublin Castle, 26th September, 1832.

Sir,—Agreeably to the request contained in your letter, I enclose copies of the opinions of the two superintending physicians of the Cholera Hospitals in Dublin, on the subject of the saline treatment in cholera.

I have the honour to be, &c.

Francis Barker, M.D.
Secretary.

To W. Maclean, Esq.

Cholera Hospital, Townsend-Street,
Dublin, Sept. 24, 1832.

Sir,—In reply to your letter, calling on me for a statement of the results which attended the saline mode of treating the epidemic cholera in the hospital under my care, I have to observe that I and my assistants have employed the above treatment in several cases of cholera, and the only advantage I could ever perceive from its use was an alleviation of the distress produced by vomiting, in some few cases.

I have not, however, found that it was so beneficial as many of the other remedies which we have employed in this hospital with a similar object.

I should observe, that the cases in which I tried the saline treatment were either in collapse or approaching to that state.—I have, &c.

John Hart, M.R.I.A. M.R.C.S.
Superintending Physician at the Depôt Cholera Hospital, Townsend-Street, Dublin.

To Francis Barker, M.D.

Chief Cholera Hospital,
Grange Gorman Lane,
Sept. 17, 1832.

Sir,—In reply to your letter of the 13th instant, inquiring the result of the saline treatment in cholera, (at the hospital under my superintendence), as recommended by Mr. Wakefield, surgeon to the Cold-Bath-fields prison, I have the honour to forward a copy of a letter received from Dr. Falloon, assistant physician to this hospital, who has given the above treatment a fair trial, and I beg to add, that similar results have occurred in the same practice to another of the physicians to the establishment.

I have, &c.

Owen Lindsey, M.D.
Superintendant Physician.

To Francis Barker, M.D.

My dear Sir,—In compliance with your wish, that I should give you the result of my trials of the combination of carb. sod. mur. sod. and oxymur. potassæ, I beg to state that in making these trials I have gone as far as I think any prudent man ought, and the result is, that in the great majority of cholera cases it is not free from hazard. We do want a remedy capable of restoring the powers of life in the really bad cholera, and in supplying this remedy the combination in question is wholly inadequate. I have known it bring on purging when none existed, and in this way hasten, I think, the fatal termination: such is the result of my experience.

I am, &c.

R. Fallon,

Assistant Physician to the Chief Cholera Hospital, Sept. 17, 1832.

To Dr. Lindsey.

CALOMEL—OPIUM—MUSTARD CATAPLASMS OR BLISTERS TO THE EPIGASTRIUM—LEECHES—COLD WATER.

To the Secretary of the Central Board of Health.

Sir,

In compliance with a circular issued by the Central Board of Health, I deem it necessary to trouble you with a brief account of the methods of treatment which I have found most successful in the Cholera Hospital, Nutford-Place, Marylebone.

In those cases in which the stage of collapse was not confirmed, and in which the following symptoms were developed, —viz. rice-water purging, vomiting, pain in the epigastrium, cramps, cold tongue, cold surface, sunken features, areola around the eyes, and suppression of urine, but in which the pulse was of good character, soft, compressible, and about eighty or ninety per minute— I have almost universally found these symptoms yield to the following treatment, recommended, I believe, by Dr. Ayre, of Hull:—One grain of calomel administered every five minutes, with two drops of the tincture of opium, in a dessert spoonful of water. As soon as the purging ceased, I omitted the opium, but continued the calomel until a decided action had been effected upon the liver, indicated by the flow of bile, or until the ptyalism was so profuse that I thought it judicious to withdraw the remedy. I have found that many of the patients, especially those who were previously in a robust state of health, resisted this last effect of calomel, and suffered very little inconvenience from tenderness or ulceration of the gums.

The disease rarely yielded to this treatment until at least seventy or eighty grains of calomel had been prescribed, and it occasionally happened that it was necessary to continue it until the patient had taken more than three hundred grains. In cases which were less severe, I gave the calomel every ten minutes, and in a few instances it was only necessary to give it every fifteen.

It is essential that the calomel should be omitted gradually, as cases of relapse sometimes happened when it was withdrawn altogether, on the first appearance of bile in the evacuations, or when the ptyalism was very copious.

I generally ordered mustard cataplasms or blisters to the epigastrium, which had the effect of allaying the vomiting; and when this symptom could not be subdued by these remedies, the application of twenty-five or thirty leeches most commonly produced the desired effect.

The remainder of the treatment consisted in administering castor-oil about the third day of the attack, which removed the morbid secretion which had been poured out from the internal coat of the intestines during the disease, and which, I think, may be regarded as the cause of the consecutive fever of cholera; for when the tongue was brown, parched, and coated, the skin hot and dry, and the patient anxious and uneasy, in eight or ten hours after the removal of this unhealthy secretion the tongue began to clean, and became moist, the skin was cool, and the perspiration natural.

In cases in which coma supervened, I found leeches applied to the temples, blisters to the scalp and to the nape of the neck, ice to the cerebellum, and large doses of tartar emetic (half a grain or a grain every hour), the most efficient remedies.

The stage of confirmed collapse of cholera I have found much more difficult to put under the influence of medicine. My success has been extremely limited, and most of the cases have

turned out unsatisfactory. In the cases in which the symptoms which I have already enumerated were present, but in which the pulse at the wrist was scarcely to be felt, and in many instances was imperceptible, and the secretions were suspended, I failed in removing the disease by those remedies which were so well adapted for restoring the healthy functions of those patients that came under treatment in the early stage.

The plan I have latterly adopted, and which I have found most successful, is that recommended by Dr. Hardwicke Shute, of Gloucester—viz. copious and frequent draughts of cold water. I have tried this remedy in four cases, and in three instances the patients have recovered. I may mention briefly, that cold water was administered very freely in one case of confirmed collapse, and in eight or ten hours re-action commenced: it was then omitted, and calomel and opium were substituted. Under these remedies the patient relapsed into her previous state, but was relieved again by having recourse to cold water, and she became eventually convalescent without any untoward symptoms.

The house-surgeon, Mr. Toynbee, has been indefatigable in his attention to the patients, and I attribute my success in a great measure to his unwearied exertions. He suffered from a severe attack of cholera about two months ago, but fortunately recovered under the use of calomel and opium. One of the nurses and a porter, who were also attacked, were restored to health by the same remedies.—I remain, &c.

ARTHUR T. HOLROYD, M.D.

12, Harley-Street, Oct. 1, 1832.

BLEEDING — EMETICS — CALOMEL OR BLUE PILL — PURGATIVES.

September 31, 1832.

SIR,

I HAVE received from Mr. De Grace, Secretary to the City of London Board of Health, a circular letter from the Central Board, requesting to know the result of my experience in cholera.

This has been limited, and as to its success, I would prefer leaving any opinion on that subject to the Central Board, when they shall know the circumstances under which I have been placed, rather than pronounce one myself on the subject.

I have had the immediate superintendence of a house belonging to St. Bartholomew's Hospital, which has been appropriated to the reception of such patients of that establishment as might be attacked with cholera, as well as for the poor of the parishes of St. Bartholomew the Greater and the Less; but when cases from other parishes present themselves, which seem likely to prove fatal in the transport to their respective hospitals, by the proper regulations of the Governors they are not to be refused: but I am thus required to admit hopeless cases, while curable ones are rejected.

Since my appointment, 39 cases have been placed under my care: of these, 12 have died, 3 before I saw them, my house being at some short distance from the hospital; 3 still remain, but may be pronounced convalescent; one, however, is labouring under the eruption described as occasionally appearing after cholera.

With regard to the treatment adopted, I should observe, that I make no distinction between those cases in which the dejections may contain some feculent matter or may be tinged with bile, and those which are merely watery; but when I have reason to believe the symptoms present to be owing to the poison of cholera, my practice is immediately to bleed: I then, if collapse appears imminent, give an emetic; afterwards a large dose of calomel or blue pill, followed by purgative medicines: and by this mode of proceeding it affords me satisfaction to state, that no case has been lost which I have had to treat before the system has been drained of its fluids, though the dejections have been characteristic and the aspect highly formidable.

I have thus stated what I presume it is the wish of the Central Board to learn, namely, those measures to which, in my opinion, any certain efficacy is to be attributed, and which I conceive have enabled me, at the institution of which I have had the charge, as well as elsewhere, to check in some instances at once, to mitigate in others, the symptoms of malignant cholera.—I have, &c.

GEORGE LEITH ROUPELL.

7, Caroline-Street, Bedford-Square.

CALOMEL, UNCOMBINED WITH OTHER REMEDIES — MERCURIAL LINIMENT, COMBINED WITH OPIUM, TO THE BOWELS.

September 26, 1832.

SIR,

IN compliance with the request of the Central Board, I beg to offer the subjoined treatment, and to state, that in every case in which it has been employed, success has uniformly attended its exhibition, if the patient was not sunk too much; and even in two cases where the stage of collapse had ensued two hours previously to my being called in, the patients were saved, and have perfectly recovered their former state of health.

In each of the three stages of the disease I have employed calomel, and calomel only, uncombined with opium in any form, convinced as I am, from having witnessed the exhibition of opiates in a multitude of cases, that its effects are most pernicious when administered internally.

The dose of calomel I have given to an adult has been 10 grains every quarter of an hour for the first three hours, 5 grains during the same period in the next three hours, and then continued 2 grain doses every half hour till green evacuations have been procured. In addition to the above, I have given a teaspoonful of sal-volatile every hour in a wine-glass of water, and allowed the patient to drink as much cold water as he wished. Clysters of gruel and common salt have been thrown up the rectum. The bowels over the whole surface have been rubbed every hour with the strong mercurial liniment, and two drachms of powdered opium in every ounce of the liniment. I beg to add that such confidence have I had in the calomel, that the only warmth I have applied has been in the shape of blankets, and a bottle of hot water to the feet, and wherever spasm has ensued I have applied the above-mentioned liniment, and it has yielded to its influence.

There is a boy aged nine years, just recovered under this treatment, who was *comatose* and *pulseless* nearly 14 hours, and should the Board think proper they can refer to the parents for the veracity of my statement. His name is Rigge, 19, Heddon-Street, Regent-Street.

* * * * *

In fine it appears to me, that if medical men would only trust to their own judgment, and draw their conclusions from what actually comes before them, and not be led away by the wild speculations of wilder theorists, who have written without perhaps seeing one single case of this epidemic, I feel confident that they would soon adopt a similar line of practice, by which means very few lives would be lost, and this at present frightful malady would cease to be considered by the public as incurable when the stage of collapse had ensued.

I have the honour to remain, sir,
Your humble servant,

J. H. TAYLOR.

7, Devonshire-Street,
Portland-Place.

CALOMEL AND RHUBARB, WITH CHALK MIXTURE, COMBINED WITH LAUDANUM AND CATECHU, IN THE STAGE OF DIARRHŒA — CALOMEL AND CARBONATE OF SODA IN THE STAGE OF COLLAPSE.

Cholera Hospital, Whitechapel.
September 22, 1832.

SIR,

IN reply to the circular, No. 2, dated Council Office, Sept. 3, 1832, proposing three questions as to our mode of treating cholera in its several stages,—

We beg to state in reply to the first, that we have found a purgative of calomel and rhubarb in the first instance, followed by the chalk mixture combined with laudanum and catechu, generally successful.

Secondly,—we seldom have met with the rice-water evacuations except in the stage of collapse or bordering upon it, when we have treated it as in that state.

Thirdly,—from our more recent experience we have found, from one to two scruples of calomel given directly, followed by ten grains every hour, till the mouth becomes affected, combined with carbonate of soda in the state of effervescence, successful. Ten cases have been treated in this mode, seven of which have recovered, one only being followed by consecutive fever.

We have the honour to be, sir,
Yours very respectfully,

R. J. REED, Surgeon.
J. FAIRBANK, Surgeon.
R. WOODHOUSE, M.D.

ANALYSES & NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Dictionary of Practical Medicine; comprising General Pathology, the Nature and Treatment of Diseases, Morbid Structures, and the Disorders especially incidental to Climates, to the Sex, and to the Different Epochs of Life, &c. &c. By JAMES COPLAND, M.D. &c. &c. Part I.

IT is remarkable that we should have been so long without a good Dictionary of Medicine; for *Hooper's* can only be regarded as an explanation of terms; while some of the minor productions in the same class, which have been attempted, consist of wretched imitations or translations from the French, deficient in every requisite, and beneath all criticism. Now, however, we have two important and valuable works in progress — the *Cyclopædia*, which has led the way, and the *Dictionary of Practical Medicine*, which follows. It is generally said, and we believe with truth, that the work which stands second as to the time of its appearance, was first as to its conception, and that it was far advanced ere the elder born was engendered. Certain it is that there were some indications of premature birth about the former, which we do not detect in the latter. Dr. Copland's book bears internal evidence of having been the object of years of labour and investigation, directed to the end in view. The references to the writers of Germany, France, Italy, and England, are countless, and are appended to each article, with indications of chapter and verse, in such a manner as to enable any one to turn to them at once, if he desires further information on the subject. With respect to the manner in which it is got up, the reader will be able to judge for himself, for we find, as this is passing the press, that a specimen of it is to be bound up with the present number, and to which we refer. The subjects treated of are all those falling between "Abdomen" and "Climacteric Disease" inclusive: and not the least praise we have to bestow upon the execution is the just keeping observed in respect to the length of the articles: those which relate to diseases of moment, as "Apoplexy," for example, being fully and elaborately discussed in comprehensive and well-digested essays; while no attempt is made to give consequence to those which are intrinsically unimportant: the author says all that is requisite, and he says no more. The work is a miracle of industry, and forms a fitting companion to the justly-popular *Surgical Dictionary* of Mr. Cooper.

MEDICAL GAZETTE.

Saturday, October 6, 1832.

" Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

A CHAPTER ON INTRODUCTORIES.

WHAT is an introductory? why an introductory is—but surely all the town must know what it is, after the variety of them that have been delivered in every part of the metropolis during the week. To define the thing is not so easy; perhaps the nearest one can come to it is to say, that it is a lecture to which all manner of persons are admitted, and into which all kinds of subjects are *introduced*. To describe it may be more feasible, or at least to tell what it is like. It is like an Omnibus (as it is also *de omnibus*) that rattles away for an hour over a great deal of space, and is filled with all sorts of company. Or rather it is like a flourish of trumpets: such as that which invites us to the performance of our old favourite, Punch; or which accompanies the "walk in" of the showman, who protests that his wax-works are more natural than life.

We recollect that in days of yore a lecture that went by this name was merely the opening of a course, or perhaps it sometimes went so far as to resemble a good overture, that gave a foretaste of the fine things that were to come; always preserving, however, a suitableness and a due keeping with what was to follow. Matters, it would

seem, are much altered now, and we have heard it remarked, that in these times an opening lecture, to whatever course it may be, is too generally set to one invariable tune—*self and company*, and that the trumpeter enacts the staple of the performance. Of the truth of this remark we were convinced the other day, by one of those odd circumstances which sometimes happen—but perhaps not twice in the same person's life. Having got into one of those very accommodating vehicles above-mentioned, to transfer ourselves—no matter in what direction—our attention was presently attracted by the strange manner of a little bustling gentleman in black, who happened to sit next us. It was evident that he was big with something of which he was eager to be delivered—incoherent phrases were ever and anon bursting from his lips—and his anxiety for the accelerated speed of the omnibus was manifested by a fidgetty restlessness and continual drawing forth of his watch. At length he gave the word to be set down, and made his exit in great haste. In availing ourselves of the vacuum which he left, our eye was attracted by a paper which evidently must have come from his pocket; but it was too late to make any effort to restore it, or to recal the gentleman to whom it belonged. At a glance we perceived what it was all about—the mystery that hung about our recent neighbour was cleared away—the gentleman was a "Professor," and here were we in possession of his introductory lecture. Even at the moment we were decyphering it (which our curiosity immediately prompted us to do), most likely he was already giving it—or all that he could remember of it—to the public; and as by the time the MS. might have been restored through the aid of an advertisement or the bellman, it would have been of use to any one but the owner, we reconciled ourselves to the possession of the document, resolving to make ample restitution in a way that we thought might be agreeable to the author, preserving the original at his service whenever he does us the honour of calling for it. We present a true copy to our readers; it will probably interest those who have not been able to attend any of the introductories during the week, and reconcile them to their disappointment; while it may help the memories of some who have been more fortunate: for we hold it to be an archetype or Platonic idea of all those *omnibus* lectures that we have heard; and thanks to the importunity of our friends, we have heard not a few. It may be well to premise that we have not been able to obtain the most remote knowledge, further than what is above stated, of the learned lecturer who delivered the following address, and though we might suspect several, yet after repeated perusals we can father it identically upon none.

"*Heads of Introductory*, 1832.

"Regret it has fallen to my lot—flattering duty imposed. Importance of our School—the eyes of the country turned upon it—posterity—its fame will throw into shade the Blacks, Cullens, and Monroes, of a certain northern establishment. Not for us to blazon forth our own praise—yet take credit on behalf of learned colleagues—not, perhaps, a more able school in Europe.

"Advantage of having every thing taught under the same roof—concentrate the pupils—dotage of Oxford and Cambridge—disadvantages of those places—subscription—expense—folly of Greek, or of more Latin than the Apothecaries require—*our* mode of managing matters—economy—enlightened spirit of the age.

"Changes which we have in contemplation. *Major rerum nascitur ordo*—

Majus opus. — External distinctions — gowns and caps—with bells or not?—prizes for some—titles for all—difficulty of finding denominations not already engrossed—(a proof of the corruption and monopoly of the old Universities)—propose *Magnus* in Midwifery—*Major* in Surgery—*Maximus* in Medicine—or, all together, *Generals in Practice*—not General Practitioners—probable *value* of our diploma—highly *honourable* at all events.

"Plan for studying universal disease in the whole of animated nature—human pathology illustrated by comparative—proposal to establish a General Hospital properly so called—separate apartments for different classes of animals—but all united—Unity in all things—only money wanted—free to pupils—shame of making those pay who are only learning—Reformed Parliament—*Mem.* Discount to those who attend *all*—and money returned to those rejected.

"Our museum—just a few things—but shall not have time to-day—osteology—splendid drawings—unique preparations—superb wax-works. *Mem.* Must have them all out.

"Few words on medical science—France and Germany—loss of Cuvier—a year big with the fate of great men—allusion to death of Sir W. S.—Shakspeare a great physiologist—knowledge of human nature—'What a piece of work is man! &c.'

"Generous emulation of pupils—genius without industry *flocci nauci*—anecdote of John Hunter—motives from self-ambition—'Knowledge is power,' Lord Bacon, Solomon—credit of the School—fame ultimately on pupils—conduct—most exemplary—never the least riot or disturbance—morality above all things—the great end and aim—value set on character of a *gentleman.*

"Myself—promise nothing—past life and services—professional works—the press—press of business, &c."

The MS. ends abruptly; but we believe there could not have been much more of it. Filled up, as we have no doubt it would have been, had not the learned lecturer dropt it in the omnibus—filled up, we say, with eloquence, and the extemporaneous resources of a fertile mind, such a lecture must have been a splendid production. But what if the loss were uncomfortably felt?—we can hardly think that possible: from what little we had an opportunity of observing in the gentleman's manner, and his emphatic mode of muttering to himself, while his arms moved about, in half unconscious sympathy—we should pronounce him perfectly competent to sustain the loss of his notes. To us, and we fancy to most of our readers, the lecture before us is abundantly intelligible: we can follow, without any difficulty, the whole train of the author's ideas, and we feel that we come from the perusal as thoroughly edified as if the production were swelled into a discourse of above an hour long. Indeed we have sometimes thought that we should prefer to have the lucubrations of certain lecturers given in this form: it would be such a saving of time: but we do not often go to hear lectures,—and what were to become of the pomp and circumstance of the lecture-room on show-days, if such a procedure were to be adopted?

The unknown author of the above notes may possibly regret that they have been given to the public in their unadorned condition, and that he had not had an opportunity of expanding them into a regular essay: but we can assure him that (next to the lucky accident that made us the finders of his MS.) he may consider himself indebted to its brevity for its admission into our pages, especially this week, when we give two lectures at full length.

AMERICAN BOARDS OF HEALTH.

It is curious to observe how frequently republican forms of government, with freedom as their idol, contrive, in some way or other, to display the most arbitrary propensities. Among us there has been, on several occasions, an outery against the attempts of the government to carry into effect the measures requisite for acquiring accurate information as to the extent of the present epidemic, and for staying its progress, although the plans actually adopted have never been more than the necessities of the case obviously pointed out. Our friends in America proceed in a much more summary manner; the most rigid returns are enforced, stating the name and residence of every patient, under heavy penalties; and the power vested in the Boards of Health may be judged of from the resolutions of one of them, which now lies before us, in which any person who has been in a house which a cholera patient has inhabited, and who shall presume to enter the town of Hudson, shall be fined 100 dollars and imprisoned for three months. A pretty strong measure this—we guess. The opinion that the disease is contagious seems to be general, if not universal, in America.

INTRODUCTORY LECTURE

DELIVERED AT THE

OPENING OF THE MEDICAL SCHOOL AT KING'S COLLEGE,

October 1, 1832,

By J. H. Green, Esq.
Professor of Surgery, &c. &c.

[The large theatre was completely filled by persons anxious to hear the Lecture which follows. It was delivered in a most masterly and effective style; and the manner in which it was received, must have been highly gratifying to the feelings of the learned lecturer.]

Gentlemen,—The honour conferred on me by my colleagues, of addressing the School of Medicine as their common representative, has naturally led me to seek for some object in which all the students in the medical and other departments could be supposed to feel a common interest, as members of this College; and presuming that my youthful auditors propose to themselves a scheme of studies, in order to their becoming members of a profession, I appear to myself to have found this common object—this united interest—in the subject of the professional character itself, and of the professions in which it has its various modifications.

A liberal profession may be defined as the application of science, by the actual possessor of the same, to the needs and commodities of social man. The essence of all science is *reason*, manifesting itself in the intelligence of the senses, as in geometry; or in the conceptions of the understanding, as in logic and dialectics; or in the truths of philosophy. And again, as the sciences (or science only, as partaking of the sciences) are so many various parts of one and the same subject—of one and the same spirit—living and growing branches of the same steadfast trunk—it must needs follow, that if the result be one in all, the same unity must be found in the sciences. There are, indeed, many sciences, and they will increase, from an insight into the consequences of distinction; and, with the more intimate knowledge of the objects investigated under the guidance of science, the number of sciences has increased and will continue to increase: still they must all retain the same inherency, the same known and understood derivation, from the common trunk. The root, therefore, of a profession is distinguishable from an art or trade, as a science; and, *vice versâ*, a science becomes a profession by its application to the needs and uses of man, and by availing itself of all the aids of experience and observation in order to this purpose.

In the three great professions—without which society can scarcely be imagined to exist, much less to arrive at or retain any high degree of civilization—the legal, ecclesiastical, and medical, grounded on the corresponding sciences of jurisprudence, theology, and physics, or rather in the history of these professions, as they have at different epochs of the world evolved and matured themselves, there is presented the fullest and most instructive illustration of my meaning—viz. we may trace the necessary connexion of every profession, legitimately so named, with a science, the not to be mistaken manifestation which science gives of its own unity and universality, and the consequent tendency of each particular science, as soon as it becomes explained and realized in an established

profession or order of men, to include in itself the others as yet comparatively in their embryo state, and waiting, as it were, for their full evolution under the protection of the elder. And at the same time, it will be impossible not to trace and admire the evident goodness and predisposing power of a divine Providence, in the order of succession in which the professions have appeared; not to see a great scheme and chain of almighty wisdom in the dependeney of the links, each having its own character, and occupying that place in the chain for which no other could have been a fit substitute. Nor shall I deem either my efforts or your attention wasted, if only I should succeed in leaving on your minds a livelier sense of the natural confraternity of the professions—a clearer conviction of the bands by which they are connected with each other; or, let me add, a more wakeful jealousy of whatever would tend to separate either of the living branches from the science of which it is the fruit and foliage, or those branches themselves from the trunk and root of universal science out of which they spring, and by whose unobstructed sap alone they can obtain the means of life and growth.

As the field must be fenced and cleared of obstructive or noxious growths before it can be cultivated and sown or planted for human use, so man must first be reclaimed to the condition of civilization, must become a member of a community—a citizen. It is evident that law in its largest sense, as including both legislation and the administration of the laws, must have taken precedence of the other professions, and that the science of jurisprudence must have preceded the other sciences.

In Egypt, the first monarchy, the great condition of public law seems first to have been provided in that which supplies the indispensable condition under which alone a people can become a nation—namely, the continuance and continued increase of its civilization; and those conditions are given, and can only be given, in the existence of a learned class, and the provisions for its maintenance. Accordingly we find, that in organizing, as it were, the laws of Egypt into a system of perpetuity, having their source or centre in the individual representative of the whole people, or the monarch, the inspired minister of Pharaoh reserved the revenues of the learned class. The church of Egypt, in the most comprehensive form, was independent and national, and in this manner the materials, as it were, of future science, and of distinct provision, arising from their application, were provided for mankind.

According to the most authentic history, however, it is evident that in Moses the science of legislation first began, and that a legal provision, as grounded thereon, was first established in the institution of the Levites. The Hebrew law was intimately connected with, was a living branch of, a special science—the science, namely, of morality; but of morality considered as a science of the relation of individuals to a community—a science of social obligation, and which must of necessity, in the order of providence, have been antecedent to the science of morality in a yet deeper sense, as respecting the relations and obligations of individuals resulting from the harmony and subordination of that power which in individual man constitutes and contradistinguishes his humanity; I say the administration of the laws, with their application in detail, was entrusted to a distinctly-appointed class, the Levites, whom with truth we may regard as the first profession. Their several residences were determined not by their birth-place, nor by any hereditary possession, but by their functions; their revenues were dependent on the exercise of those functions, and they remained inalienable and national by a primary contract. But most observable it is, and which we shall hereafter have occasion to repeat, so long as the law of science remained in that profession, the unity and universality of science manifested itself. The law, and the legal profession as its outward form, contained and comprehended whatever was known, and in those times capable of development, in both the other professions. The Levites were not only the guardians of the ark and the ministers of the municipal and domestic religion of the state, but they were entrusted likewise with the medical police, and were the inspectors of the public health.

The same proof of my position is supplied equally in the annals of Greece and Rome. The first great names that appear in the dawn of that historical age are those of the great legislators, Minos, Lycurgus, Solon. The first great products of human wisdom were codes of laws. For ages, in Rome at least, the only liberal profession, as distinguished from art and trade, which the free and the noble were honoured in exercising, and the exercise of which constituted a species of nobility, was that of the law; and so it continued as long as the law itself remained a living science—even to the time of Trajan. And when I affirm that the Roman law, which had embodied in itself all the seeds of genial grace, and organized them into a mighty engine of civilization,—when I affirm that this subject, so far as it is preserved in what is called "The Theodosian Code," presents the most perfect form of embodied science, I speak in the presence of those better able to appreciate the truth of the observation

than I myself can pretend to do. But when, in the progress of corruption and degeneracy, the great institutions of the great lawyer were overwhelmed with the whims of immorality, the dictates of insane despotism, and the caprices of individuals, the legal profession soon degenerated into a trade, the members of which were in general probably more feared than honoured.

It cannot, however, but impress a reflecting mind even with religious awe, that the science of the Roman law had not become completed till the conditions had been provided, and the necessity arisen, was felt, and made evident, of a new science calling forth another professional class. The essential character of man had been provided for in the middle form of the state, in order that the individuals partaking thereof might act and work as men. Accordingly the science of legislation, and the legal profession as its living organ, was the first-born and the first matured, and with the excellence that sprung up under its protection, and ripened beneath its fostering influence, came architecture, with the fine arts in the train; and with these again the moral purity of patriotism and local attachment. Thus legislation brought discipline, and the habit of relative duties and functions. These again gave the energy of cohesion to individual citizens, and the power of machinery to the state. But what were the results which the history of Rome records? Conquest, thirst for power, difference of conditions, not only beyond the demands of healthful subordination, but incompatible with and subversive of it—wealth with pauperism, the gigantic shadow which wealth casts on the setting sun of a declining state; then followed sedition, contempt of the past, presumptuous ignorance, and finally, a crazed and dislocated body, clumsily compressed within the iron hoops of military despotism.

Such is the history of the Roman republic,—a mightier power, a more inward and penetrating spirit, than even the spirit of law required—a power which not only, like that of the law, acted from without and on the individual, but which acted primarily and principally *in* the individual, and from within. Such was the condition, and it is but another proof of a special providence in the order of the professions, that these were given and realized in the dispensation of the gospel, and in the chain of providences by which its light was diffused, and its influence collected in the re-radiating foci of widely scattered and increasing churches. But no less, either during the preparation and preparatory to it, was this necessity felt. With the spirit of free law, and with freedom as an emanation from it, the patriotic spirit had likewise departed, and with patriotism, with the co-existence of independent states, with the sense of nationality, all the influence of local and national religion likewise departed, or remained but as the gleams of a phosphorus-drawn image beheld in day-light.

[The learned professor here made an allusion to the mythology of the time, but from the noise of several persons entering the theatre we were unable to catch the import.]

But with the nature and sublime character of this great revolution, to which the anterior history of the civilized world, and the science and profession of the law as its civilizing spirit, was but a preparation for that into which, as the pre-determined centre of providence, all the events in the history of North and South, East and West, had in their awful march been converging — with CHRISTIANITY, as the universal and mundane religion—my subject has no other connexion than as it involves a new profession grounded on science then first made really known.

And it is evident that I here refer to the ecclesiastical profession, and the correspondent sciences of metaphysics and ethics. But let me not be misunderstood. I speak of the profession as grounded exclusively on the correspondent sciences, independently of that higher root which must ever distinguish the ecclesiastical from other professions under a Christian dispensation. It is not of the profession, as an organ of revelation, nor of any branch of the profession which has for its object the preparation of man as a future denizen of another world, that I speak, but of the professions as having generally for their object the maintenance of that progressive civilization without which no temporal state can be either permanent or progressive; and especially the cultivation of the inward man, as to the individual, his integrity, distinct from, though not in separation from, his relation as a fractional part of the state, and his duty as a citizen.

No one can have a livelier sense than myself of the practical evils that accompanied the ever-increasing disposition of the sacred profession to turn from the oracles of inspiration to the schemes or systems descended, or supposed to be descended, from Plato or Aristotle. "Of late," says a contemporary, "do the doctors of the church forget that the heart, the moral nature, was the beginning and the end of their religion, and that truth and knowledge were comprehended in its profession, and that therefore, as preachers of the gospel, they ought to have distinguished themselves from the philosophers of the former world, in whose writings they find the elements of their science, with their metaphysics and logic. Of late, also, in

councils and synods, the divine humanity of the gospel gave way to speculative systems, and religion became a science of shadows, under the name of theology, or at best a bare skeleton of the truth, without life or interest for the majority of mankind, for whom, therefore, there remained only rites and ceremonies, spectacles, bulls, and symbols."

But the fullest persuasion of this truth ought not to blind us to the mighty services which the Jeromes and Augustines rendered in the Western Empire, and the schoolmen who, in the middle ages, and during the whole process of the settlement of the feudal states, effected a barrier in retarding the encroachments of barbarism, in counteracting, and as it were diluting, the thick darkness spreading over the civilized world. Nor let it be forgotten that the scholastic guides prepared the way for the Reformation, and armed the first Reformers with the most effective controversial weapons, and that in the two centuries in which the sciences of theology and ethics reached the highest point; whilst at the same time the Scriptures were most successfully preserved, as the great leaders of civilization, and imparted morals to the profession, which consisted of men whose minds and habits had been reared and formed under the scholastic discipline.

Such, then, was the ecclesiastical profession, and throughout the epoch of its dominant influence it preserved in its own form the unity and spirit of science. The clergy embraced the learned of all denominations, maintained the vital union of all knowledge with the universal sciences, and of all, as having for their common object the preservation, the improvement, and diffusion of the arts and knowledges which constitute the condition, and determine in every country the degree of civilization. And in this, as in the former legislative epoch, the sages and professors of the law and jurisprudence, of medicine and physiology, and even music and architecture, were all alike ecclesiastical doctors and masters of the church.

As it has been my delight to perceive, so it has been my object to prove and display, a predetermined order and providence in the successive evolutions of the third universal profession which is now in its distinct and matured state; and this providence appears to me especially evident in the circumstances that accompanied and led to the third epoch—the evolution of a third branch of a not only distinct but separated profession. In the first epoch we have found all causes working to the formation of the citizen; in the second to the cultivation of the individual as an intellectual and spiritual being; and if a third was to arise, it could only have for its object the relation both to the citizen and the individual man, the nature and the complexion of his dependence on, and intercommunion with, and control over nature; viz. his body. That science of course must be physiology, and the profession by whom the science is, so far as the imperfection of human knowledge permits it to be, applied to the needs of the community, the medical; both terms, physiology and medicine, being taken in the largest sense.

Even a slight acquaintance with the history of our profession will suffice to shew, that its final separation from the ecclesiastic followed the Reformation, or accompanied its dawn when the increasing corruption of the church, the degeneration of metaphysics, and the mis-statements of logic and dialectica had eclipsed the light of experience in all natural knowledge. The astonishing minds of the age felt the necessity of the purer light of revelation to reclaim for the use of mankind the sacred lamp which diffused the whole; the scriptures were once more restored to their place as the foundation of religion, and then the theological, by partaking of this higher principle, became separated as a profession from those of jurisprudence and medicine. Among the earliest efforts we find for the accomplishment of a higher rank of learning, and by which this was effected, one, and not the least important, was the removal of the extravagant overvalue of logic and dialectica, by which, as by a sort of magic, all knowledge was to be obtained of things as well as thoughts. By a great error, the power of logic was not only to succeed, but to supersede reflection, and the consequence was that mere logical facts and generalization were substituted and passed off for the very essence and constituent cause of all things. This delusion gradually, but rapidly, disappeared—this dense fog of human conceit thinned away, and gave admission to the light of experience, and with it to a perception of the necessity of increasing the light by the right use of the senses—the practice of the understanding. The wondrous mechanism of words was now applied to its legitimate purpose, that of communicating knowledge by words, and the acquirement of that knowledge. Reason now acted in its two-fold form, in the pure sense as a metaphysical science, or in the application of sense to experiments or systematic observation. In the future purification of each by the other, about the same time, resulting in part from important discoveries, by a series of providential events of which the most memorable are the compass, printing, gunpowder, and the power of increased vision by the combination of glasses, the world of the senses

was beyond all experience, enlarged, and evolved. New worlds in every direction were opened up for civilized mankind, and under these circumstances the mechanical sciences were rendered available in a thousand directions, at a time that in themselves they received almost miraculous growth and expansion.

Under these auspices physics and physiology became real sciences, not disconnected from pure or formal science which the reason had evolved, but in intimate union therewith, rising from the foresight, and giving rational light and abstractive reality. Then medicine, in the most comprehensive sense, arose to the dignity of a science, and the medical became distinctly and legitimately a profession.

Most true it is that doctors of medicine existed throughout the middle ages, and though the greater part of the art, such as it was, was exercised by ecclesiastics and situated in monasteries, yet as soon as the universities of Europe began to flourish, the teachers and prescribers of medicine were recognised, and degrees of honour given them, under the particular name of *physician* or naturalist. But not less is it true, that during this period the claims of individuals to professional dignity were derived from their connexion with the great seats of learning, and were grounded on their character as men of learning generally, and their connexion not indeed with any science truly worthy of that term, but still with what was then deemed science — astrology, astronomy half metaphysical and half traditional, herbalism, and alchymy. And under the supposition of their connexion with universal science it even then obtained the name and rank of a profession; but in how obscure and imperfect a state, a slight acquaintance with the history of medicine during the middle ages will inform us.

When astrology had faded away before the dawn of true astronomy, and the last dreams of alchymy in the ascending light of chemistry, Harvey, the first great anatomist, arose, and the science extended itself till it received an intelligible practical union with physiology and the laws of life; while at the same time by Boyle, and his associates, the more direct and extended knowledge of the mineral and vegetable kingdom was brought into efficient bearing on practical medicine, and the foundation of a scientific materia medica was laid. The union of science with common sense, the result of observation and experience, found its representative in Sydenham, and immediately after appeared, and all at the same time, three great masters of the profession, each the founder of a separate school, Boerhaave, Hoffman, and Stahl. In these it may be truly said, that the three great divisions of medical science, as having man for its object, might be planted. While the great mind of Boerhaave was happily, though not exclusively, directed to the human body as under the general laws of mechanics or chemistry, so that the iatro-chemical school with all its excellencies and disadvantages may be referred to him as the founder; his no less illustrious cotemporary, Stahl, equally benefitted science in an opposite extreme, in fixing the attention of modern physiologists on the influence of the mind, and demonstrated how large a portion, how important a part of its operations, were carried on without consciousness. But even his clear perception of this great truth led him into the error of confounding will in its most general sense with the mind of the individual, and hence he, as it were, personified both the power and the will by which he connected and identified it with the soul, and thus partially relapsed into the errors of the Helmontian period. But at the same time, as an intermediate stage between Boerhaave and Stahl, the celebrated Hoffman, with less genius perhaps, but with a steadier judgment, laid hold of the great practical truth, that the body to which medical science was to be applied was a *living* body, that the laws and susceptibilities of life should be the main object of investigation, and that the body in all deviations from a healthful state is not to be treated either on the one hand as an hydraulic machine, or on the other hand as a thing merely spiritual and intellectual, on which medicines were to act as by magic spells and incantations. Still, however, in the systems of these illustrious authors, we find all the three great principles constituting the living man; viz. first, the material substance in its connexion with the general laws of fluids and solids, mechanical and chemical, or if we may venture such an expression, the *corporeality* of man. Secondly, the vital principle which characterizes life, and by which the former is modified. And lastly, the mind or intelligent will influencing and controlling both.

It was reserved for our great countryman, John Hunter, almost within our own times, to lay the grounds of harmonizing the third distinction, that life, or the principle of vitality, is the activity of function displayed through organization. This vital principle is necessarily, in order, antecedent to organization, and is its essential condition. But as his theory stands, though perhaps obscurely expressed in his writings, this great man taught this law as the Newtonians taught us to consider gravitation not as a thing, not as spirit, neither as a subtle fluid, but as a law, comprising a specific characteristic. But this was not

all; invaluable as this service was, and most happy as its effects were in the improvement and increased light cast on surgery, he placed the seal on his labours by including the human anatomy in the science of comparative or universal anatomy. He commenced with the rudest forms of organic individuals, and thus supplied both the torch and the materials for his great successors on the Continent, who found in this universal anatomy, the grounds and occasion of a new science, still in its infancy, but in thriving infancy, the science of comparative physiology, and with that the well-grounded and not unconfirmed hope of making every part of organic creation give intelligibility to every other part, and all, to crown the epitome, presented in the human frame.

Had John Hunter performed no other service than that of thus bringing the whole art of healing, medical and chirurgical, into immediate contact with the sciences of nature, which without reference to their immediate practical application, and independent of all professional views, are cultivated by the purest and noblest minds, for their own worth,—if John Hunter had done no more than connect the medical profession with all that is ennobling in science, by a bond of analogy which never, without ignominy to the profession, and the forfeiture of reason, can henceforward be dissolved or broken, he would rightly take his place amongst the most eminent benefactors of mankind, and have left a name which every naturalist must hear with reverence, and which no physician or surgeon can pronounce without gratitude and filial awe.

In directing your attention to the beautiful, and evidently providential order in which the three great professions successively evolved themselves from their several sciences, I find, or rather have already found occasion to make a distinction apparently subtle, but in fact of great historical interest; viz., that between a profession living in a science, and a science continuing to live in the profession. Now the former, that is to say, the profession living in the science, is essential and indispensable to the very being of the profession. Science is the very ingredient, separated from which the compound would cease to be, otherwise than by a misnomer, a profession, and would fall back into an art. But in respect to the latter, the science continuing to live in the profession, there is not only no such necessity, but even the contrary; we may see a proof of enmity and aversion to science contemplated as a vivifying principle. The living principle of science, I say, whichever the science may be, has successively lived in each of the three great professions—yet in one only at the same time; but during this period, the profession in which it lives and acts will necessarily display the essential universality of all sciences, by comprehending in itself, though under its own form, the other two professions. We have seen this exemplified in the science of jurisprudence and profession of the law in the history of Roman jurisprudence. But even an ordinary acquaintance with the history of Rome will supply abundant illustrations of the position of the all-comprehensiveness of the sciences. Theology was admitted to be subordinate to the final cause of the law, shaped and modified according to special purposes, and enjoined and made obligatory, not as religion, not as truth, not as moral goodness, or duty, but as law. And if the medical profession appear less conspicuous, in the form of the Roman law,—and of frequent occurrence it confessedly is—the cause is to be found in the servile employments of medical practitioners, physicians, or surgeons. From Trajan to the age of Justinian, there must have been a period during which the scientific study of the law flourished among professors, though the science itself had ceased to receive growth or access. The profession, however, still lived in the science, and so long it remained honoured; but at length the profession sank, and the very name, throughout a long series of years, became the butt of the vulgar. This arose from the profession itself having fallen into the especial disesteem of mankind at large, and such indeed must, sooner or later, be the fate of every fall from high into lower rank, where the degradation has been effected by the apostacy of the fallen themselves from the essential character and dignity of the rank. It is not only true of the professions, but of the professions it is *especially* true. Language, in all the several dialects of the civilized world, supplies few terms so expressive of contempt and aversion as those which mention the lawyer, the physician, or the clergy, degraded into the petty-fogger, the quack, and the truckling, trading priest.

It is not necessary that I should pursue the illustration through the science and correspondent profession which succeeded to that of the law. It is matter of history known to all, that, with the establishment of the central power in the papacy, the church contained in itself all the sciences in its own characteristic science—metaphysics and logic, in the type of theology; but subordinate to its purposes. The institution of the canon law—the genius and spirit of the new-established kingdom—and, finally, the almost complete occultation of Christian doctrine, sufficiently tell one side of the story; but it would be ungrateful to forget the brighter side of the

question, and omit to mention the schoolmen of Lombardy, the Wickliffes, the Luthers, and Melanethons. The clergy, corrupt as they may have been, were the salt of the earth—were the appointed means who, for generations and generations, conveyed the inextinguishable lamp; and when we take a list of the great men who rose at the constitution of the Augustine monks, we cannot refuse our admiration to a soil capable of bearing such forests of towering trees — as many as the vast cedars of paradise.

Not only did the profession live in the corresponding sciences—as, under the auspicious influence of our not yet subverted institutions, thank heaven! it continues still to do—but until the dynasty of the Tudors the science lived in the profession.

At the reformation arose, grew, and flourished with the other sciences, the study of medicine, purified of material astrology and pseudo-spiritual influence; and with this *pari passu*, a distinct medical profession, the continued advance of which, in the universal estimation of civilized man, has been equally proportioned to the ever closer and closer connexion both of the profession with the science, and of its professors with the growth, progress, and expansion of science. As medical professors, we live in the science of physics and physiology; but likewise with a catalogue of illustrious names alike eminent as naturalists and physicians. The Boerhaaves, and Hoffmans, and Stahls, of successive generations, are ready to acquit me of all boast when I assert that not only the profession lives in the science, but that the science lives and grows in our profession.

Though perhaps less favoured hitherto than our elder sisters, by legislative patronage and national institutions, still the profession is manifestly evolving itself, and putting on a universal and national character; though in each department under its own form. Almost in our own time we have seen a new and distinct science, that of medical jurisprudence, rise, and still in the progress of forming itself: the science of medical police cannot much longer be withheld from the demands of a civilized and commercial nation; and if the benefits already given remain, and those yet wanting shall be supplied, a science of medical ethics will no longer be wanting. I cannot have before me the names and persons of the distinguished cultivators of medical science, whom, with unfeigned humility united with honest pride, I am permitted to name as my colleagues — without perceiving in some perhaps the infancy, but in all the germs of a new department of medical science—a new arena of honourable effort for the medical profession. As surely as man, the epitome of the world's life, subsists in a living intercommunion with all the world, and is destined to act on it by his wealth, his business, and the might of social union, —as surely as the same man, by his animal life, by his imagination, and by the appetites, passions, and affections which arise out of that life, is destined to undergo the re-action of nature and solicit her aidance – so surely I infer the rise, growth, and perfection of a medical botany, a medical chemistry, a medical meteorology, and, I at last hope, a medical psychology; and, thank heaven, we have many points in present view as well as a distinct prospect, if only the realizable condition be not withheld.

Of these conditions, the remaining time allotted to this address will confine me to one most immediately suggested by the place in which I am addressing you. To be an instrument in realizing this condition, has been the main object of this discourse. It has been my aim to prove, first, the vital connexion between each of the professions and the several sciences, especially their corresponding ones, so as to establish the balance between sight and insight, between individual skill and the general principles which determine its application. Secondly, the connexion of each several science, of each profession, with the universal sciences. Thirdly, as the result of both, the primary, the beneficial connexion, the acknowledged fraternity of all the professions with each other; deriving their best honours from the same fraternity, and by every motive of honourable interest and public duty implied and revealed in the protection and furtherance of each other.

Now, to those great and beneficial objects already stated and explained, I have to add the fourth – the connexion of all the professions with those national institutions to which *alone* the name of University can be legitimately applied. Change of time, of circumstances, the increasing number, wealth, demands and qualifications of a nation, will and must direct a corresponding expansion and accommodation of these venerable institutions, and will dictate a well-considered and cautious, but yet not too tardy, increase of their numbers. As, however, the professions of which they are the nursery, and which being many are yet, in their grand and essential constitution, but one, so that, in the common use of terms, it should be indifferent whether they are spoken of in the singular or plural—whether we say national university or national universities—I speak of no mere possibility, no fair, but unrealizable idea. Of this, the very names of Oxford and Cambridge will abundantly serve to acquit me. Each with its characteristic dif-

ferenee; each most honourably marked by the characteristics of its alumni and their own *alma mater*; and still more honourably characterized by their mutual respect; either, thank God, constituted to be the almoners of the whole community. But it is this circumstance which makes the alumni brought up at these institutions feel themselves men of the same class—children of a common household—whenever the occasion of playful comparison between the two is lost in the sense of their common standing. If there be on earth a work worthy of the meditation of the noblest intellect, and to the support of which every motive of philanthropy, patriotism, the love of science, and even the sense of moral beauty can minister, it is to require a practical modification of these institutions, according to their local position and circumstances; and yet, in this variety, to preserve the grounds of their common nature, the condition of their own organization. In this, as in all other human concerns, we must prepare ourselves not to repine at the absence of admitted advantages which the place precludes; much less are we to substitute a counterfeit resemblance for the reality, but seek for a compensation by other advantages which immediate objects prompt and require, and which are in like manner precluded from sister institutions by their peculiar objects. Nor will this, I hope, be found hopeless or unreasonable, if only the great common principle be held sacred—namely, that each university should be truly national, and therefore comprehensive, to the full extent, of the moral needs of a nation. You have in this the very condition of true nationality—viz. the cultivation of men who are to be the fosterers and guardians, and protectors of civilization in all.

In this spirit it is that each university may be expected occasionally to enlarge its possessions by new enclosures. It is in this respect that different universities in the same realm might each, not only without injury, but to the advantage of all, be distinct, and furnish the students, according to their nature, wise and intelligible grounds of preference.

I will venture to illustrate my meaning by a direct application to an institution, the interests of which must, of course, be nearest and most immediate to my own mind and the minds of the present auditory. I should act not only an unworthy part, but, if it were intended to flatter or please the predilections of those that hear me, a most mistaken one, if I undervalued, nay, if I disguised my own convictions of, the peculiar advantages in morals and manners, and the whole formation of the gentleman, which Oxford and Cambridge derive from the temporary domiciliation of the *alumni* within their magnificent halls and colleges—institutions, the beautiful relics of past ages, free from the evil which attached to them under the spiritual dynasty which with us has passed away, and retaining all the good which the existing times either require or expect.

Highly, indeed, do I venerate them in a threefold aspect: first, as honourable asylums of history, literature, and science; secondly, as comprising a great society, ever the same, and who may be considered as a lake, formed by the influx of continuous rills, for all the great services of the realm, and successively poured forth and diversified, to convey light throughout the land; and, lastly, as an intermediate repose,—a few waiting to fill places of the first class, and others preparing, and by the beneficence of past times, enabled to wait, for individual spheres of professional duty appropriated to their talents, acquirements, and character. I know not that we can too highly estimate the advantages to the kingdom at large, the special advantages to the gentry, and whatever is of a liberal nature, from this provision of an intermediate state between the full-grown schoolboy and the independent man—a state during the most perilous period of human life, in which the individual remains *sub tutelâ*, yet no longer as a boy, but as a commencing man, influenced by the character and laws of the institution, and gently coerced by a peculiar discipline, which even at the time he feels to be an honourable distinction, and which he knows hereafter will be considered by others to entitle him to a distinct rank in society. These, and many other advantages from the same source, I distinctly apprehend, and I can, with more perfect freedom from the suspicion of partiality than many of those now hearing could do, declare, that I never hear the names of our two great universities without an increased pride in my country.

These advantages may be incompatible in a metropolitan institution with other advantages of equal moment, which are locally demanded, and by which the former may be in part supplied, or altogether compensated. Numbers, which are of incalculable value, may be mentioned. Much may be done even by the harmonious combination of the preparing school with the maturing university in one system. It induces the alumni of the institution habitually to regard themselves as members of one body—brothers in the same household; to combine a correspondent life of honour, of self-respect, and of respect for each other as fellow-collegians; with the habit of despising the hollowness, the trickery, the ostentation, the littleness, which con-

sists in the ambition of being great to little minds, and the low arts of levying a lucrative tax on ignorance and folly, for the maintenance and thriving of pretended knowledge. In short, that purity of sentiment—that habit of honour and of gentlemanly feeling—in which the moral life of the individual breathes as in its natural atmosphere, with that unconsciousness which gives a charm to unaffected manners and conduct.

Again: the compensating advantages by which this institution may rationally be expected to rise progressively to honour and confidence, are great and evident, and at once correspond and are proportionate to the facilities of its location. And here in an eminent degree we may hope to find the common grounds of professional excellency gradually reduced to the most effective system, even because here the beginning, the end, the root, the stem, and the branches, are composed in one vein, and may be contemplated as a plexus of means to various ends, and united in the same ultimate end. It is possible, and should it prove actual, it will be no subject of regret, that in cultivating the progressive extension of the pure sciences, and in the glorious researches of learning, the elder Universities will take the lead; but, on the other hand, with the knowledge that stands in most immediate connexion with the spirit of the age, with the temporal and physical needs or enrichment of society,—with the external application of this knowledge in all the sciences which have the forms and products of organic and inorganic nature for their material, with the continued application of these to the well-being of the community, as their object in the professions that have arisen, or may arise out of them, and in which the medical profession, in all its various branches, must at all times fill the largest space and occupy the most prominent situation;—I am at a loss to determine which to declare the greater; the peculiar facilities furnished for the improvement of these advantages, and the extent to which the power of participating in them may be augmented in an institution appropriating the means and commanding the resources of this great metropolis, or the necessity and public urgency of providing for the spirit of intellectual expansion and growth which, in some form or other, must exist as a living energy throughout the whole empire. This spirit, we acknowledge, should be connected with whatever is venerable in our native land. We speak of our Alfreds, our Wicklifles, our Cranmers, our Bacons, our Boyles, our Sydenhams, and our Hunters, as beings that still belong to us, as parts of the great organization which their spirits have aided to evolve. It is only by the institution and protection of this and similar great seminaries of learning, in which are cultivated the sciences – anterior to science as connected with the corresponding profession—in the unity of the spirit, under the sense of a common derivation, by the fraternizing habits of a common object; with the members of all the several professions thus acknowledging a common birth-place, which will tend at once to a re-union of all the learned classes; every member of which will be enabled and disposed to regard the progress of another profession as being that of a partner, whose authority and whose influence, whenever rightly directed, he is bound by duty, and prepared by impulse, to support and render effectual.

It would be easy, moreover, to shew the peculiar expediency, nay, moral necessity, of giving to the physical sciences, and the medical as their correspondent profession, a high and important place in a metropolitan university—a university which may become the eye and heart of this great metropolis of the political and commercial world. It would be easy to place this necessity in a still more striking light, could I do it without pain to my own and offence to your feelings, by presenting the full view of the effects and consequences of a contrary plan—of an extensive, active, multiplying profession detached from universal science, and yielding to an ever increasing tendency to empiricism and empirical novelties unsustained by religion, detached from all the institutions that have been the precious birthright of an Englishman. But the picture would be too sombre, and I trust it may be in other countries than our own, that we may be compelled to look for the consequences of professions divided from each other, and having no common bond.

This college has arisen under purer auspices, and I have still faith enough in the English heart of my country to believe that under these auspices, so long as its objects are national, it shall continue to expand and prosper in all its departments. In this belief I utter the name of King's College, and with my heart and soul exclaim—*Esto perpetua!*

ST. BARTHOLOMEW'S HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

Allow me to forward you the following interesting case for insertion in your valuable journal, and remain, sir,

Your obedient servant,

A. M. M'Whinnie.

House Surgeon's Apartments,
St. Bartholomew's Hospital,
October 4, 1832.

Case of "Tremblement Mercuriel," or Mercurial Affection from the process of Gilding, successfully treated by the administration of Conium.

Richard Brown, æt. 35, of spare habit, but good constitution, was admitted, under the care of Mr. Earle, on the 1st of September last. He had been from his youth employed in gilding; from which occupation, however, he had never experienced any disorder, or ill effects, until a fortnight prior to his admission into the hospital, when, after a day of unusually laborious work, he was suddenly seized with cramps in the fingers, which were shortly followed by a shaking and tremulous motion of both upper extremities. They were slight at first, but gradually increased, so as to become very distressing. This agitation of the muscles continued even during sleep, and was accompanied with a gnawing pain, as he expressed it. With the exception of slight pain and heat about the head, his general health was not much affected.

During the first four days, mild purgatives were given him, and leeches, with cold evaporating lotions, applied to the head.

September 6th.—The symptoms have become still more general, the lower extremities having been affected the previous evening, so that, in fact, the whole body appeared in constant motion. The bowels rather costive, but entirely free from pain. Towards the latter part of the day, the tremulous motion of the muscles of the right arm subsided, but the limb remained almost paralysed.

Ordered Ol. Ricini, ℥ss.; Ext. Conii, gr. v. fiat pil. j. ter die sumenda.

From the day on which he commenced the conium, the patient experienced a gradual remission of his symptoms, and at the expiration of about ten days they had almost entirely subsided. At this time, "pilulæ panis" were substituted for the conium, when the patient immediately fell into the same state; the symptoms recurring in perhaps a still more aggravated degree. The conium was again administered, and with its former good effect. He has just left the hospital, apparently quite well. He was, however, recommended to continue the use of the conium for a week or two longer.

SIR W. RUSSELL AND SIR D. BARRY.

Sir W. Russell and Sir D. Barry have just received, through Prince Lieven, diplomas constituting them honorary members of the Imperial Academy of Medicine and Surgery of St. Petersburgh. His Majesty the Emperor had already conferred upon these gentlemen the collar of the order of St. Anne of Russia.

WEEKLY ACCOUNT OF BURIALS,

From the Bills of Mortality, *Oct.* 2, 1832.

Abscess	3	Inflammation of the Bowels & Stomach	7
Age and Debility	73	Brain	2
Apoplexy	6	Lungs and Pleura	9
Asthma	15	Insanity	5
Cancer	2	Jaundice	1
Childbirth	6	Liver, Diseases of the	7
Cholera	73	Locked Jaw	1
Consumption	109	Measles	15
Convulsions	34	Miscarriage	1
Croup	6	Mortification	9
Dentition or Teething	5	Paralysis	2
Dropsy	32	Rheumatism	2
Dropsy on the Brain	17	Small-Pox	19
Epilepsy	3	Sore Throat and Quinsey	1
Erysipelas	2	Spasms	2
Fever	22	Stricture	2
Fever Intermittent or Ague	2	Thrush	5
Fever, Scarlet	18	Tumour	1
Fever, Typhus	3	Venereal	2
Gout	1	Unknown causes	1
Heart, Diseases of	6		
Hooping-Cough	9	Still-born	16
Inflammation	54		

Increase of Burials, as compared with the preceding Week . . . 140

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

September 1832.	Thermometer.		Barometer.
Thursday . 27	from 41 to 70		30·14 to 30·09
Friday. . . 28	41	67	30·07 30·01
Saturday . 29	40	69	29·99 29·92
Sunday . . 30	50	67	29·89 29·93
October.			
Monday . . 1	48	65	29·98 29·94
Tuesday . 2	50	63	29·89 Stat.
Wednesday 3	41	63	29·89 29·77

Wind S.W. and N.W. the former prevailing.
Generally cloudy, with frequent rain.
Rain fallen, ·5 of an inch.

NOTICES.

The Report from the General Dispensary, as well as numerous papers, are unavoidably postponed.

Mr. Roberton's paper, if possible, next week.

BOOKS RECEIVED FOR REVIEW.

Dr. Copland's Dictionary of Practical Medicine. Part I.

Dr. M'Cormac's Observations on Spasmodic Cholera. Second Edition.

Mr. Prater's Experimental Inquiries in Chemical Physiology. Part I. (complete in One Volume) on the Blood: with Remarks on Cholera Asphyxia.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 13, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

Lecture II.—Part II.

Papulæ.

I began, gentlemen, at the last lecture, the consideration of diseases of the surface of the body. Among these we began to consider those which are inflammatory; of those which are inflammatory we began to consider a number which are characterized by mere inflammation, without any collection upon the surface of the inflamed part—without any thing contained within the cuticle—without any collection of water, vesicles—without any collection of pus, pustules—without any scales, scabs, or crusts, or any thing else; but those in which we have simple redness of the skin; —and among these we began with those in which the inflammation is exceedingly minute—confined to spots. Of these diseases there are three; the strophulus or red-gum of children, the lichen of adults, and one which has not yet been considered —prurigo.

These affections are all characterized by little, minute, red spots on the skin, called papulæ; which you will recollect are defined by writers on diseases of the skin to be very small acuminated elevations of the cuticle, with an inflamed base, not containing fluid, nor tending to suppuration.

The first of these (the strophulus or red-gum of children) I told you appeared under different forms. Sometimes there is a large number of minute red dots between the papulæ, and then it is called *S. intertinctus.* These minute red dots, not larger than specks, are called *stigmata.* They do not form a disease, but they occur in the midst of other affections, and are called stigmata. Dr. Willan defines them to be bright red specks, without any elevation. In strophulus, lichen, and prurigo, the skin is elevated—there is an acuminated elevation —but in the midst of these you sometimes observe these stigmata. Plate I. contains a good representation of them. I mentioned that sometimes the papulæ of strophulus are white rather than red, and then it is called white gum instead of red gum, *S. albidus.* If these white papulæ be pretty large, and have no inflammation at their base, it is then called *S. candidus*—Plate iii. fig. 3. If they be collected together in any quantity it is called *S. confertus*—Plate iii. fig. 1. Now and then the affection is very evanescent, and then it is called *S. volaticus* —Plate iii. fig. 2. In this form the papulæ are collected in circular patches. I believe I stated that the same disease of strophulus, when it occurs in adults, is called lichen. If this affection occur in the most simple form, it is called *L. simplex*—Plate iv. fig. 1. In a very severe form, it is called *L. agrius*—Plate iv. fig. 2. If the papulæ occur at the root of the hairs, it is called *L. pilaris*—Plate v. fig. 1. If the papulæ are dark, it is called *L. lividus*—Plate v. fig. 2. If the papulæ be collected into patches, regularly circumscribed, it is called *L. circumscriptus*—Plate v. fig. 8. I will only trouble you to remember that these varieties of form will occur; you need not trouble yourselves with the names. I mentioned, that, in hot countries, this disease is sometimes attended with a very high degree of pricking, or burning, without any eruption; and it is then called *L. tropicus.* If the skin be raised into bumps, almost like nettle-rash, it is called

L. urticatus; but then you ought to call it urticaria.

Prurigo.

I will now proceed to the consideration of the last of these three papular diseases. Dr. Willan makes three of them, but you might as well say there are but two. You will remember that not one of these affections is contagious. The disease of which I will now speak is called *prurigo.*

Symptoms.—In prurigo the papulæ are very little discoloured; they are nearly the same colour as the skin, but they are larger than in lichen. They are particularly characterized by itching, and the itching is a far more striking symptom than the eruption itself. That is not the case in the other two varieties, except in that form called *L. tropicus.* In it there is a very severe eruption, whereas here the eruption differs but little from the adjoining skin; and the papulæ also vary from lichen in not being so pointed. So severe is the itching, that people scratch themselves till they rub off the surface of the papulæ, a little blood exudes, (a very minute portion,) and then it forms a little black crust, so that the papulæ will have an artificial black top; and from scratching them water will ooze as well as blood. This, however, is incidental, and has nothing to do with the complaint. If the patient will continue to scratch, he may cause these papulæ to be converted into vesicles; if he scratch still more, suppuration will take place, and he will have pustules; and the skin may be brought into such a state that it will crack and become indurated and hypertrophied. This is a chronic disease; lichen and strophulus are sometimes chronic and sometimes acute; but this usually lasts a considerable time, unless it is properly treated at an early period.

Species.—If it occur in the mildest form, it is called *P. mitis.* This chiefly affects the young. The disease altogether, in every variety, affects both the young and the old; but that called *P. mitis* principally affects the young, and it occurs particularly about the spring or beginning of summer. It is said by some to degenerate into the itch; others, however, deny this. Sometimes the eruption is scarcely visible at all; there is intense itching, but it is rather difficult to find out any eruption. It will remit, but sometimes it will intermit—come and go entirely. If it be very severe, there is an epithet added to the word prurigo to signify great intensity; and, from the itching resembling so much the bite of an ant, it is called *P. formicans,* which is a very severe—I may say a dreadful disease. It affects adults at all periods, but not children; and it occurs in every part of the body except the palms of the hands and the soles of the feet. Occasionally it is preceded by feverishness, pyrexia, by pain of the head, and by sickness. There is a third form, confined to old age, and that is called *P. senilis;* and this is likewise a very severe form of the disease. I should sometimes be at a loss to distinguish between *P. formicans* and *P. senilis,* for the former only occurs in old people. I think it would be better to say that this is a disease which sometimes is mild, but that now and then it is severe. If it attack old people, it generally continues very obstinate for a great length of time. Plate vi. fig. 1. represents *P. mitis;* fig. 2. *P. formicans;* and fig. 3. *P. senilis.* There are no scales, no scabs, no water, no pus.

Now this disease is not dangerous to life, but it is sometimes really a most dreadful disease—dreadful, I mean, so far as suffering is concerned, and, for what I know, it may injure the general health. I have known the intense suffering sometimes cause imbecility of mind. The intense suffering has continued month after month, and indeed year after year, and has produced such depression of spirits, and such exhaustion of mind, that persons have become imbecile, really worn down, and a sort of fatuity has arisen from mere exhaustion. I once had a man come to me at St. Thomas's, when I attended the out patients, in this state. He pulled off his coat, opened his bosom, and shewed me every part in an instant—he was so quick in all his movements. He then pulled a comb from his pocket, and assured me that was the second comb he had bought, having worn out the first in scratching himself. I have no doubt this was true. The itching was most intense, and he had been in this state two or three years, and therefore there had been time to wear out a comb. About three years ago, I had a man who came to the hospital, and whose sufferings had been nearly as intense. The idea had not occurred to him of buying a comb, but he well used his nails in scratching himself. His mind was as much gone as that of the other patient; he was really falling into childishness.

This disease is sometimes local; it attacks a particular part of the body only; is not diffused. It then affects particularly the scrotum of the male and the pudendum of the female. The scrotum from constant irritation, from the patient everlastingly scratching himself, becomes scaly and very much indurated. It will attack the prepuce, and then it is called *P. præputii.* Sometimes it has occurred within the urethra, *P. urethralis.* It will sometimes affect the extremity of the rectum, *P. podicis.* The worst seat of it, however,

is in the pudendum of the female, *P. pudendi muliebris*, and there it is sometimes very violent, very distressing, so that a woman cannot go into society at all; she cannot appear before men, nor can she indeed appear before strange females, in consequence of her being under the necessity of scratching herself. I have known women driven almost mad with the vexation of finding that they were not able to pass five minutes without scratching themselves violently. I saw one woman who was obliged to get up several times in the night, being unable to go to sleep, till at last the heat became so great that she was compelled to get out of bed and wash herself with cold water; and so she had passed every night for months, when I saw her. The vagina and the inner surface of the labia in these cases, when they are very severe, become thickened, and bumps of induration—small indurated portions—are formed here and there: they are not properly tubercles, but have a tuberculated appearance. When this occurs in females, it excites a desire of copulation more and more, and this relieves it for a time, as they have told me, and then in a short time they are worse than ever. It is impossible for them to get relief in this way every moment, and I advised the woman to whose case I had just referred, and who told me that she lived separately from her husband, to use nothing but cold water. It is really, though not dangerous to life, a distressing disease, and women will cry and absolutely wish for death when they are labouring under it. I cannot conceive any thing more lamentable, and, if it occur to a modest woman, it is the most horrid sort of case that can come before you. It rarely occurs in females before the middle period of life. Dr. Willan says, that aphthæ may appear in the anymphæ and internal part of the labia, and be communicated to the glans and internal part of the prepuce of men; but are easily cured, and that they and *P. pudendi mul.* often occur after the fourth month of pregnancy.

The mild form of prurigo may be mistaken for itch: I will not trouble you with the diagnosis now, but advert to it when I speak of itch; I may, however, mention that it will occur in every part of the body; it will occur in the face as well as other parts, but the itch, I believe, will not: and prurigo is not a contagious disease.

Treatment.—With regard to the treatment, however, supposing it to be the mild form of the disease, it is right to make a patient avoid stimuli of every sort—pepper, mustard, wine, beer, &c. Many persons have a tingling immediately on taking certain articles. If I take a grain or two of pepper, or taste vinegar, I have an itching of the scalp, and wherever I am I must begin to scratch my head. If I take opium, I have a violent tingling of the nose for many hours afterwards. Now all these matters, especially mustard and pepper, are likely to increase the affection if it be present. If a patient will bear it, it may be right sometimes to take blood; at any rate it is proper to purge him moderately, and I should advise alkalies, as there is often an acidity in the stomach. But there is a remedy from which I have found greater relief than from any other, not in the mild form only, but in the severe, and one of these men was cured by it, at least he was so far relieved that I could keep him no longer in the hospital, and that is, colchicum. I am sure that if you purge with colchicum, you will find more benefit than from any thing else. In the mild form of the disease, undoubtedly, this is the best remedy. Patients should avoid going near the fire, or taking much exercise, so as to irritate the skin; but I am quite satisfied that colchicum is the best remedy you can employ internally. As to the itching itself, that is very much mitigated by diluted acids, such as vinegar, and also by the chloride of lime or of soda. These produce a very great mitigation of the itching. You will also find relief sometimes from a fomentation of prussic acid. The woman who was so bad from *P. pudendi muliebris*, found great relief for a time from applying prussic acid. She used it at length to such an amount, and of such a degree of strength, that it produced giddiness and fainting, so that she could not stand it, and yet it did not cure her complaint. It appeared at last that the best thing was a cold application, and therefore she had a pail of water brought into her room at night, which she used incessantly. I believe this local prurigo will occasionally arise from some local cause of irritation. Worms in the rectum will produce *P. podicis*: and a stone in the bladder is sometimes attended with a violent itching of the prepuce. In women it sometimes attends structural disease of the womb. It is right to endeavour to ascertain whether there is a local cause, and if there be, you must endeavour to remove it; but, if you cannot find a local cause, then I believe the application of the chlorides, or prussic acid, or cold water, is the best thing. Some tell me that they have seen great relief from what is called the yellow wash—oxymuriate of mercury and lime water. It is much about the same thing as using the chloride of lime. The French use sulphureous baths, and emollient baths containing gelatine, but I have no experience of them.

EXANTHEMATA.

We now proceed to another class of diseases in which the redness is not confined

to spots, but forms patches. Such diseases as these are called *Exanthemata*, or, in English, *Rashes*,—a rash being an extensive redness of the skin.

In these diseases there are not pimples—spots, but patches, the same thing precisely, only of greater extent. They are defined by Dr. Willan to be "red patches, variously figured, in general running together, confluent, and diffused irregularly over the body, leaving interstices of a natural colour, and terminating usually in cuticular exfoliations, though sometimes disappearing without any such exfoliation." The former class of diseases, papulæ, you will remember, either terminated without any thing following, or induced a scurf: these, being a more extended redness, being patches instead of pimples, are followed, not by scurf, but by an exfoliation of the cuticle. Large portions of cuticle separate, and therefore, instead of being branny or scurfy, it is in plates.

These exanthemata often render the surface uneven, by elevating the portions affected. The brightness is variable, and sometimes, Willan says, extravasation occurs.

Now the chief diseases of this description, are, in the first place, erythema and roseola, which I will unite together, or endeavour to do so, as I did lichen and strophulus; the next is measles; the next scarlatina; and then urticaria. Some of these are contagious, and others not. None of the first class were contagious, but two of these are, namely, measles and scarlet fever. These two usually occur but once during life. The two first of these affections are very slight, just like lichen and strophulus, and are not contagious.

Roseola.

The first of these is roseola, and it is merely worth knowing lest you should mistake it for something else. Roseola is described as having rose-coloured patches without wheals, without little bumps, without papulæ, without minute elevations of the skin, and these patches are circular or oval: Plate xxv.

Species.—It occurs at all ages, but especially affects children. When you see children with little rosy patches of the skin, circular or oval, the disease is called *Roseola*. There is an itching sometimes attending it, and sometimes only a tingling. If it occur in children, it is called *R. infantilis*. The patches are of all sizes, and sometimes they are diffused very generally over the body, but if not, still they are pretty numerous. It is a trifling eruption, and seldom lasts more than four or five days. If the patches be round, it is called *R. annulata*. Sometimes there is a little feverishness, a little irritation of the bowels; and those symptoms generally occur from two to seven days before it appears. It is usually a superficial complaint, very innocent to the body, very short in its duration, and after it, there is scarcely any exfoliation. It is said by Rayer, that the character of this eruption is, that, after pressure, the redness returns at all points. In scarlet fever, if you press the rash, the redness, on removing the finger, returns from the circumference of the part; but, in roseola, every part recovers its redness at the same time. I never made the observation myself, and therefore cannot answer for its accuracy. Now and then it might be mistaken for scarlet fever; but, he says, that you may distinguish between the two affections by noticing what I have just stated.

This is a disease of so short a duration that it never becomes chronic unless there be many attacks of it—unless it be remittent. If it come and go, a patient may be troubled with it for a length of time, but the disease never remains incessantly for any long period. In the spring and summer it will no doubt frequently arise from the heat of the weather, but frequently it happens without any evident cause whatever. If it occur in the summer, it is called *R. æstiva*; but if it occur in the autumn, it is then designated *R. autumnalis*. If it occur in small-pox, it is called *R. variolosa*; if in cow-pock, *V. vaccina*. It has various names, just according to these circumstances, which names it is quite nonsense to attempt to remember. Occasionally you will see such rosy patches in continued fever, but still it is called roseola. The redness of the skin which you observe in gout is called roseola. The redness of the skin which you observe in rheumatism sometimes, especially of the fingers, bears the same name. Occasionally the mucous membrane of the throat suffers the same degree of redness, more particularly the pharynx. It would appear that occasionally something of the same nature occurs in the stomach and intestines; at least, when there is this eruption of the body, there will be a violent degree of heat in various parts of the abdomen. After inoculation for small-pox, this little redness will take place before the pustules appear, (they say in one out of fifteen cases,) and inoculators used to imagine that it betokened a mild form of the disease; but if the redness were general and deep, and there were much pyrexia, they supposed it indicated that the disease would be severe—would be confluent. The roseola which occurs in cow-pock, generally appears on the eighth or ninth day.

Treatment.—The disease requires no treatment whatever unless you choose to lower the child's diet, and give it a dose of physic.

You will find this disease represented in Plates xxv. xxvi. xxvii. The great importance of knowing this rash is not to cure it, but to be aware that it is not another disease, because many children have been said to labour under measles, or scarlet fever, when they have only had this redness of the skin. You will hear of children having had measles and scarlet fever half a dozen times, whereas they had merely this little redness of the skin, called roseola.

Erythema.

Now the next disease is separated from it by writers, and called *erythema.*

This disease is said to consist of red patches, or diffused redness, often affecting the subcutaneous tissue, so that there is a little swelling. To shew you the absurdity of distinguishing these two diseases, I may mention that one is called *red patches, variously figured and irregularly diffused*, and the other is called *red patches, or diffused redness.* I am sure it is frequently impossible to distinguish between these two diseases.

The different varieties of erythema are much more unlike each other than many cases of erythema and roseola. All that you have to remember is, that a little redness is called roseola, or erythema; that roseola occurs particularly in infants, and erythema occurs sometimes in rather a severe form.

Species.—It may be transient, and last only about a week, and then there is furfuraceous branny desquamation. Sometimes it is local, and will arise from friction, and then it is called *E. intertrigo.* If the skin be irritated in the groin or arm-pits, the motion of the parts increases the irritation; and if they be accidentally irritated by the dress, then the redness will increase, and this is sometimes called *intertrigo.* However, when this redness is slight, it is called *E. fugax.* If the skin be very smooth, it is called *E. lævе.* If it have a distinct margin, it is named *E. marginatum.* If there be small papulæ, it is designated *E. papulatum.* If, instead of papulæ, you have slightly elevated tubercles, it is called *E. tuberculatum.* If you have large bumps, it is then designated *E. nodosum.* You have seen legs become bumpy and red, and that is an instance of E. nodosum. You also well know, and you will remember, the shining appearance sometimes of an inflamed œdematous leg, and that state is called *E. lævе.* You may as well say that there is erythema with a smooth shining surface, as trouble yourselves to recollect that it is called *E. lævе.*

Causes.—This disease is now and then preceded by a little illness, which disappears when the eruption occurs, and now and then there may be a little feverishness during the attack, but for the most part it is a trifling complaint, or it is consequent upon some other affection. Rayer considers that when there is an internal affection, the disease is the sympathetic effect of the internal irritation—that an irritation of the stomach or intestines is the real cause of the disease, and not that this disease itself is at all capable of affecting the constitution. When persons are out of health, there will be an external inflammation without any contents at all, and that inflammation is called erythema.

But there is a form of this disease which is very obstinate, and you are sure to be consulted upon it. It appears in great patches, chiefly on the legs, and particularly in females. If you draw your fingers along the legs, you will find bumps very hard and red, and it is called *E. nodosum.* Plate xxxii. fig. 1, represents this disease. It is really worth looking at, because it is accurately delineated in this plate. You will be continually consulted respecting it, and asked to give it a name, and if you cannot, you will be considered a goose. Of course patients place the more confidence in you if they fancy you know what is the matter with them, and it is very natural that they should do so. It is very easily cured if treated properly at first; but if it be neglected, it is a very obstinate affection.

Now and then, instead of bumps, you have tubercles, in the common acceptation of the word. This is represented in Plate xxxi. fig. 1. This affection, as I just now said, is called *E. tuberculatum.* You see that these are all superficial rednesses. The tubercles are like peas. It is worth knowing, because patients die when they have it, though I do not know that they die *of* it.

Treatment.—Now the best treatment for this disease is anti-inflammatory; in fact, just the same as for all the others that I have mentioned. If the patient's strength will bear it, you may take away blood with advantage, and you generally find it buffed and cupped. You may also purge the patient; in fact, you may treat him on the antiphlogistic plan: either purge him alone, or bleed him at the arm. If there be anasarca of the legs, you may favour its removal by posture. You cannot expect the erythema to disappear while the leg is hanging down; it arises from the distention of the part; and if the distention of the part be allowed to remain, nothing will remove the erythema. The general rule, however, is to treat erythema as you would any other inflammation.

In the erythema which occurs in the legs of females, you will not only find very

great use from these measures—that is to say, bleeding in the arm, the application of leeches to the neighbourhood of the part, and active purging; but you will find more benefit from colchicum than from any thing else. I have had great experience in the treatment of this disease, and I know the comparative efficacy of combating it by purging with common cathartics, and by purging with colchicum. You will find colchicum the best medicine you can employ, not only in severe prurigo, but in this species of erythema.

I mentioned to you that, in one variety of this affection, there was great redness of the skin, with hard lumps—not so large as in *E. nodosum*, but small lumps about the size of peas, or small-pox pustules. This is a state of the parts which I have never seen but once, and then I confounded it with *E. nodosum*, and thought nothing of it, imagining that I could cure it. The lumps had no sooner disappeared than the man became paralytic, and then hectic, and died in an extraordinary way, with symptoms of various diseases. I was not then aware sufficiently of the distinction of the disease into *E. nodosum*, which is an innocent disease, and into *E. tuberculatum*; but Dr. Willan says that he had seen only three cases of *E. tuberculatum*, and all of them proved fatal. Two of his patients died of hectic, just as mine did, and one died of subsequent hydrocephalus. My patient died hectic, and if he were not hydrocephalic, he had affection within the brain, for he was paralytic. Dr. Bateman says that he never saw the affection.

The treatment, I presume, would be the same as for *E. nodosum*—a certain degree of bleeding and colchicum. I gave it to this man, but to my astonishment he did not get well. Of course, this disease does not give rise to paralysis or hectic, but I presume it is one which only takes place in constitutions which are exceedingly bad—which are strongly disposed to some internal disease, and when the patient is on the eve of labouring under it.

When you see patients with red patches on the skin, of this description, and with scarcely any complaint, you may be sure that the affection is erythema or roseola: call it which ever you please. Now and then you have it very troublesome in females, and with bumps; and now and then you have the tubercular form, which is usually the prelude to a severe and fatal complaint.

The next diseases in this order are very important—measles and scarlet fever; but it is well to get over those which are slight first.

OBSERVATIONS ON PARTURITION.

TAKEN FROM A

Lecture delivered at the Theatre of Anatomy and Medicine, Marsden-Street, Manchester,

October 3, 1832,

By John Roberton,

One of the Surgeons to the Lying-in Hospital.

It has always been the policy of those who decry man-midwifery, to instance the ease and safety of parturition in brutes, and in women amongst savages; and thence to infer, that the same process in civilized society would be equally safe and easy, were it only left (as they contend it ought) to the efforts of nature, and the assistance of matrons. These objectors, it would appear, forget that the practice they recommend was universally followed, in every country in Europe, till little more than a century ago; and that it was gradually abandoned, apparently, through the influence of increasing humanity and intelligence.

The assumed safety of parturition in brutes, of which I shall speak first, involves considerable fallacy. In brutes, it is true, we discover a wonderful degree of perfection in the performance both of the organic and animal functions. But this can be said of them in the wild state only. In that state they rarely exhibit varieties in any respect; that is to say, they very rarely deviate from the primal type of the species to which they belong. In colour, form, habits, and what is of much importance in the present argument, size, they are produced the same in successive generations. In a herd of Bisons, for example, amounting perhaps to many thousands, it is, generally, impossible to detect even a single instance of deviation, in regard to colour, from the natural dun. In our common domesticated animals, a similar uniformity of type is soon produced, when they are turned loose to breed in the wilderness. This is seen in the horses and cattle which the Spaniards, selecting from the various breeds of their own country, introduced into the savannahs of the new world. There they are found, in vast herds, not, as in the domesticated state, of various colour, and size, but of a brown bay—a colour common to a great number of wild quadrupeds; and, in other respects, presenting the uniform features of *feræ naturâ*. These circumstances naturally lead us to infer, that monstrosities, as well as diseases, must be unknown among wild animals — an in-

ference near the truth; yet we shall err, in regard to this point, if we venture to generalise without a careful examination of facts; for although it be true that monstrosities and diseases are extremely rare in wild animals, various instances of both have been known, and were our opportunities of observation greater, probably we should discover more. Camper, a high authority, assures us that he had in his possession specimens of malformation belonging to nearly every species of animal: among others, a gazelle with two heads; also a serpent and a tortoise, each with two heads; and a lizard with the two hinder feet in one. In the great work of Daubenton, examples, I believe, are given of a similar kind. Of the diseases of animals, in their wild state, we are not likely to know much; yet we are not without a number of observations on this point, for which I refer you to the works of Camper. I will merely mention one instance, on the authority of Adair. In the year 1766 an epidemic malady prevailed among the wild beasts, particularly the deer, in the remote woods of West Florida. The Indians, in their winter's hunt, found several lying dead; some in a helpless condition; and others fierce and mad.

The condition of domesticated, is extremely different from that of wild animals. No sooner are the natural habits of animals modified by the influence of man, than a great variety of changes rapidly ensues. Each particular species soon presents, within itself, remarkable diversities, in colour, instinct, figure, and size. They now become liable to numerous diseases; and exhibit likewise almost as great a variety of congenial imperfections as man himself. But of all the organic changes to which they are subject, none is more prominent and worthy of our attention than that which respects the generative system. Frequent sterility now succeeds to uniform fecundity, and abortion, in some species, becomes so frequent, under particular circumstances, that the disposition is even thought to be propagated by a specific contagion. Be this as it may, it often pervades an entire dairy; and is extremely difficult of remedy. So far, again, from bringing forth their young, with uniform ease and safety, the mortality resulting from parturition, under certain circumstances which I shall specify, is incomparatively greater than it is in our own species. And even when the circumstances are of the most favourable kind, this act is attended with more or less pain, and, occasionally, with risk to life.

Without enlarging on the subject of comparative obstetrics, (although I must be permitted to say, that I regard it as one of high interest to the student of midwifery,) it may be well if I make a few remarks, and state one important fact respecting it, derived from a practical person every way worthy of credit*.

Of course those domesticated quadrupeds only, which bring forth one, or not more than two or three young at a birth, call for remark. In such as have a numerous litter, as the sow, the young are individually so small, relative to the size of the mother, as to preclude almost the possibility of causing much difficulty in the birth. Notwithstanding this, I have known parturition fatal to both the cat and the bitch, which, as you know, have a numerous offspring.

It may, I think, be regarded as a law, that the parturient act, in domesticated animals, is easy or otherwise, in proportion as they are subjected to a more or less laborious life. Hence the mare, which is seldom permitted to be idle, rarely dies in parturition. It is in the cow and the sheep, particularly the former, that the act of bringing forth their young is so often attended with difficulty, and even with fatal consequences. In country dairies, where the cow is daily abroad in the open air up to the period of calving, and feeds upon herbage, parturition is comparatively safe and easy; less so, however, I am inclined to think than in mankind; but in town dairies (you are aware that in most great towns very large dairies are kept) the act of parturition is incredibly dangerous, so much so, that it is seldom the dairy proprietor chooses to keep the same cows for more than one year. During each season he sells off his stock, and supplies their places with cows in-calf, purchased from the country farmer; and these he does not admit into his cow-house till they are within eight or ten days of the period of calving. When, on account of her good qualities, he is induced to retain a milch cow year after year, the risk in parturition, and from its consequences, is reckoned equal to one-fourth of the value of the animal.

Thus we find that in town dairies, where the state of the cow is wholly artificial, (that is, where she is never turned out to take either air or exercise, and is fed not on herbage, but chiefly on warm boiled grains,) parturition is attended with extraordinary risk; a risk fifty-fold greater than occurs in the human kind, even under the most unfavourable circumstances that are known.

The next argument on which the opponents of midwifery, as a science, found their objections, is the ease and safety of

* The individual alluded to was for some time the superintendent of a dairy in the neighbourhood of Edinburgh, consisting of about 300 cows.

labour among such savages as the American Indians and the New Hollanders, where, say they, men-midwives are unknown; and woman, like every other animal, brings forth her young by the aid alone of that all-sufficient midwife, nature. Whether or not it be true that women, in this state of society, bear children with more safety than those of our own country, we shall presently inquire. I readily admit, however, that the women of savages experience less pain during parturition, and, comparatively, still less danger and suffering in the puerperal state, than the women of civilization. This is owing to a variety of causes which may easily be pointed out. In a rude condition of society, a great proportion of females, and especially such as are feeble and deformed, are destroyed in infancy. This practice obtains, more or less, in perhaps every tribe of barbarians of whose manners we possess any knowledge. Hence, of course, the healthy, vigorous, and well-formed, alone are reared, and live to become mothers. The life also of women, in such a condition of society, is incredibly hardy and toilsome; and this, by at once invigorating the organic frame, and limiting and repressing the influence of the mind on the body, renders them of a singularly *inirritable* constitution,—almost in the degree of wild animals. Far less sensible to pain than the civilized portion of their sex, they speedily recover from severe wounds, and other bodily injuries, with little or no sympathetic fever. It is of such women as these that James, the scientific narrator of the American expedition from Pittsburgh to the rocky mountains (when speaking of the Indians in their native wilderness) remarks: "During pregnancy the squaw continues her usual avocations, and even in its most advanced stage she neither bears a lighter burden on her back, nor walks a shorter distance in a day, than she otherwise would. If on a march she feels the pains of parturition, she retires to the bushes, throws her burden from her back, and, without any aid, brings the infant into the world. After washing in water, if at hand, or in melted snow, both herself and the infant, she immediately replaces the burden upon her back, weighing perhaps between 60 or 100 pounds, secures her child upon the top of it, protected from the cold by an envelope of bison robe, and thus hurries on to overtake her companions."

If we are to believe many who have lived among barbarians and written of their habits and peculiarities, childbirth in them is uniformly easy and expeditious; nearly as much so as the performance of the simplest of the animal functions. A considerable variety of recent, credible, and highly valuable evidence on this point, however, (furnished chiefly in casual hints and allusions, which is by far the most unexceptionable kind of evidence), leads me to form a very different conclusion. So far is parturition from being *easy, expeditious*, and *safe*, in every instance, we have reason for thinking that *truly difficult* labours are, proportionably, as numerous with them as in our own country. Where there is no malposition of the fœtus, or other impediment, no doubt parturition is a lighter affair with the barbarian than with the European. Of this, speaking generally, there can be no doubt; and the reason I have already briefly stated: but, in exemption from the usual causes of impeded labour, properly requiring the aid of science for the safe and speedy delivery of the patient, I believe there is either no difference at all, or, if there be, it will be found in favour of the greater exemption, from such causes, of women in a state of civilization. The blows and other ill usage in various ways which the women experience at the hands of their husbands, and the heavy burdens which they are in the daily habit of carrying, up to the last hour of utero-gestation, cannot, in all cases, fail in producing either malposition of the fœtus, or injury to the connexion between the fœtus and the mother. Besides, although it be true that few instances of decrepitude, or of other defect in the bony system, are found in a rude state of society, yet there is no doubt that such defects do exist. M. Rollin, surgeon, in the voyage of La Perouse, in his account of the physical peculiarities of the natives of California, assures us that he did not see among them one instance of rickets; and a similar remark is made, by many observers, regarding other barbarians. But what of this? A traveller might visit, and attentively survey, an extensive district of our own country, and behold a far more numerous population than M. Rollin, and the others I have alluded to, saw, and yet, probably, not discover a single case of hunchback, or rickety deformity. As a set off to such sweeping observations of travellers, I may mention a few facts that are brought out, incidentally, in the narratives of some of the most credible authorities we possess, respecting the ruder portion of our species. Thus, when describing the wild tribes bordering on the Rocky Mountains, Mr. James informs us that in the Oto nation they saw a deaf and dumb boy; an adult with a curved spine; and another with an inflexible knee, the leg forming a right angle with the thigh. Among the Kaskias they saw likewise one old woman with a distorted spine, who, Mr. James remarks, when young, had probably suffered from rickets. Scrofula,

the party found, was not uncommon. In Captain Lyon's journal of his voyage to the North Pole, mention is incidentally made of an Esquimaux boy, of five or six years old, who, in addition to mental imbecility, was dumb, had rickets, and epileptic fits. In the account of the missionary voyage of the ship Duff, to Otaheite, (this was at a period when the islanders had as yet borrowed nothing from civilization,) the writer remarks, that a person knock-kneed or bow-legged was rarely to be found. His party saw only three hump-backed children in the whole island, and they were boys. It would, of course, be vain to conjecture how many deformed girls the barbarity of the natives may have consigned to the grave—beyond the observation of the missionaries. In speaking of the natives of Tongataboo, Captain Cook remarks, that they have few natural deformities. He, however, saw two or three with the feet bent inward. By a little more industry in searching for similar facts, others, I dare say, might be discovered; but these are sufficient to demonstrate the probability, that distortion of the pelvic bones may exist in women of even the rudest tribes of whom we possess any knowledge.

But is it really true that barbarian women have always easy and safe parturition? The contrary, I am inclined to think, will be found true. I have already admitted they suffer very little from the effects of labour, just as they would suffer little from a severe accident, or a surgical operation. But in a hundred instances of labour among the Indians of the Rocky Mountains, or the New Hollanders, I see no reason to conclude that the proportion of preternatural cases would be found to be smaller than in Europe: perhaps it would be found to be greater. Although minute and specific information on this point is not to be attained, I have collected a number of remarks more or less directly bearing upon it. Long (a noted fur-trader), in his book entitled "Voyages and Travels among the American Indians," when descanting on the fortitude of the savages, mentions incidentally the fact of a young woman, of the Rat nation, being in labour a day and a night without uttering a groan; the force of example acting so powerfully on her pride as not to allow her to express the pain she felt. Another similar fact is stated in the Voyage of Clarke and Lewis up the Missouri. The wife of an Indian of the party was in labour, and suffering considerably, when one of the Indians gave her as a remedy some of the rattle of the rattle-snake, in powder, pretty much as we should give the ergot of rye. In Hearne's Journal of his Expedition to the Northern Ocean, he casually says, "here (mentioning the name of a place) we were detained two days, owing to one of our women being taken in labour. The instant that the woman was delivered, which was not till she had suffered for near 52 hours, the signal was made for moving." Mackenzie, also, in his well-known Travels in the extreme North of America, incidentally remarks, that, on a particular time, the Indian hunter attached to the party returned, after a temporary absence, accompanied by his wife, leaving behind him his mother-in-law in a helpless state, with three children, and in labour of a fourth. It came out that she had been left "in a state of great danger." In the scientific expedition to the sources of St. Peter's River, its historian, Capt. Keating, states respecting the Potawatomis, a tribe with which he associated for some time, and concerning whose manners his party gained much curious information, that labour was seldom fatal among them, but that many instances had occurred in which the child was so long in being born, that it was putrid when expelled. The same writer informs us, that, in answer to inquiries, made among a tribe of Indians, called Sanks, concerning the usual duration of labour, he was told that the pains of labour continued, in some cases, as long as four days. In general, however, labour continued a very short time. From the Dacotas, another Indian tribe, the same party learned that parturition among them, though generally easy, in some cases lasted from two to four days. In Franklin's Overland Journal, we have another incidental notice of labour in an Indian. A Chipawyan woman fell in labour, in the woods, of her first child, and, on the third day after, died. In Krantz's account of the manners of the Greenlanders, we have an allusion to parturition which deserves mention. He is speaking of the opinions which these savages hold regarding the qualifications that entitle them to gain admission to heaven: among others, those, it appears, find entrance who have been drowned in the sea, or have "died in childbirth."

The next fact I shall mention has reference to a people, the lowest of any in the scale of civilization; I allude to the New Hollanders. Among them a man is not permitted to approach where the act of parturition is being peformed. Collins, an excellent observer and writer, informs us, that he had the curiosity to get a European woman to be present at a native labour. By this person it was remarked, that while one female poured cold water, from time to time, on the abdomen, another was busy performing some trifling charm. How long the labour lasted is not said; but after it was over, the poor woman appeared

much exhausted, and fell across a fire that was in the place, happily without receiving injury.

In concluding the list of facts, in support of this branch of my argument, I have the gratification to present you with what I cannot but regard as valuable and interesting information concerning parturition, as it occurs in the islands of the South Sea, privately furnished me by Mr. Ellis and Mr. Bourne, missionaries, who resided (particularly the latter) a great many years in those islands of the Pacific where missions are established. In order to elicit the information I wanted, in a clear and precise form, I took the liberty of putting in writing the following questions, which I shall give you *seriatim*, with the replies:—

1st, Is parturition, in general, speedier, easier, and safer, in the South Seas, than it is among our own peasantry? Mr. Bourne's reply: — "Parturition in the South Seas is, in general, easy, speedy, and safe, even to astonishment. Immediately after delivery, the women are generally able to arise, take their infants in their arms, and bathe themselves and infants in some neighbouring rivulet. A servant to one of the missionaries, whose business it was to catch and milk her master's goats, was confined with a child on the Sunday evening, and on the Monday morning caught and milked the goats as usual." Additional reply by Mr. Ellis:—"Parturition is remarkably easy. Many instances of this came under our notice. A servant of ours was engaged at washing one morning; labour came on about nine o'clock; she went home; and, in the evening, walking, came again, with the child in her arms. Formerly they used, immediately after delivery, to sit upon a pile of hot stones covered with herbs, and when this had produced profuse perspiration, would rush into the sea within half an hour after. I am disposed to think civilization does make childbearing more difficult, or makes the mothers feel its inconveniences more."

2d, Have very protracted, dangerous, or fatal instances of childbearing come to your knowledge? By Mr. Bourne:—"Protracted, fatal, and dangerous instances of childbearing have come to my knowledge; although such are not very frequent." By Mr. Ellis: — "Protracted and dangerous labours have generally been occasioned by mal-presentations; the most have been shoulder presentations, or the protrusion of the arm."

3d, Have you observed parturition to be more or less difficult according to the state of civilization: easier, for example, in New Zealand than in Otaheite? By Mr. Bourne:—"Parturition is as easy in Tahiti as in New Zealand."

4th, Do the South Sea women employ a class of females, in any respect answering to that of our midwives? By Mr: Bourne: —"No class of women are employed in the South Seas answering to midwives." By Mr. Ellis: — "There were a number of women celebrated for their skill in aiding difficult labours, but in ordinary cases their aid was not sought."

5th, In protracted and difficult labours, what means do they use to hasten delivery? By Mr. Bourne:—"In protracted and difficult labours, no means are used to hasten delivery. Every thing is left to nature. The missionaries have saved many in difficult labours, that otherwise would have died. I knew of one fatal instance, and many others would have occurred but for the missionaries." The reply of Mr. Ellis is in a trifling degree different:—"In difficult labours, the patient was fixed on two stools, while a friend supported the back: or, the patient sat on the extended thighs of an assistant, while another person endeavoured by pressure, and other mechanical means, to promote delivery. We have reason to believe several must have died in childbirth but for the aid of the missionaries."

After so copious an induction of facts, I need say little more, I presume, to convince you that the act of parturition, among the women of rude nations, is not, in the absence of obstetric science, *uniformly* safe and easy: but, on the contrary, notwithstanding the degree of perfection in which the organic functions in general, and of course the uterine, are performed in them (in which respect they are more favoured than the women of civilization), protracted and even fatal labours are at least equally numerous as they are with us.

[To be concluded in our next.]

PROPHYLAXIS OF CHOLERA.

To the Editor of the Medical Gazette.

Sir,

At the present moment, when cholera is infesting almost every part of the United Kingdom, you will not, I am sure, refuse the admission into your valuable journal of any suggestions tending either to mitigate or prevent so fatal a malady. Having had the opportunity of observing this disease in every degree during its progress in Lynn, I have endeavoured to distinguish the juvantia et lædentia, as well dietetic as medicinal. Prior to its visiting us, abundant matter for reflection had

been furnished from many quarters, and numerous modes of treatment had been recommended, but no certain remedy for overcoming the disease when once established was known, and, unfortunately, has not yet been discovered. Under this distressing fact, with a disease so malignant in its character, and so rapid in its progress to a fatal termination, it occurred to me that medical men were not only called upon to pursue their search after means which would remove effectually the horrible collapse—not only to combat all premonitory symptoms—but under certain circumstances to take a step antecedent to this, and *prevent the accession* of premonitory symptoms: I therefore determined on following up this idea, whenever a favourable occasion should present itself.

In July last, cholera made its appearance in that part of the town called North End, where our fishermen reside, a situation above all others considered most conducive to its rapid extension, and there certainly was (judging from the first few cases) an expectation of such a result. Fearing this, and explaining my views to our dispensary surgeon (whose assidnity in this epidemic I am in justice bound to say has been unremitting) I ordered that whenever a case should shew itself, every individual residing in the house, or having communication with the patient or family, should take the following medicine:

℞ Misturæ Cretæ, f. ℥viiss.; Tincturæ Catechu, f. ℥ss.; Olei Menthæ piperitæ guttas, iv. Dosis pro ætate adultâ Cochlearia ii. ampla ter in die.

It will be seen that this medicine presents nothing new, that it is one of every day use to restrain diarrhœa, but the novelty of practice consists in the time of administering it; a time, I grant, very unusual either for a medical man to prescribe, or a person (I cannot say a patient) to take medicine. But, under all circumstances, I consider the practice defensible; whether we look to the great susceptibility of the whole alimentary canal to morbid impressions at this season; to its excessive proneness to diarrhœa whether common or peculiar; or, lastly, to the obtaining a confidence and firmness of mind—a thing very difficult of acquisition at the present juncture. It was, therefore, no small pleasure to find that this last effect was exceedingly conspicuous, and particularly when in addition it became evident to all, that the progress of the disease was immediately and sensibly arrested; and I can adduce many families where a death from the most malignant cholera had taken place in each, without any of the others, who had regularly taken the above medicine, being affected with the disease, or with even its premonitory diarrhœa. I can also exemplify the converse, where nearly whole families have been swept away, who never took any remedial means whatever to prevent an attack. It would be too dogmatic to assert, that the striking suspension on the one hand, and fatal progress on the other, were positively sequences resulting from the use of means on the one side, and a want of them on the other; but there seems great probability of it, and one thing I can aver from numerous cases, and be supported in my averment by the surgeon above-mentioned, that no evil has followed the practice, although the bowels are brought into a more confined state. Having attended a malignant fatal case very closely on the 30th of June, I experienced, on the following morning, a slight relaxation of bowels, with some nausea, and a peculiar sensation about my legs, as though they were paralysed somewhat, and could not perform their duty well, with a tendency to cramp. I immediately procured a cretaceous astringent mixture of a strength greater than the pharmacopœia as regards creta and gum, and have taken it regularly more or less from that hour to the present, without the least inconvenience, except a trifling increase of constipation, which on three occasions only required a simple enema of warm water; purposely avoiding the use of any aperient, from my being in daily attendance on cholera cases. There may be many who will view it in the light of a milk and water practice; others who will deem it a work of supererogation, and quite unnecessary until premonitory diarrhœa makes its appearance, and then will think other means more effective, as calomel and opium, &c. The practice might be mild, but that does not derogate from its efficacy, and I anticipate that a trial of it will be found highly conducive in checking the progress of this most destructive disease. Vaccination we know

to be a mild disease in comparison with small-pox, yet it is a preventive when properly performed and had recourse to in time, but if imperfect, or delayed until the poison of variola has infected the system, it is no longer a preventive.

It forms no part of my present communication to discuss the treatment of cholera, or its contagious or non-contagious character; both of which I may probably consider on an early day, when I have completed a tabular statement of its progress in Lynn; but if not trespassing too much on your pages, I will briefly state my views of the theory of this formidable disease.

* * *

I am of opinion, from the sensations experienced in my own person, since attending cholera patients, as well as from what I have gathered from medical friends under similar circumstances, that the poison producing this disease does enter the bodies of those in close and frequent attendance on the sick, but that it does not exert its baneful influence, to any serious extent, unless the bowels are from some predisposition, or error in diet or regimen, rendered easily susceptible of diarrhœa, and consequently does sooner or later, according to circumstances, lose its virulence, or become eliminated by some other emunctory, either skin or kidneys, and in a way very little, if at all, injurious to the animal economy: otherwise in what way are we to account for the beneficial effects of subduing the premonitory symptoms, which are unquestionably a part of the disease?

During the time this epidemic has prevailed amongst us, the cases of severe diarrhœa, either alone or combined with vomiting, have been exceedingly numerous in the Dispensary practice, at the early period more especially, and these all yielded to the cretaceous astringent medicine alone or united with moderate doses of laudanum, without one particle of mercurial in any form; neither has one case subsequently fallen sick with cholera. I have also learnt from several of my medical friends in extensive practice that the same has obtained with them; one of these, however, prefers the infusum catechu to the cretaceous mixture. There is reason to think that creta is more particularly beneficial and requisite at the present period, for although if it meet with any acid in the alimentary canal, the carbonic acid gas will be disengaged, and some slight flatulence, and perhaps nipping pain, ensue, yet this detracts very little from its utility, because all acids in the primæ viæ should be corrected; and in seasons of cholera the alkali had better be of that kind which will not tend to form soluble purgative salts, and such unquestionably is the carbonate of lime, in preference to the salts of soda or potash. And here let me observe that the excellent chemist, Dr. Prout, has declared that the secretions of our body do now evince increased acid properties. He has found the perspiration exceedingly acid, and also the saliva, which is generally neutral: likewise the lithic acid and lithote deposits to disappear, or be greatly diminished in the urine, and an acid more like oxalic to prevail in it; and the morbid deposits of patients which before were usually compounds of lithic acid, now to be the oxalites. Hence I think we should be still more induced to exhibit chalk freely, as the most preferable antacid, knowing its peculiar efficacy as an antidote to oxalic acid when taken as a poison.

I have the honour to be, sir,
Your obedient servant,
JOHN WAYTE, M.D.

Lynn, September 21, 1832.

DIGEST OF CHOLERA REPORTS PROPOSED.

To the Editor of the Medical Gazette.

SIR,

IT must be admitted, I fear, that no satisfactory pathology of cholera has yet been made out, by means of which the treatment of that disease can be conducted on rational and scientific principles; neither can it be truly said, that the experience hitherto possessed has led to a definite appreciation of the merits of the numerous remedies so far empirically employed.

The pages of your valuable journal, during the last few months, bear ample testimony to the truth of the latter observation; for although cajeput oil and some other remedies, which had received the encomiums of distinguished men, have, by the general consent of the profession, been consigned to oblivion, yet various and contradictory plans of treatment continue to receive the approbation of practitioners; and, in short,

no near approach has yet been made towards an uniform and consistent system of treatment.

The construction of proper returns might, it is conceived, have led, long since, to a more just and decisive estimation of the plans of treatment adopted. The Central Board appears at length to have taken the subject into consideration, and has accordingly distributed circulars, calling for reports of such modes of *treatment as have appeared to practitioners to be successful*. But if what has been previously said be correct, namely, that opposite methods of treatment have all along received and continue to receive the decided preference and commendation of different medical men, what other result can be anticipated from returns regulated by such a principle, than a repetition of the discrepant and embarrassing testimony which the recent records of medicine exhibit? The object which it is desirable to attain is, an accurate comparative estimation of the merits of the plans of treatment adopted under various but accurately-noted modifications of the disease, which can only be effected by a correct, though brief report, of every case returned to the Central Board, with a statement of the remedies, or class of remedies, applied. By returns of this kind the Board would be enabled to construct their own tables, uninfluenced by the prejudices of practitioners in favour of particular remedies. And such impartiality is highly important, for it will be readily granted, that however flattering the result of certain remedies may appear to the medical attendant in a few isolated cases, unless their utility can be shewn by statistic details, in a reduction of the rate of mortality, such utility is, to say the least of it, very problematical.

In prosecuting an inquiry of this nature, a satisfactory result can only be ensured by proceeding upon data as numerous and as closely defined as the subject will admit of—that is, by a brief statement of the *characteristic* symptoms of *every individual case* reported, with the *remedies*, or *class* of *remedies*, employed in it. A statement so particular would be furnished at no great expense of trouble, and a reference to it would remove all doubt concerning the nature and degree of severity of the disease; and thus a repetition of the unpleasant and embarrassing discussions which have occurred relative to the epidemic in Cold-Bath-Fields prison, would be avoided. Any erroneous prejudices entertained in favour of particular remedies, would be exhibited and corrected; as such returns would shew to what extent the rate of mortality was affected by given remedies under defined modifications of the epidemic.

Accuracy of result, however, imperatively requires that the modifications or varieties of the disease, as exhibited in individual cases, should be clearly stated. The general designations, cholera or collapse, are insufficient. The dissimilar rates of mortality exhibited by the reports from different places, are partly explicable, no doubt, by the fact that as there is no strict line of demarcation between the severer forms of *cholerine* (to use a convenient French expression) and the less intense degrees of cholera spasmodica and asphyxia, cases have been made the subject of report from one town which elsewhere have not been considered sufficiently severe to be included. The degrees in the state of collapse are various, and admit of some classified arrangement. Let the characteristics of each case be stated, and then a proper basis for the comparative estimation of the merits of different plans of treatment will be afforded. The characteristics referred to are — extent of serous vomiting and purging; cramps and spasms; temperature as indicated by the thermometer under the tongue; blueness or otherwise of the surface; pulselessness; vox cholerica; ischuria.

If you deem the preceding observations worthy of insertion in the Gazette, I will thank you to give them a place in your next number.—I am, sir,

Your respectful and
obedient servant,
R. Arrowsmith, M.D.

Coventry, September 22, 1832.

P. S. — *Sulphate of Manganese.* — The absence of bile in the discharges from the alimentary canal, in cholera, has been every where remarked upon, and it has been almost as commonly stated that the re-appearance of this fluid in the discharges is a proof of the subsidence of the peculiar morbid action. But whether such re-establishment of biliary excretion is to be regarded as the

cause or as the mere sign of improvement, has not been stated. One writer conceives "that the blood of the portal veins is charged with the choleric miasm;" another remarks, that "small doses (of calomel) have been really efficacious in restoring the secretion of bile, and *thereby* promoting the *decarbonization* of the blood;" and scarcely has a practical paper on the effects of remedies been published which does not contain some allusion to the important beneficial consequences of the re-appearance of bile in the discharges.

These remarks are designed as merely introductory to the mention of a remedy as yet untried in practical medicine, but which can scarcely be an indifferent one in several morbid conditions. I allude to the *sulphate of manganese*. All the knowledge I have of this substance is derived from a passage in Marx's Toxicology, and which passage is, in fact, a quotation from Gmelin's Experimental Treatise on certain Mineral Poisons. The passage referred to states, that the sulphate of manganese, when injected into the veins (the experiments were performed on rabbits, I believe), produces a striking action on the liver, increasing the secretion of bile in an extraordinary degree, so that the large vessels were coloured by it; and even causing inflammation of the liver. If the therapeutic agency of this sulphate be found to accord with its reputed physiological action, it may prove a remedy of utility—if not in cholera, at all events in some other states of disease.

SUCCESSFUL EMPLOYMENT OF SALINES AT THE CHOLERA HOSPITAL, ST. LUKE'S.

To the Editor of the Medical Gazette.

Sir,

Government having required information concerning the different modes of treatment adopted by medical gentlemen who have had opportunities of attending patients labouring under the Asiatic or spasmodic cholera, I have drawn up a report for the Central Board, and beg to send you the following brief communication for your journal.

Having, since the month of June, been engaged in attending upon cases of this character at a public institution, I have naturally felt extremely anxious to avail myself of every source of information I could obtain.

The sphere of my practice has been extensive; comprising, not only such patients as were received into the hospital, but such also as were out-patients in a large and extensive parish in the metropolis.

I soon found, upon conversing with several respectable practitioners in the neighbourhood, that a variety of conjectures had, as usual, been formed, concerning the nature of the new epidemic; and, consequently, a diversity of opinions existed as to the most effective method of cure.

Under this perplexity, from the discordance of sentiments entertained by intelligent professional men, I was induced to pursue that mode of treatment which had been previously adopted by those gentlemen who had been in the daily habit of attending and prescribing for the sick; consisting chiefly of calomel and opium, which were exhibited conformably to the symptoms and urgency of the case, and which, I believe, were deemed the best remedies in general use.

But finding much disappointment in pursuing this plan, and considering it as merely combating with the symptoms of the disease, instead of striking at the root of the malady, I abandoned the pursuit, and adopted that mode of treatment denominated the *saline*, in the manner laid down and recommended by Dr. Stevens, in his recent publication on "The Healthy and Diseased Properties of the Blood;" and, in as far as relates to cholera, I am decidedly of opinion, from my own personal observations and experience in the treatment of this direful disease, that the saline remedies are not only the most rational, but decidedly the most successful that have yet been tried; and, from what I have seen of their effects, I am induced to believe that they demand the attentive consideration and practical *test* of the profession, in preference to remedies which have been extensively used with so little advantage.—I am, sir,

Your most obedient servant,

S. Cambridge, M.D.

Cholera Hospital, St. Luke's,
City Road, Oct. 2, 1832.

SUPERIORITY OF THE SALINE TREATMENT.

Report from Greville-street Hospital.

To the Editor of the Medical Gazette.

Sir,

Now that the epidemic named cholera has existed for some time, and still continues its ravages in various parts of the kingdom, and as no uniform and successful mode of practice has yet been laid down either by the Central Board of Health or any other constituted authority; from the experience I have had I feel it my duty, alike for the advancement of medical science as well as for the public benefit, briefly to report the cases that have occurred, with their mode of treatment, at this hospital; leaving unbiassed practitioners to draw their own conclusions as to the merit (if any there be) of the plans which have been used for arresting the very fatal termination of this appalling disease. Allow me, in the first place, to remark that this hospital is not under the control of any Board of Health, but perfectly independent; its doors have been, and still are, open to every destitute and diseased individual, of whatever cast or country; the only letter of recommendation required, being "disease and poverty." Under such circumstances, it is evident that the most wretched outcasts from various parts of London, when seized with this disorder, have been brought in; likewise a great proportion of the patients have been sent in, I might say, to die, inasmuch as they had been treated, but abandoned as hopeless, by the medical officers of surrounding parishes. The hospital is equally free to every professional and scientific individual; by which an opportunity is afforded to every person so disposed of watching both the progress of the disease and the result of treatment in every patient. Sir, in forwarding to you the following list of patients and mode of treatment, I must beg to be distinctly understood that it is with no other motive than to make known, through the medium of your journal, to the profession in various and distant parts of the kingdom, a system of treatment that has been pursued here with more uniform success than at any other hospital in this metropolis.

For practical purposes, I have thought it advisable to divide the progress of this disease into two stages, although varieties occasionally occur that would defy any order or classification, but for the most part the diagnostics are well defined. The Central Board have marked out three stages of the malady; have likewise advised a very complicated mode of treatment. Simplicity of arrangement and treatment are of the utmost importance to practitioners, who are yet but little acquainted with the nature of the complaint. The first stage, I mark as continuing up to a period when the functions of the liver and kidneys may by artificial means be excited; hence the importance of calomel. The second stage to commence when the pulse is imperceptible at the wrist, and when the liver and kidneys cease to act, and cannot be stimulated to action by any known remedy until the patient is freed from the specific poison, and the volume of circulating fluid be in some degree restored. In general, one or two doses of calomel have been found to excite sufficient gastric and renal action to drain from the blood the morbid poison, but when the patient is not seen before the second stage ensues, from twelve to twenty-four, or forty-eight hours, is in general the period before re-action can be established by the saline plan of treatment: but in children the effects are more immediate. It is my opinion, that the quantity of fluid drained from the blood into the stomach and intestines is the specific effect of this peculiar poison, and that the vomiting and purging are the consequent results of the immense accumulation of that fluid in those organs, and that both actions are absolutely necessary for the well-being of the patient. Two patients have been cured by saline injections, after all hopes of recovery from the saline medicine were lost: one treated by myself, the other by Mr. Reynolds, surgeon, of Carsharlton, a gentleman who has diligently watched the results of the saline treatment at this hospital. The extreme thirst indicates the indispensable supply of fluid. One patient, who died under the saline treatment, swallowed no less than forty gallons of water in ninety-six hours: during the first twelve hours after his admission, he took seventy-eight pints.

Ten patients, who are now quite restored to health, took no less than 225 gallons of water within seventy-eight hours.

Remedies during the First Stage, up to four years of age.

Calomel, 5 grains; Ginger, 5 grains. Mixed together for a dose.

This powder to be given immediately, mixed in a little treacle; and two hours after the powder, give the following draught:—

Powdered Rhubarb, 10 grains; Castor Oil, half an ounce. Mixed together, and given in half a cup of strong coffee.

Should the vomiting and purging continue, give two table-spoonfuls of soda water every half-hour, and repeat the powder of calomel and ginger four hours after the draught.

From the age of four years to fourteen, give the following powder and draught:—

Calomel, 9 grs.; Ginger, 9 grs. Mixed.

The draught:—

Castor Oil, three quarters of an ounce; Tincture of Rhubarb, two drachms; Powdered Rhubarb, 8 grs. Mixed.

From the age of fourteen and upwards, the following powder and draught:—

Calomel, 15 grs. to 20; Ginger, 15 grs. to 20. Mixed.

The draught:—

Castor Oil and Tincture of Rhubarb, of each one ounce. Mixed.

Small draughts of soda water to be taken by all, providing the vomiting continues; and should the symptoms not abate, the powder and draught may be repeated four hours after the first dose.

Remedies during the Second Stage.

No. 1.—Up to the age of 4 years:—

Common Salt, one scruple; Carbonate of Soda, six grains; Oxymuriate of Potash, two grains. Mix for one dose.

No. 2.—From 4 to 14 years of age:—

Common Salt, one drachm; Carbonate of Soda, ten grains; Oxymuriate of Potash, three grains. Mix.

No. 3.—Above the age of 14 years:—

Common Salt, two drachms; Carbonate of Soda, one scruple; Oxymuriate of Potash, seven grains. Mix.

The above powders, dissolved in a small cupful of cold water, to be given every quarter of an hour, until the excess of purging and vomiting subside and the pulse is clearly perceptible; from which time, extend the period between each dose, first to half an hour, then to an hour, and so on, till both pulse and breathing are vigorous. During the progress of this treatment, as much cold water or weak beef-tea may be taken as the patients desire; the more the better. Spirits and wine to be most particularly avoided.

Hot Saline Bath.

From seven to fourteen pounds of common salt, dissolved in a sufficient quantity of water to cover the whole body, and the patient must remain in from ten to twenty minutes, at a heat from 110 to 120 degrees; if necessary, the bath may be repeated every eight hours; after which, the patient must be kept in bed, and between blankets, with bottles of hot water to the feet and legs. A free admission of fresh air should be allowed into the apartment, and, if possible, to pass directly over the face of the patient; the body being kept as warm as possible.

The saline injection consists of the powder No. 3. dissolved in 32 ounces of water at the temperature of 100 to 110 degrees.

The following is a list of patients admitted into this hospital in the second or collapsed stage of cholera:—

Number of Patients.	Age.	Cured.	Died.
11	from 1 to 5 years.	5	6
7	5 — 10	4	3
13	10 — 20	12	1
26	20 — 30	16	10
44	30 — 40	25	19
31	40 — 50	16	15
24	50 — 60	8	16
17	60 — 70	5	12
11	70 — 80	2	9
Total 184		93	91

Cured.	Died.	Treatment of the above Number.
0	17	Either on their way to the hospital, or immediately after admission; the treatment previously, if any, not known; and no medicine could be swallowed during their short existence in this hospital.
5	13	By various plans of treatment, previously to the introduction of the saline medicine.
2	11	By various plans of treatment, succeeded by venous saline injections.
5	18	Under the saline remedies, but after stimulants, opium, and calomel, had been used in vain.
7	21	When brandy and laudanum had been freely given, previously to admission, or to the adoption of saline remedies.
0	4	Under the saline, in persons previously diseased.
74	7	Under the saline, and in persons where no other treatment had been adopted.

In addition to the above cases, 315 patients, labouring under the first stage of the disorder, have been treated by large doses of calomel, followed by purgatives of castor oil and tincture of rhubarb; twelve of which number ran into collapse and were treated by the saline remedies, but, eventually, only four died. It is right to remark, that the saline treatment, in this hospital, was first adopted by Mr. Whitmore, of Cold-Bath-Square, in a patient that was abandoned by myself, as a hopeless case—although this person recovered, and, by the like plan, many lives were prolonged, yet no uniform success ensued until the saline powders were faithfully administered every fifteen minutes, night and day, with an unlimited quantity of cold water. Hot saline baths were an important auxiliary, in fact, they never failed in relieving the cramps and exciting the extreme circulation, and thereby diminishing the lividity of the extremities. In every attack of the disease, that was not followed by purging and vomiting, all remedies were found perfectly useless, as all such individuals died, generally within six, never exceeding eight, hours, from the seizure, which, to me, affords ample illustration of the important effects of vomiting and purging in the collapsed stage of complaint, or even in the early stages, when the function of the liver is arrested. It is worthy of remark, that out of 13 patients, from the age of 10 to 20 years, only one was lost, and this died after a long struggle, having been injected 9 or 10 times with the saline fluid, rallying more or less after each addition to the venous fluid, the pulse being perceptible at the moment of death. In the 315 cases, there was not one who had bilious diarrhœa.

From the above facts, it is quite evident, that until the saline medicines, hot saline baths, and water without limitation, was steadily and faithfully administered, almost every case, in the second stage of disease, terminated fatally; while, on the other hand, nearly every patient who had not been previously treated by other remedies, but with whom the saline only had been pursued, almost every one survived, as the preceding report sets forth (that out of 81 cases in a state of collapse only 7 deaths). With the above facts before me, I must be not only blind to justice, but to all sense of honour and candour, were I not publicly to acknowledge, that until this treatment, suggested by Dr. Stevens, was forced upon my notice by stubborn facts, I not only treated it with disdain, but with determined opposition, yet I feel that I have been amply repaid, inasmuch as I have been taught a salutary lesson, never again to treat with indifference the suggestions of any man, without due reflection and careful investigation. Notwithstanding all the conflicting opinions that have appeared respecting Dr. Stevens's hypothesis, whether true or false, I care not, but I do feel, that to him alone is the profession and the public indebted, for the path that he has opened, the beacon that he has lighted, in the vast labyrinth of humoral diseases—for the new era that has commenced in both the pathological and therapeutical sciences — and for having thus cleared the threshold and opened the gates, from whence we view the distant light glimmering over the darkness of past ages, yet sufficiently bright to stimulate every scientific inquirer to a thorough cultivation of this unknown portion of human diseases.

WILLIAM MARSDEN,
Surgeon to the Free Hospital,
Greville Street.

2, Thavies-Inn, Oct. 10, 1832.

ANALYSES OF TWENTY-EIGHT REPORTS ON CHOLERA.

Besides the papers which we have given in the preceding pages, we have received numerous others, for which it is impossible to make room. We subjoin an analysis of the most important; with all of which, except those marked with an asterisk (*), we have been favoured by the Central Board of Health.

Dr. Wayte, of Lynn, Sept. 29.—Case of cholera with collapse, cured by cold water, in the manner of Dr. Shute.

Dr. Donnell, of Liverpool. Oct. 3.—In the first stage, thinks opium alone is required to stop the disease. In the second stage, laudanum to be combined with sugar of lead, in starch enemata, and repeated till purging be stopped; internally, 2 grains of calomel, and half a grain of opium, every hour. If case be severe, more calomel and less opium, repeated very frequently, as every five or ten minutes. Mustard poultice to stomach, if vomiting. Bleeding, if cramps, unless the patient be an old drunkard, or otherwise debilitated. "In 19 out of 20 cases this treatment succeeds."

In the third stage. Opium injurious: no plan yet tried of the least use.

Dr. Murphy, of Liverpool.—First stage to be treated boldly by means of calomel and opium. The violent vomiting continuing after the diarrhœa has ceased, best treated by prussic acid.

Second stage. If rice-water dejections, without vomiting, but with a natural skin as to heat, and a perceptible pulse—laudanum, 3i. to 3ij. instantly, enemata of sugar of lead and opium. If collapse just coming on, oil of turpentine in drachm doses every quarter of an hour. Brandy, Stevens's salines, calomel, bleeding, warm baths, all worse than useless.

Third stage. Has tried every remedy "that has been spoken of;" nothing particular to say in favour of any. Performed tracheotomy in one case, and inflated the lungs himself; thinks it prolonged life half an hour!

Mr. R. S. Dudley, Oct. 4, has given calomel with capsicum, of each gr. iij. every four hours, in the first stage, following the third pill with a dose of castor oil.

In the second stage he has given gr. v. of calomel every hour, or with longer intervals.

In the third stage he has abstained from stimulants, and latterly trusted to the cold water plan of Dr. Shute. Only three patients in collapse have been lost under this treatment: he does not state how many have recovered.

Mr. Greenhow (Oct. 1), our respected correspondent of Shields, continues decidedly against allowing the patients to gratify their desire for fluids; forbids stimulants; gives salt in gruel; sponges the skin with warm water; free admission of air; light bed-clothes; small doses of calomel and opium; effervescing draughts of carb. soda and tartaric acid; disapproves of emetics and enemata; thinks "we have often been induced to do too much."

Mr. Richard King, Tower, Oct. 3, has seen the disease chiefly at Darleston. At the onset of the disease, bleeding, sudorifics, gentle laxatives, antiphlogistic regimen. When a little farther advanced, and attended with vomiting and bilious purging, carbonates of ammonia and soda every hour, abstaining as much as possible from fluids. When purging has ceased to be bilious and fæculent, with cramps, &c. &c., mustard poultices to legs and stomach, followed by a blister, heat to the feet, scruple doses of calomel every hour till mouth be affected, water with a glass of brandy to the pint for constant drink. When there is total collapse, mustard emetic, scruple of calomel every hour, heat to feet, very cold water for drink, recumbent posture insisted on. The following remedies have been fairly tried, and found wanting: laudanum, cajeput oil, croton oil, oxymuriate of potass, heat to the surface (feet excepted), frictions, transfusion, and "quantities" of brandy.

Mr. J. Gardner, of Foley-place.—The successful treatment consisted in checking the most prominent symptom, and then proceeding on general principles.

If the spasms were very severe, and excited most attention; bleeding, pediluvium with mustard, &c. &c.

If the patient appeared exhausted, cold, pulseless, without much spasm or

pain, and without any commensurate evacuations; ammonia, frictions, nitrous acid and ether, brandy, &c. were all useful.

If the vomiting was most urgent, laudanum, ether, &c. until it was relieved.

If thirst, *cold water*, and this was in many cases extremely beneficial.

If pain in the stomach, mustard plasters and opium.

If diarrhœa the worst symptom, an astringent.

In many cases the exhaustion of the patient appeared to depend on the immense quantity of fluid evacuations from the bowels. In these cases a strong decoction of hæmatoxylon was the most decidedly useful.

In all cases calomel in large doses was given, to restore and evacuate the biliary secretions; but in several of the fatal cases, bilious evacuations preceded death.

68 cases of well-marked cholera treated: 18 dead, 50 recovered. Of the deaths, 13 took place in the collapse, 5 in the consecutive fever. Of those who died in the collapse not one came under treatment at the commencement of the attack.

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* In the Institution to which we alluded in our No. for August 11, the surgeon to the Cholera Hospital (and we again omit the names, for the reasons formerly given) states, that in the premonitory symptoms small doses of calomel, combined with opium, followed up by cretaceous mixture, containing some warm aromatic (generally tinct. cardom. c., with tinct. opii, ♏ x. to each dose) proved very efficacious. Of 45 cases treated as above 43 perfectly recovered: the other two sunk into collapse, and died.

Eighteen were treated with the saline powders: 5 passed into collapse, and died; the others were long in recovering.

In the stage of collapse, where the pulse is not totally gone, mustard emetics, with muriate of soda, "repeated every half hour to about six doses," were beneficial. In complete collapse, nothing of marked service; perhaps an injection of three parts of warm water, with some brandy, as good as any thing. Cold water for drink affords relief: stimulants do harm.

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*Mr. Lord, of Hampstead, under date Sept. 26, has forwarded to us a case in which a man, thirty years of age, recovered from the stage of collapse in cholera under the use of cold toast-water ad libitum.

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* Mr. Howley, of Swansea, Sept. 24 and 25, relates a case in which a man, aged 55, recovered from collapse under the use of cold water. "The quantity of water drank in the first twelve hours was eight quarts: he slept three hours in the course of the night, and drank seven pints of water, and four more from 8 till 11 A.M. on Monday." He was taken ill on Sunday, and was attended by Mr. Howley and Mr. Edwards.

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* Mr. Littleton, of Swansea, in a letter dated Sept. 12, states, as the result of his experience (having seen above fifty cases), that the most efficient treatment of cholera, when distinctly marked, is the exhibition of "three or four grains of tartarized antimony every twelve minutes," till full vomiting is produced, following this up in two or three hours with thirty or forty grains of calomel.

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* Mr. Rose, of Swaffham, Norfolk, recommends nitrate of silver, one-eighth to one-fourth of a grain, in four pills; one to be taken every half hour. Mr. Rose has never treated a case of the epidemic.

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* Mr. W. de Garrett, of Edinburgh, suggests *a combination* of the various active remedies which have been recommended, and enumerates particularly—Latta's injections, Stevens's powders, tight bandaging, croton oil, and cold water. He gives a case in illustration, in which, however, calomel and opium appear to have been the chief means employed: the patient recovered.

Mr. J. Burrows, Stonehouse.—All the cases except five already in the state of complete collapse: 67 treated, 32 dead, 35 recovered. Principal remedies, about gr. ii. of calomel every quarter of an hour, followed by a tablespoonful of camphor mixture, with spirit. ammon. aromat., mustard cataplasms, terebinthinate enemata, with laudanum. After some improvement, blue pill, sudorifics (liq. acet. ammoniæ, liq. antim. tart.), laxatives, effervescing draughts.

Mr. Maurice, Chairman of the Board of Health, same place, states that no case of cholera, even of the slightest

kind, occurred in the poorhouse, containing eighty-six inmates, though the disease raged round them, and eighty deaths took place within a hundred yards of the building. Their diet, &c. was regulated, "and every precaution taken to prevent communication with the town."

Mr. Woodman, St. Thomas's, near Exeter, (Oct. 5, 1832,) has treated 182 cases, whereof 21 died and 161 recovered: the majority (about 150) seen previous to collapse: of these only 6 died. The treatment adopted in the early stage was b'eeding to six or twelve ounces: calomel one scruple, with opium grains iss., when purging was profuse. When vomiting is urgent, saline effervescing draughts; calomel repeated till salivation be induced: if collapse threaten, a powerful stimulus.

In collapse, bleeding tried in six cases; seemed to hasten death. Trusts chiefly to boiling turpentine, applied externally by wrapping linen cloths, which have been dipped into it, "securely" round the legs and arms; the same application to pit of stomach; "does not remember a single case of troublesome vesication. Calomel continued (and mercurial frictions adopted when reaction has occurred); spirit ammon. aromat. freely.

In one case (a child three years old) cold water has just been used with advantage, turpentine being applied to extremities, and calomel given freely.

Dr. Vallange and Mr. Anderson, of Portobello, (Oct. 2, 1832.)—In the stage of bilious diarrhœa, castor oil, with thirty drops of laudanum, and followed by calomel or blue pill, proved successful in every case.

When rice-water dejections, &c. came on, the stimulants fairly tried and entirely failed. Plan afterwards adopted consisted in large doses of calomel and colocynth, opium, hyoscyamus, venesection "in every possible case," large enemata of hot water, external stimulants. In two cases tried the inhalation of nitrous oxide; think very favourably of it, but had not the means of trying it fairly. Cases treated, 40; died, 24; recovered, 16.

Dr. Stephen, of Portobello, (Sept. 28, 1832.)—Practised at Musselburgh during the epidemic. In the first stage, a bleeding of 10 to 12 ounces, where age and constitution admitted of it; this followed by 25 to 35 drops of laudanum, and subsequently by castor oil, or compound powder or tincture of rhubarb. In second stage almost invariably fatal. Saw most benefit from port-wine injections, with half a drachm of sulphate of quina, of starch with opium, or kino or catechu, with small and oft repeated doses of anodynes by the mouth, succeeded by wine and water where the stomach had become less irritable. In the third stage has not found any thing of much use.

Mr. Banner, of Liverpool, (Sept. 17, 1832) has treated 186 cases; viz. 72 in the first stage, 91 in the second, and 23 in the third: out of these cases 12 have died.

First object, to allay the irritability of the stomach, and get the system under mercury. To effect this has bled to syncope, by which the vomiting and cramps, and not unfrequently the purging also, have been stayed; then calomel, grs. iij. with $\frac{1}{4}$ grain of opium, every three hours, till symptoms subsided, which has usually been after the third or fourth dose. In 14 or 16 hours after the evacuations have ceased, an ounce of castor oil. In only one instance has the first stage under this treatment passed into the second. In second stage, bleeding to syncope, but here not so effectual as in first stage. Calomel found to be best retained in powder, viz. cal. gr. iij., with an equal quantity of sugar, and $\frac{1}{4}$ grain of opium. Perseveres with the calomel till mouth be affected. Mustard poultice to stomach; port wine, half an ounce, with carbon. of soda, half a drachm, every half hour. Warmth to feet very important. In third stage bleeding "undoubtedly injurious:" trusts to calomel and opium, in small doses, every half hour: port wine in large quantities; mustard poultices, frictions, &c.

Drs. Squires and Lane, Messrs. Bevan and Turner, of Liverpool, (Sept. 24, 1832.)—In first stage, bleeding, calomel not exceeding grs. v., and opium not exceeding gr. iss. If pain about the chest, mustard cataplasm to stomach. In a few hours a moderate dose of castor oil, with a few drops of laudanum in peppermint water. Of 200 persons thus treated in the Refuge House (*i. e.* for

premonitory symptoms) only 16 required to be taken to the hospital, of whom 4 died, so that there were 196 cures, not followed by fever.

In the second stage, if pain or uneasiness in chest, bleeding, without reference to state of pulse. If pulse did not rally under it, flow was stopped, to prevent fatal collapse. Small doses of calomel, minute portions of opium, frequently repeated. No patient lost when the slightest ptyalism was produced. Mustard cataplasms to the abdomen. If purging excessive, enemata of starch and opium. Vomiting and thirst combated by saline effervescing draughts in small quantity. *Hot* tea; stimulating liniments and frictions externally; heat to the extremities.

In third stage, bleeding to be adopted with extreme caution. Most useful remedies are, calomel and opium in *small* doses; small quantities of camphor in a very moderate portion of brandy; free use of stimulants decidedly injurious in this and every stage of the disease; external irritants and heat to surface; hot drinks. Have tried "every mode of treatment, from the saline remedies to cold water *ad libitum*, and have been compelled to discard them."

Mr. Kelly, of Liverpool, (Sept. 20, 1832.)—In first and second stages, injections of a drachm and a half of laudanum, with grs. viij. of sugar of lead, and tincture of catechu one ounce, in eight ounces of starch mixture, repeated every two or three hours.

In the collapse trusts to mild stimulating "*diet*," and enemata containing astringents. Cannot speak so favourably of calomel as others do. Thinks saline injection deserves further trial; has succeeded with it in three cases out of twelve.

Messrs. Wightman and Clark, of Carwood, near Selby, (Oct. 5, 1832.)—First stage, Dover's powder in large doses, with absorbents; astringents, and anodyne injections.

Second stage, an emetic, sudorifics and injections as above, calomel in small doses, with Creta peppermint, every ten or fifteen minutes, soda water, effervescing draughts, sinapisms, heat to feet, &c.

Third stage, powerful sudorifics, calomel and chalk, sulphate of quina, musk, camphor in large doses: other remedies as above.

Cases treated, 87; died, 17; recovered, 70.

Mr. J. Windsor, of Liverpool, (9mo. 17th) in the first stage, has found chalk mixture, or an astringent aromatic mixture, with a portion of opium, to have been efficient "without exception." When rice-water evacuations have come on, he depends on calomel and opium, gr. iii. to iv. of the former, and gr. ss. of the latter, every half hour: "when the least ptyalism was produced, the patient was safe." In collapse, has tried ammonia, soda, camphor, opium, &c. but with little advantage. Has treated about 120 cases: 6 died during the rice-water evacuations, 10 in collapse; 104 recovered.

Mr. Gaselee, of Southwark, (Sept. 26, 1832.)—Mere bilious diarrhœa to be met by ordinary treatment; but where the purging is *very* profuse, and more particularly if it have passed into the form of rice-water dejections, the object is to stop all the discharges, for which purpose opium is his "sheet anchor;" but this, to be efficient, must be given largely, and repeated according to the recurrence of the alvine discharges. The great principle of this gentleman's treatment is arresting the evacuations, and when this is done he is in no hurry to give aperients; thinks the third day early enough. Stimuli of the spirituous volatile character are also exhibited when the patient is depressed. Smaller doses of opium to be continued, and, if required to control the discharge, also enemata with laudanum.

In collapse, approves of a warm room, hot fomentations, small but repeated doses of ammonia, moderate quantities of brandy, port wine, or gin and water, small opiate enemata, water or soda-water (but not largely) for beverage. Does not believe that any medicines act specifically. Concludes with these words: "It will thus be evident that in the treatment of collapse I cannot call myself successful: in the preceding stages nobody ought to be otherwise."

Dr. Branson, of Doncaster, (Oct. 4. 1832) for himself, and all the professional members of the Board of Health. Up to the 9th of June, 14 cases, 9 deaths; from 9th of June to Sept. 3d, 98 cases, 17 deaths, 81 recoveries. The treatment during the former period consisted of stimulants and opiates; afterwards

calomel was chiefly trusted to, but preceded by an emetic and bleeding. The mode of proceeding is thus described:—

"There was scarcely a case in which the rice-water evacuations were not observed, and the practice which was found to be the most successful was, to administer a mustard emetic, and at the same moment to bleed. The operation of the emetic was almost instantaneous, and promoted the flow of blood from the vein, which, in some cases, might not else have been obtained. In ten minutes after the emetic, ten grains of calomel were given, and if the cramps were severe, two grains of opium at the same time; and in fifteen minutes more, five grains of calomel alone, and so repeated every fifteen minutes until the colour and quality of the intestinal ejections were altered, and they had assumed a dark brown, or rather a dark green colour, resembling chopped spinach; after which the calomel was discontinued, and the only medicines required were small doses of castor oil, so as to secure the daily emptying of the bowels, and occasionally effervescing draughts, to allay the sickness.

"It was early observed that repeated doses of opium produced symptoms of cerebral congestion, and afterwards a most obstinate and irrepressible nausea, for which reasons we rarely repeated its use.

"The form in which calomel was given, namely, in powder thrown on the tongue, and washed down with cold water, secured its retention, it scarcely ever having been rejected by the stomach. The quantities of calomel thus given within 24 hours, varied from 60 to 255 grains; and the present state of perfect health of the subjects of this practice, proves that the system has sustained no injury from the large quantities of mercury taken."

Bland fluid nourishment. The horizontal posture strictly enforced.

Mr. Wiggins, of Wallington, Oxon, (Oct. 8, 1832.)—In bilious diarrhœa, calomel in rather large doses, rhubarb, cordial and saline stimulants. In rice-water evacuations, if much sickness, salines, with carbonate of ammonia in excess, and tinct. of calumba, with four grains of calomel every hour. If diarrhœa, without much vomiting, calomel as above, with a grain of opium, weak brandy and water. In collapse, carbonate of ammonia, in doses of 15 or 20 grains, every half hour, the best stimulant. As soon as warmth begins to return, an ounce of brandy and water (strong) every quarter of an hour. Thinks well of "a spirit bath," and ill of warm water bath. Has seen much advantage from camphor and opium—one grain of the latter and four of the former.

Mr. Thomas, of Liverpool, under date Sept. 17, says, in answer to *Prop.* 1, when the choleroid pestilence is epidemic in the neighbourhood, I consider the bilious diarrhœa a premonitory symptom. I always bleed if the pulse will bear it; the blood taken exhibits two streams combined in one—a purple and a scarlet stream. I allow the blood to flow until the whole becomes of an uniform standard colour. The pulse, in the commencement, is usually broad and soft; at the termination of the operation it is firmer and more contracted. I administer calomel and opium at the commencement—one grain of the latter to four of the former, every hour, until the motions become more consistent. This practice I occasionally vary: if the motions be watery and yellow, with patches of mucus floating in them, I administer a table-spoonful of the following mixture every half-hour:—

℞ Misturæ Cretæ, ℥vij.; Confection. Opiat. ℥iss.; Tinct. Cin. Co. ℥j. M.

I generally find the diarrhœa checked after the third or fourth dose. I also use injections of catechu and opium into the rectum; and if much tenesmus be present, enemata of mucilag. amyli cum opio, instead of the catechu. I have also, after the liquid bilious diarrhœa is checked, prescribed with advantage the hydrargyrum c. creta, combined with the compound powder of ipecacuanha, every hour. If these powders do not move the bowels, I prescribe a pill composed of four grains of the submurias hydr. and two grains of socotrine aloes, which generally produces solid motions. The castor-oil is afterwards to be employed, to regulate the bowels.

Prop. 2.—I have bled in this case without advantage, and therefore deprecate venesection. I prescribe the chalk mixture, with carbonate of ammonia and tincture of catechu, and rapidly repeated doses of the hydrargyrum c. creta, or calomel and opium, every half hour (2 grs. hyd. to $\frac{1}{6}$ gr. of opium).

The grand object which I have now in view is to get the system under the influence of mercury as rapidly as possible. I allow brandy in moderate doses, (a table-spoonful every half-hour,) or port-wine negus well spiced. I enjoin counter-irritation over the abdomen with mustard plaisters; also injections into the rectum of catechu, with a little laudanum. In general I avoid opium as much as possible in this stage, lest the nervous system should become narcotized.

Prop. 3.—In this stage I consider that there are two indications to be fulfilled: 1st, to arouse the functions of the nervous system, more especially those of the sympathetic ganglia; 2dly, to furnish a *basis* for the immediate elaboration of fresh blood. The best stimulus I consider to be mercury. I have employed the oxymuriate in desperate cases (¼ grain every half hour); in conjunction with which, frictions with mercurial ointment have been employed. The spinal column must be stimulated by plaisters of mustard from the nape of the neck to the lumbar vertebræ. If the mustard produces no effect in the course of an hour (which is sometimes the case), frictions with the pure water of ammonia and nitric acid, must be used, by small dossils of lint dipped in these caustic liquids. I have found the nitric acid applied with a feather, in the malignant collapse, merely to stain the skin, and to produce scarcely any sensation. The skin will soon be destroyed if the friction be used, and then counter-irritation will be established. I have prescribed the oleum terebinthinæ (a drachm or two) every half-hour, with mucilage, in some cases with evident advantage, in others without success. In some cases I have found the phosphoretted ether, with tinctures of cantharides and cinnamon, useful. Mustard cataplasms may be applied over the abdomen, as in the case Prop. No. 2.

The second indication I attempt to fulfil by the frequent administration of spoonfuls of mutton-broth, spiced. It should also be administered by the rectum. I continue the stimuli until I find the tunica conjunctiva is becoming vascular. I make a point of frequently depressing the lower eye-lid; and if I perceive an artery starting up immediately perpendicular to the pupil, I know that it will quickly shoot out ramifications over the sclerotica: this I consider a signal for the withdrawal of all spirituous stimuli. If the patient be not mercurialized before this (if he escape out of the collapse), he will probably be cut off by inflammation of the brain and effusion, when the fever of the pestilence unmasks itself. I have either tried, or witnessed the trial, of the following systems:—Dr. Stevens's saline plan; Dr. Hardwicke Shute's cold water plan; the injections of saline solutions into the veins (which I recommended to the Central Board as a plausible experiment on the 15th February last); and the result of my experience and observation is, that they are not attended with sufficient general success to sanction a deviation from established practice. It behoves me, however, to state that I have seen cases of malignant collapse, in which I am persuaded the patients were cadaverized *ab initio*. In these cases, the functions of the sympathetic were absolutely annihilated.

Such is the general plan of my treatment of this pestilential fever. A more particular detail of the modifications of treatment adopted in all the complex varieties and intricate phenomena of the disease, would require a much greater space than it would be proper at present to occupy. Such modifications of administration must depend upon the mode of the development of the disease, and the view which individual practitioners may take of such symptomatic exemplifications.

For the following sensible letter from Mr. Barnett, addressed to the Secretary of the Central Board of Health, we are happy to find we can make room:—

Sir,—The unimportance of any communication which I could make, towards the improvement of the treatment of malignant cholera, has been the cause of my not attending to your request before; but as the disease has very much decreased in this neighbourhood, and the opportunity of observation gone by, I think it proper to make known to you the result of my observation in upwards of 200 cases.

That the diarrhœa, while bilious, was, without exception, under the influence of those remedies commonly used for diarrhœa occurring from other circumstances; viz. opium, catechu, chalk, cinnamon powder, logwood, &c. &c. And when, from some particular consti-

tutional or other causes, the mucous membrane of the stomach and bowels was irritated or inflamed, blue pill, combined with opium and ipecacuanha powder, blisters, mustard poultice, &c. &c.

The collapse appears to me to be the consequence of the rice-water dejections, therefore the commencement of the one is the necessary result of the other, to a greater or less degree, according to the loss from the circulation*. In this stage of the disease, I believe, from the very commencement, remedies have little effect. I have seen an equal number recover under every kind of treatment, except the direct stimulating, such as brandy, &c. under which I have seen very few recover. But, at the same time, I think the collapse has been, in many instances, accelerated by every description of treatment, when commenced in the second or third hour of rice-water dejections; *e. g.* calomel, saline, &c. &c. but particularly from large doses of opium.

I believe, after the collapse has somewhat progressed, the system is insusceptible of remedy (except the injection into the veins). My reason for coming to this conclusion is, that I have, in many instances, rubbed 12 ounces of strong mercurial ointment combined with camphor, and in other cases with mustard powder, over the whole surface of the body in the space of 40 hours, and given, at the same time, 5 grains of calomel every half hour, without the least soreness of the mouth or any other sensible effect.—The injection into the veins has an evident effect on the pulse, but is not lasting.—I have not seen more recoveries by injection than other means. But, of this remedy, I think we want more practice to know how to use it to advantage.—I am by no means an advocate for bleeding at this period of the disease.—Though I am of an opinion that mercury has no effect over the collapse, still, when the system struggles through, and mercury has been and continued to be used, the third or fever stage is more likely to be recovered from; but, merely because this powerful therapeutic agent has been used, in the earliest susceptible state of the constitution, to medicinal influence. When the disease has passed through the collapse, and the system perfectly reacts, it is again subject to curative means; and those remedies, which are generally used for congestive fever of a typhoid kind, become beneficial: mercurial inunction, and calomel in small and repeated doses, until the mouth becomes affected, should be a principal feature in the treatment of this stage; ipecacuanha, saline medicines in a state of effervescence, &c., also mild purgatives of rhubarb or castor oil, will be occasionally necessary. In consequence of the unequal state of the circulation, and the change which the blood sustains in course of the collapse, also the consecutive derangement which the nervous system suffers from such change, you will have certain organs much congested, (the brain, liver, lungs, and bowels,) therefore it is, in most cases, necessary to have recourse to local, and, in some instances, *careful* general bleeding. I say careful, because my experience does not warrant that copious bleeding which, I know, several advocate. Local counter-irritants, mustard poultices, blisters, &c. are of course necessary: and, indeed, if this stage is treated upon the common principle of congested fever, observing the beneficial effect of slight ptyalism, it will be generally recovered from. Stimulants are commonly very injurious in this stage. As my object is merely to lay before you, in a summary manner, a general outline of the conclusions of my experience in this disease, and as the opportunity is over of my making further intended trials of the injection into the veins, altered in its modus operandi, and combined with galvanic or electrical influence, I must quit the subject by saying, that we have certain curative means for the præmonitory stage; that the means necessary for the recovery from the stage of rice-water dejection, and consequent collapse, we are as ignorant of as we were at the first appearance of this epidemic; but the third, or fever stage, is under the influence of therapeutic means.

I am, your most obedient, &c.

T. W. Barnett, Surgeon.

Limehouse, Oct. 4, 1832.

* I do not wish to be understood to mean, that collapse cannot take place without dejections, because, I believe, the serum of the blood may pass into the bowels, and produce the same effect as if it appeared in the form of dejection.

BILLS OF MORTALITY.

To the Editor of the Medical Gazette.

Sir,

The interesting communication from Mr. Babington, published in your last number, must have satisfied your readers of the advantages which statistical medicine may reap from a well-organized system of parochial registers. The Worshipful Company of Parish Clerks, by whom the London bills of mortality are prepared, are fully sensible of the defects pointed out by Mr. Babington, and for many years past have been anxious to rectify them by means of a parliamentary enactment. A bill "for better regulating the returns of christenings, burials, and marriages, in London," was accordingly brought forward last session of parliament; but owing, I believe, to the all-engrossing reform question, was ultimately withdrawn. The bill will doubtless be again brought forward, and, I trust, with better success.

One great object of the measure was to compel a return from the lazy and refractory parishes. Mr. Babington deplores the absence of all returns from *certain* parishes, but he omits to state that the great defaulter is the parish of St. George, Hanover-Square. I have heard several explanations given of this obduracy on the part of St. George's parish, one of which ascribes it to a belief of the uselessness of these weekly registers. I cannot but hope that now, when the value of the bills of mortality is acknowledged in one of the best periodicals of the day, and their defects are regretted by one of the most enlightened surgeons of St. George's Hospital, the interdict will be taken off, and the mortality in this populous and important parish no longer left to be guessed at. It is, I presume, competent to the vestry of the parish to direct their clerk to make the requisite returns.

I am, sir,
Your obedient servant,
"Old Mortality."

Gravesend, October 9, 1832.

PROTRACTED GESTATION.

To the Editor of the Medical Gazette.

Sir,

I beg leave to submit the following case to the consideration of your correspondent, Mr. Morrison:—

A few years ago an action was brought, at Lancaster, by —— Anderton, against John Whittaker, "to recover compensation in damages for the injury caused to the plaintiff, in consequence of the seduction of his daughter, which had deprived him of her services."

Margaret Anderton being sworn, and examined by Mr. J. Williams, stated, "it was on the 8th of January that I had the intimacy with the defendant, but never had any with him before or since. The child was born on the 18th of October."

On her cross-examination she said, "the 8th of January was a Sunday. I don't know where the defendant had been spending the day, but he came to our house in the evening, and staid till ten or eleven at night: my misfortune happened about eight o'clock. The defendant and I, and Betsy [her sister], were in the kitchen, and my father and mother in bed. I never walked out with him at night."

Re-examined.—"My sister Betsy was in the room. . . . . Defendant requested Betsy to leave the room, as he wanted to have some conversation with me. We were never left alone before, as Betsy generally sat up with us."

"Betsy Anderton, the sister of the last witness, confirmed her testimony in those parts in which her name was mentioned."

"The Jury having consulted a few seconds, returned a verdict for the Plaintiff—Damages, 50*l.*; costs, 40*s.*"

From the 8th of January to the 18th of October inclusive, makes 284 days, or rather the child was born on the 284th day of pregnancy; but no observation appears to have been made by the counsel for the defendant (Mr. Knowles) on this protracted gestation; he did not attempt to disprove the dates, but rested satisfied with what bears upon the face of it, a very unusual length of time for pregnancy, particularly a first pregnancy, to reach. Annotator.

Sept. 17, 1832.

MEDICAL GAZETTE.

Saturday, October 13, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

HYPOCRITICAL ADDRESSES TO STUDENTS.

We promised, in pursuance of our purpose of noticing those points in our medical institutions which we hold to be susceptible of improvement, to take up the subject of medical education specially, and to discuss its present state, extenuating nothing, nor becoming the apologists of any party—freely and independently censuring, where censure is deserved—approving, where we deem approbation due—counselling and exhorting, where we think any good, however remotely, can be effected by such means. That promise we mean presently to perform. But it ought to be premised, that it is by no means our intention to dogmatize, or hold forth *ex cathedra*, on the subject. We trust to be able to execute the task which we have set ourselves, in an impartial but unassuming manner—so as to engage the attention of all who are in any wise connected with the profession—from the presidents of the corporations, and the corporations *en masse* and in detail, down to the students who are enrolling themselves as aspirants to professional standing. We are anxious that this should be understood *in limine*, that the students may be distinctly apprised that they are invited to our amicable parlance, and may know, that never for a moment do we intend to lose sight of their interests. It would be strange, indeed, if such a topic as that of education should be discussed, without the proximate material (to use a phrase of the logicians) occupying even the primary rank—having a front row, at least, allotted to them among the crowded benches of the arena. The students have the more need to be advertised of this, as there are those abroad, who, we are grieved and indignant to see, are not unwilling to practise on their inexperience; they have it dinned into their ears that they (the poor simple students) come to town as sheep to the slaughter—that the schools of the metropolis are the shops of nefarious sharpers—that there are snares set for the incautious in all directions—and that they must beware of what they do. There is an air of kind consideration for the pupils' persons and property in all this, that is very *imposing:* the solicitude for regulating the management of their purses is, assuredly, very conspicuous; and the suggestions vouchsafed for the expenditure of their finances at the best market, are of the friendliest and most considerate description. The pupils, of course, are full of gratitude for this fatherly kindness and regard, and are all of them possessed of the precepts, and imbued with the practical information, of the benevolent guide who so fortunately came in their way on their arrival in town—who saved them from precipitancy, and possibly from ruin.

But simple, indeed, and inexperienced, must be the youthful mind that is caught by such palpable chicane. Have any of the merest tyros who are now attending the metropolitan schools, come to town so green as not to be proof against such manifest imposition? Which of them has not perused the "Dangers of the Metropolis?"—or has not heard of the feats of the London ring-droppers?—or read the History of Jonathan Wild? Those who have, are safe enough—those who have not, had better be on their guard: and when they find themselves fallen into company with one who gratuitously tenders them his services,—puts upon them his intrusive advice, and bids them take care of their pockets—who insinuates,

nay, who does not hesitate to declare, that he holds all lecturers to be *roués* and all the schools to be traps—who exhorts them to sit in judgment on their teachers both before and after selection—who preaches distrust and disaffection, and the right—the expediency—of open resistance; yet, with curious subtlety, advises the student "not to *incur the risk* of injuring his future reputation by acquiring a *pernicious notoriety, founded on a charge of a turbulent disposition*;" —when they find all these properties prominently possessed by an individual, or individuals, soliciting their better acquaintance, let them look well to it: they will soon be sensible of the necessity of inquiring who it is that gives this unsought-for advice; and if, upon inquiry, they find a contrast between the character of the giver and some part of his admonitions, with an ill-disguised hostility to good order pervading the whole (and a little insight into the doings of the Archimago they have to deal with will be sufficient to convince them of this)—once more we say, let them look to it, and in time be warned—of their warner.

It is a painful duty—but nevertheless a needful and imperative one in the present case—to excite suspicion in the minds of the young and inexperienced; but where there is a poison there ought to be an antidote; and when suspicions of the worst and basest description are disseminated to the prejudice of gentlemen of high attainments and moral character—men who have been mainly instrumental in making the profession what it is—the guardians of its well-being, and the fosterers of those who are to be entrusted with a similar responsibility hereafter—it is full time that counter-suspicions should be suggested, though they extend no farther than to the inquiry, who are they that presume to do such things? Should they turn out to be the common slanderer, the noted disturber, and the oft-convicted libeller—then the inquirers shall have profited by their second thoughts, and the suspicions raised in their minds shall have been productive of positive good. It is with this view simply—a justifiable and proper one, as all our reasonable readers must admit—that we have ventured to touch upon such a subject; for who is there that knows any thing of the party to which we allude—so notorious for scattering tares wherever they may chance to find root—that does not feel indignant in observing hypocritical addresses to pupils, on the commencement of their career, emanating from such a quarter; addresses which, under the mask of advice and caution, inculcate principles of the most inflammatory and dangerous tendency?

We will be bold to say, that never was a more audacious calumny than that which charges sordidness and insufficiency on the London teachers—never a more decided libel upon the whole profession: for where, if not here, in this metropolis, may a competent body, for educational purposes, on the most extensive scale, be found?—where is there collected together, and occupied in the business of teaching, such an assemblage of celebrated men? And if *they* be the mean, sordid creatures that jaundiced, self-constituted censors, would have the world believe them to be, adieu to the honour—the grace—the respectability—the common decency of the whole profession! Better the students should give up all notion of connecting themselves with it at all!—It is enough to have touched upon these false and audacious charges: the very noticing of them is a necessity which every well-wisher of medicine must regret—to dwell upon them would be to give them an importance which they merit not: we turn to a subject more welcome and more suited to our pen—some general remarks upon the London School.

We speak of the London School as *one:* for we have long been in the habit of contemplating it in this point of view. We look upon the numerous corps of teachers of science, both medical and general, within the walls of this vast metropolis as constituting a University in the largest sense of the word; and upon the several schools, properly so called, as so many departments co-operating, or which ought to co-operate, with one general design. That London is at present virtually a University, containing many Colleges, in which every branch of human knowledge is taught, and by many of the ablest teachers that the empire can produce, is a fact beyond a question. There is no essential requisite which it does not possess—no advantage, desiderated in the ancient seats, which it does not fully enjoy. The only ground of reasonable apprehension, in regard to this our national establishment, is, lest the spirit of ultra-rivalry, which we perceive is at work, be allowed to go too far: for we can scarcely avoid observing a number of petty states, each contending for its own independent pre-eminence, and a few of the larger ones aiming at the erection of *imperia in imperio.* But, perhaps, while there is much to apprehend in such a system, there may also be something in it not undeserving of praise. If rivalry be confined to a contest for pre-eminence on fair and liberal grounds, without an attempt to palm upon the student names for things, there is in London, we will venture to say, as much material for scientific produce, and, with unanimity, there might be as near an approach to excellence, in the workings of the various rival establishments which it contains, as the nature of imperfectly regulated human institutions will admit.

We will resume this subject, if possible, in our next.

EXHALATIONS FROM FILTH.

A SMART discussion recently took place in the Academie de Médecine on this subject, originating in the following circumstance:—When the cholera appeared at Blois, a resident physician saw with alarm that the public workmen were employed in unpaving the streets, for the purpose of repair. He apprehended that the emanations which would arise, would prove fatal to all who were disposed to be affected with cholera. He accordingly wrote to the Préfect of the Loir-et-Cher, who sent in his letter to the Minister, and the latter applied to the Academie for their opinion on the subject. M. Double was entrusted with the drawing up of a report, of which the conclusions were these:—"that the exhalations of putrid animal matter are by no means so dangerous as have been supposed; and that the disturbing of the streets or soil for any public or necessary purpose need not excite any degree of alarm." M. Dalmas made an objection to the wording of the first inference, inasmuch as it implied *some* danger, whereas from the experiments of M. Duchâtelet we should conclude that there was none whatever. M. Piorry suggested that putrid animal matter injected into the veins produced very fatal results. But M. Marc and M. Double defended the report; which was eventually adopted.

INCREASE OF CHOLERA IN SCOTLAND.

WE are sorry to state that the cholera has considerably increased at Dumfries, Edinburgh, and some other parts of Scotland, within the last fortnight. We understand that, in some of those places, this augmented activity came on immediately after the discontinuance of gratuitous supplies of food to the poor had taken place,—a measure which the exhaustion of all the funds which could be received by charitable contribution, as well as of that received by the authority of the Privy Council, unfortunately render unavoidable.

SPANISH ANTI-CHOLERA MEASURES.

EVERY traveller, from an infected district, is subjected to the performance of quarantine at Perpignan or Bayonne; and, if he enters Spain without having gone through the formality, he is subject

to be punished with death, his apparel burnt, and his goods seized. The same punishment is extended to those who may receive him. Such is the ordonnance of the Captain General of Barcelona — a pretty strong measure, it must be confessed.

ITALIAN PHYSICIANS CONTAGIONISTS.

Several physicians, sent from Italy to Paris to study the cholera, have, in the account published on their return, declared their conviction, that the disease in that capital was contagious. It is remarkable that while the practitioners residing in towns where cholera prevails have often been non-contagionists, an opposite view has almost invariably been taken by those having no local interests, but sent from a distance to watch the disease, for the guidance of those in places which it had not yet reached.

NEW ANALYSIS OF THE BLOOD IN CHOLERA.

By M. Lecanu.

The first remarkable circumstance attending the blood in this disorder, is the singularly augmented proportion of its fixed matter. In three experiments, which I think may be depended on, I found the mean proportion of fixed matter to amount to 37 per cent., leaving 63 for the water*. But it is known that the blood in health contains 79.1 per cent. of water, the maximum being 80.1, and the minimum 78.1; whence the blood of cholera patients must be understood to contain more than twice as much fixed matter as the blood of people in health.

* In one experiment I found —

Water	66
Fixed Matter	34
	100

In another:

Water	74.9
Fixed matter	25.1
	100.0

And in a third:

Water	48
Fixed matter	52
	100

Mean quantities:—

Water	63
Fixed matter	37
	100

With regard to the fibrine, albumen, and colouring matter, I have nothing particular to observe, except, indeed, hat in the cases which I examined, the colouring matter appeared to have undergone a modification similar to that which arterial blood exhibits on being changed to venous, though my re-agents have not been successful in determining its nature.

I have experienced the greatest difficulty—amounting indeed to a positive obstacle—in attempting the quantitative analysis of the blood in cholera, owing to the impracticeability of separating the serum. I have reason, however, to dissent from the opinion of M. Hermann, of Moscow, whilst I accord with that of M. Rayer, that cholera blood presents not the slightest trace of acid properties. Whether I coagulated it with alcohol or by heat, I could not obtain, above once in five trials, a liquor that perceptibly reddened some turnsol paper; and this delicate change of colour may have been altogether owing to commencing decomposition, for the alcohol which I used to coagulate a part of the same blood, remained neuter with coloured reagents.

But on the other hand I have always been able to trace in cholera a sensible diminution of the alkaline carbonate contained in healthy blood.

I am inclined to believe that the remarkable augmentation of fixed matter above-mentioned, is not owing to the formation of a greater proportion of globules, but to the withdrawal of a quantity of serum, more or less considerable. This opinion I form from the quantity of carbonate of soda, albumen, and that peculiar extractive matter which has been compared to osmazome, ordinarily found in the stools of cholera patients previous to their death. I am aware that some chemists have found the stools acid, and some alkaline; but this, I think, has been owing to the time chosen for making their experiments. For example, in the case of the Sieur Cartier, one of the first victims to cholera in Paris, the stools passed the night before and the morning of his death were distinctly alkaline, whilst the matter found in the large intestines, at the autopsy, was strongly acid.

The white and fibrinous looking matter found in the stools, and which has caused them so often to be compared to rice-water, seem to me to present more

of a mucous than a fibrinous character: there is besides no deficiency of fibrine found in the blood which has been analysed.

Paris, Sept. 20, 1832.

INSOMNOLENCE CURED BY SULPHATE OF QUINA.

M. BARBIER, of the Hôtel Dieu, Amiens, relates the following case:—A man, aged 42, had cholera, from which he recovered; all the functions were restored, except that his sleep was destroyed; scarcely had he an hour's rest altogether in the course of each night; laudanum and other soporifics were exhibited without effect. M. Barbier found, on examination, that every evening he had a nervous "agitation," which lasted all night, accompanied by some pain in the head and limbs. Looking to the *periodicity* of the affection, M. Barbier ordered six grains of sulphate of quina every night. It was given two nights; he slept well; it was then omitted; he had no rest. The medicine was again renewed, and continued, with the effect of permanently procuring six or seven hours of sound sleep.—*Gazette Médicale.*

MUSK IN FLOODING.

In uterine hæmorrhage, particularly after labour which has been too precipitate, Dr. Hauff states that he has found musk, in doses of eight or ten grains every quarter of an hour or every half hour, to be an excellent remedy.—*Medizinisches Conversations-Blatt, No.* 3.

CLINICAL REPORTS.

OBSERVATIONS ON CLUB-FEET.

By M. DUPUYTREN.

M. DUPUYTREN lately exhibited at his clinical lecture an infant born in the Hôtel Dieu, having two strongly marked club feet. The learned surgeon took the opportunity of making the observations which follow:—

Club-foot is for the most part a congenital deformity, in which the foot is turned very much inwards, the sole being nearly perpendicular, and the external edge looking down, so that the individual rests upon it, or, when the deformity is very great, even on the outer ankle. At the same time, the cavity of the sole of the foot appears to be augmented. All these external phenomena have been well described by Scarpa and others. Scarpa and M. Cruveilhier have also occupied themselves with the interior appearances displayed by dissection, but none of them have sufficiently dwelt on the most important results of the club-foot—namely, the diminished nourishment and consequent atrophy of the limb.

Congenital club-foot is either limited to one or involves both members. In the former case, if the infant be examined very soon after its birth, the deformed foot is found to be rather smaller than the other, but the legs are of equal length. M. Dupuytren has had numerous opportunities of satisfying himself on this point. When both feet are affected, they are in general equal in point of development. This kind of premature atrophy, the unknown cause of which is probably connected with that of the deformity itself, produces as a consequence a secondary wasting, which extends to the entire limb, and the source of which may be better explained. In fact, the infant, from the day he begins to walk, constantly makes use of the sound limb chiefly, resting the weight of the body almost always upon it. The nutrition bears proportion to the exercise, while the other limb, almost unemployed, wastes, in consequence of its inactivity.

Now this atrophy takes place in two different ways, which have hitherto been confounded, but which ought to be distinguished. 1. The limb wastes in length; 2. It wastes in thickness. The wasting in breadth is but little manifested in the skeleton, though much in the muscles, and hence the weakness and thinness of the limb—a vexatious circumstance, it is true, but one which may be remedied by calling the parts into exercise. The atrophy as to length takes place both in the bones and in the muscles, but it is developed in the skeleton, which is most important, and thence proceeds a shortening of the limb, which no remedy can cure. The difference in length between the limbs increases in direct proportion to the age. Not perceptible at birth, it becomes obvious some years after, and at the age of ten M. Dupuytren has always found it well marked, and still more so at twenty, if no means of prevention have been adopted.

The shortening of the muscles and tendons, less considerable in general, becomes nevertheless irremediable after a certain time. Thus at twenty years the tendo-achillis has so lost its due length that when the foot has been brought to its natural direction the heel continues to be pulled upwards, so as to oblige the individual to have a very thick sole to the heel of his shoe, in order to be able to rest at all upon the part. It is therefore desirable to prevent as much as possible this shortening of the bones, because when it once takes place it is irremediable. According

to these views, M. Dupuytren requested several practitioners who devote themselves especially to such cases, to begin the treatment immediately after birth: he sent four or five infants of very early age to an establishment for "Orthopedy," where they remained not more than five or six weeks. The deformity was completely corrected, so that the children learned to walk in the usual manner, and the limb never having lost its length, performed its functions in the usual manner. I witnessed the results, said M. Dupuytren—I kept the individuals in view—and ascertained that the deformity did not return; and I affirm that, by treating club-foot thus early, the wasting of the limb may be avoided with certainty.

It may be added, that the younger the infant is the more readily will the foot yield to pressure. In a new-born babe the hand of the surgeon is sufficient to restore its natural form to the foot, and that without causing any pain. A few months more, however, increases the difficulty, and when the patient has passed his tenth year, machinery is required to accomplish the end in view. After twenty, even mechanical contrivances fail to be of service. This depends upon three principal circumstances: 1. the suppleness of the ligaments and muscles, which continues to diminish as the age increases; 2. the increase of the deformity itself; 3. the imperfect conformation in which the bones are developed; which last is decidedly the most powerful cause.

In conclusion it may be stated, that the treatment of club-foot, if undertaken at birth, is easy and simple: it is both completely preventive and curative.

GENERAL DISPENSARY.*

Chronic Inflammation of the Bladder successfully treated with the Pereira Brava.

Richard Taylor, aged 25, was admitted, under the care of Mr. Coulson, May 18, 1832. The symptoms which he was labouring under at the time of his admission, were a dull aching pain in his loins, uneasiness in the region of his bladder, occasionally extending along the urethra to the external orifice; an incessant desire to make water, each effort being attended with pain and difficulty. The patient said that the urine at times contained a good deal of adhesive mucus, as well as blood. He was sounded, but no stone could be felt, and the urethra was free from stricture. The man had been under medical treatment since the beginning of November, 1831, and all the usual remedies had been tried, but without success. His health was considerably impaired. Six leeches were ordered to be applied to the pubes, and an infusion of the pareira brava (in the proportion of six drachms of the root to a pint of boiling water) was prescribed, of which he was directed to take two table-spoonfuls three times a day. The leeches were repeated five or six times, and tartar emetic ointment was rubbed in for a few times on the pubes. These were the only means employed in addition to the infusion of the pereira brava, which he continued taking (with the intermission only of a week or two) till the 4th of July.

The patient strikingly improved under this plan of treatment; but it was suggested that the amendment might be attributable to the leeching and counter-irritation, and not to the medicine: the medicine was therefore discontinued, and his former symptoms immediately returned. In July, the decoction was ordered instead of the infusion. An ounce of the root in a pint and a half of water, boiled down to a pint, was the strength employed; and to half a pint of this, two drachms of copaivi, with some mucilage, were added: this was ordered to be taken as before. The patient has continued taking this mixture up to the present time, and he finds himself, whilst taking it, free from any bad symptom. On his first application he used to make water upwards of twenty times a day, and very little each time; now he only voids his urine three or four times a day, and makes a pint or more at a time. The patient fears that he shall never be able to do without the medicine, as he finds the symptoms of his complaint return when he discontinues the remedy. In fact, where chronic inflammation of the bladder is the primary affection, the surgeon seldom succeeds in effecting a complete cure. The complaint may be kept under, as in this case, but there is always a great tendency to a relapse.

Mr. Coulson is trying the pareira brava at this time, in some other cases of chronic inflammation of the bladder, and with apparent good effect. He was induced to try this remedy from the observations of Mr. Brodie, in his Lectures on Diseases of the Urinary Organs. The form in which Mr. B. recommends it to be used, is as follows:—"Take half an ounce of the root of the pareira brava, add three pints of water, let it simmer gently near the fire until reduced to one pint. The patient is to drink from eight to twelve ounces of this decoction daily."

Operation for Stone.

Silas Maggs, 12 years of age, and of a delicate constitution, was admitted, under the care of Mr. Coulson, September 5th, with symptoms of stone in the bladder. The

* This short article is in the old type, having been intended for the concluding Number of last volume.—E. G.

mother says, that about eight years ago the child first complained of difficulty in passing his water, and that this symptom has continued, with little or no intermission, up to the present time; a good deal of blood being sometimes voided with the urine. During the last month, the child had been under the care of an intelligent surgeon, and his health, which had suffered considerably, was much improved by the treatment to which he had been subjected. The child had been sounded, by the same practitioner, three or four times, and a stone distinctly felt. A peculiarity in the case was, that sometimes a calculus could be felt and at other times it could not; and this had caused the operation to be delayed. The boy was of a very irritable habit; the urine was alkaline, and contained some adhesive mucus. On the 8th the child was sounded, but a stone could not then be felt; the boy, however, had emptied his bladder just prior to being sounded. As the child's health was in a better state than it had been for some time before, and the parents were anxious for the operation to be performed, it was determined upon for the next day, if the stone should then be detected. Some castor-oil was given early on the following morning, and a clyster administered two hours before the time fixed.

Sunday, September 9th.—Mr. Coulson again sounded the child, when a stone was distinctly felt. The operation was immediately performed, and a calculus composed of the phosphate of lime, of the size and shape of a large peach-stone, was removed. The operation was completed in two minutes. The child was then put to bed, and an opiate given. Very little blood was lost, and the child is rapidly recovering, not having had a bad symptom.

MEDICO-CHIRURGICAL REVIEW *versus* THE WEST-END.

We have received a letter from "A West-End Pupil," entreating us to defend the School to which he belongs, against some "injurious reflections" in the last number of Dr. Johnson's journal. We are very sorry we cannot oblige our young friend by entering upon the subject,—not attaching quite so much importance to it as he seems to do. Besides, by his own shewing, it is unnecessary, as Dr. Johnson has himself taken care to prove, that his own opinion is at variance with that of his reviewer. "Has he not (asks our 'Pupil') at successive times entered two of his own sons at the School in question, and under the very men who are still there? has he not filled twenty mortal columns of his present number with Cases and Reports from the institution alluded to? and does he not formally announce his intention of continuing "in each succeeding number" to favour us with "lengthened and interesting" clinical observations from the same quarter, notwithstanding that his reviewer has taken a pathetic leave of the place in a lachrymose Latin valedictory?" We dare be sworn the Doctor knew no more of the paragraph complained of, than he himself informs us he did about the attack on Mr. Arnott, in his previous number. As to the rest, our correspondent need not distress himself—the public, he may be assured, set down such "reflections" precisely for what they are worth.

MR. DAVIES.

Mr. David Davies has been appointed Surgeon in Ordinary to Her Majesty's Household, in the room of Mr. Keate.

WEEKLY ACCOUNT OF BURIALS,

From the Bills of Mortality, *Oct.* 9, 1832.

Age and Debility	23	Hernia	1
Apoplexy	8	Hooping-Cough	3
Asthma	4	Inflammation	24
Cancer	2	Inflammation of the Bowels & Stomach	9
Childbirth	3	Brain	4
Cholera	30	Lungs and Pleura	2
Consumption	52	Liver, Diseases of the	8
Convulsions	26	Locked Jaw	1
Dentition or Teething	5	Measles	9
Diarrhœa	2	Mortification	4
Dropsy	8	Paralysis	3
Dropsy on the Brain	15	Small-Pox	20
Dropsy on the Chest	2	Spasms	3
Epilepsy	1	Stricture	1
Fever	9	Worms	2
Fever, Scarlet	16	Unknown causes	1
Fever, Typhus	5		
Hæmorrhage	3		
Heart, Diseases of	1	Still-born	11

Decrease of Burials, as compared with the preceding Week . . . 292

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

October 1832.	Thermometer.		Barometer.	
Thursday . 4	from 44	to 61	29·74	to 29·57
Friday. . . 5	48	61	29·44	29·33
Saturday . 6	40	61	29·44	29·51
Sunday . . 7	33	62	29·42	29·58
Monday . . 8	47	61	29·16	29·57
Tuesday . 9	40	59	29·76	29·89
Wednesday 10	40	62	30·00	30·04

Generally cloudy; raining daily, except the 10th.

Rain fallen, 2 inches and ·2 of an inch.

Charles Henry Adams.

NOTICE.

We beg to refer our correspondent "X." to the leader with which we closed our last volume; also to the notice in our No. for June the 16th, when the course was temporarily discontinued.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 20, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

Lecture III.—Part II.

EXANTHEMATA.

Urticaria.

The next disease, gentlemen, of the description in which the inflammation is extended in patches on the skin, and of which I will speak, is urticaria. I select it the next because it is not a contagious disease, and, indeed, is almost always a disease free from danger, just like the three I spoke of in the class of papulæ—namely, strophulus, lichen, and prurigo; and just like the two of which I have already spoken in this class—viz. roseola and erythema, excepting E. tuberculatum, which certainly does, although it will not itself prove fatal, occur in persons who usually soon die of something else.

This disease, urticaria, is in plain English the *nettle rash*. It is so called because the appearance is precisely that of a person stung with nettles,—*urtica* being the Latin for nettle. You find it spoken of by some writers under the term *essera*, which, I understand, is the Arabic name. I think Dr. Heberden speaks of nettle rash under that title.

In this disease there are efflorescences, as they are called—extended patches; but besides that there are wheals. I need not say that a wheal is a pretty hard elevation of the skin, such as occurs from a horse-whip applied to the surface of the body; but it is defined particularly by Dr Willan, to be a rounded or longitudinal elevation, he says, of the cuticle; but one ought to comprise more in it than that: we might say in general terms, of the skin; but still "not permanent, not containing fluid, not tending to suppuration." Of course, if the cuticle be raised, according to Dr. Willan's expression, there must be something in it; you would imagine there to be a vesicle, water, or pus; it is, therefore, improper to say elevation of the cuticle. The cuticle is raised; but you would have a wrong idea if you imagined that the cuticle was raised from the other component parts of the skin. The cellular membrance is raised indeed, as well as the cutis, and there is a hard bump, and an extended efflorescence or patch, or whatever you please to call it, around the bumps. This efflorescence is of a vivid red—a very intense red—sometimes really of a damask hue—almost the appearance which you observe in those persons said to have claret marks; occasionally there are a few very small wheals, but sometimes not, the efflorescence being the character of the disease, though in the greater number of cases, in the efflorescence you find these wheals, which look white in the midst of the red patches. There is an extreme itching—that sort of itching which is called tingling, exactly as if a person were stung with nettles. To the eye of a bystander, and to the feelings of the patient, the state is just that of a person stung with nettles.

Species.—If the bumps be very hard indeed, they are much larger at the same time; and that variety of the disease has a particular name, and is called *U. tuberosa*. It is sufficient to remember, that sometimes the bumps are pretty large and hard, and very painful; and if you choose you may remember, that when they are so it is called U. tuberosa. These large ones, these thumping bumps, chiefly occur

in the loins and legs, and are generally worse at night, subsiding in the morning and leaving the patient weak. If it happen that these wheals and patches are numerous, and coalesce, and of irregular forms, is is called *U. conferta;* and these are said to occur chiefly in persons of a dry, swarthy skin, above forty years of age. If it so happen that the disease has been preceded or is accompanied by headache, nausea, gastrodynia, drowsiness, feverishness, pyrexia,—altogether it is called *U. febrilis.* Very frequently, whether it is preceded by these symptoms or not, it is attended by them when it does appear. If they precede it they will still continue; but frequently they will come on only when it comes on. Generally, in severe cases, there is heat and thirst; the tongue is white, yellowish, and loaded; the epigastrium is tender; the pulse is full and quick; and now and then the disease will come on like any other inflammation, with shivering. Now and then the internal symptoms, which occur before the eruption, are relieved by it, or at least are diminished, or disappear; but they re-appear when it ceases again. Frequently, however, these will all exist together—the internal symptoms of feverishness, and the external symptoms of efflorescence and wheals.

This disease is sometimes so active, that the face is swelled altogether, and the eyes are almost lost. Persons say they can hardly see out of their eyes, and, in fact, you can see but little of their eyes, and every part around is swollen—cheeks, lips, and scalp; and all are tense, the nose among the rest. The eruption will vary in intensity, and vary in its situation, not only on different days, but at different hours of the same day; it will come and go several times in the twenty-four hours. Warmth will aggravate it, and, on the other hand, exposure to cold will do just the same. When a person undresses, and there is an application of cold air to a part of the surface which before was covered, it will frequently bring out the rash, and make it worse. On the other hand, if a person go into the other extreme—if he stand near the fire, or take stimuli, he will be worse. I need not say that rubbing and scratching make things a great deal worse, but people will do so, and on account of the pain they really can hardly help it. This disease is often not confined to the surface; it affects the internal mucous membranes next the surface, and the submucous cellular membrane. You will often find the tongue, the fauces, and the throat swollen, so that the patient can perhaps hardly swallow. The irritation of the mucous membrane in that quarter of the throat sometimes occasions a degree of cough; and it is said, but I have never seen it, (though I have frequently seen patients unable to swallow, and nearly unable to breathe) that now and then there is an irritation of the bladder, producing strangury, and sometimes diarrhœa is induced. The internal affection in the complaint is sometimes said to end fatally; but I presume this does not arise from the eruption; on the contrary, I imagine that it is the general state which gives rise to the eruption. The disease will last for a few days, perhaps a fortnight, and now and then there is a slight scurf afterwards. The cuticle, from the irritation, is separated from the parts beneath, and comes off in the form of slight scurf; this occurrence, however, is not a general thing.

Sometimes the disease is chronic, called *U. perstans.* It is sufficient to remember that it may be a chronic disease. The redness will go, but the wheals, perhaps, will remain. Now and then, instead of remaining chronic, it comes and goes for many months, vanishing and recurring, and then it is called *U. evanida;* but I beg you will not trouble yourselves to remember these expressions. If you know that it comes and goes, or stays, that is sufficient, without knowing how authors arbitrarily choose to designate these varieties. Dr. Bateman says there is no pyrexia, but I know that there frequently is, and also an inflammatory state of the head and of the abdomen. It sometimes happens that the eruption disappears, or only comes from time to time; and when the tingling comes between the appearances of the disease, it is then called *U. subcutanea.* You perhaps cannot well imagine a disease of the skin to be under the skin, but so it is called; it lies underneath and teazes the patient without shewing its face.

Perhaps, before I proceed to consider the causes, I had better shew you the appearances of the disease. It is an affection which people very often do not recognize. I know that it occasionally occurs in practice that a patient is said to have any thing but urticaria, and is very much frightened; but it is easily recognized by the tingling and by the elevations or wheals. The affection is represented in plate xxiv. figs. 1 and 2. You see in both forms of the disease that the wheals are slight; in the upper figure there is a slight inflammation, and in the lower one it is very great; it is as deep as damask, or claret marks. You sometimes see the redness with a few wheals; and people are often said to have erysipelas when they have only this; and there is frequently a swelling of the face too, so shat some persons are very much alarmed. It occurs sometimes in children, and in them it may be more easily mistaken at first than in adults. It may be, in the first instance, mistaken for measles,

or some other disease: it is often called erysipelas.

Causes.—I believe that the most frequent cause of urticaria is the application of cold, especially when the body is heated. It will frequently arise from cold applied to the surface—sometimes cold and wet, but especially when the body is over heated. It is perhaps sometimes induced by sudden heat. It will frequently arise from an emotion of the mind; it arises too from teething, and we see it too continually from certain ingesta; some have it through one kind, and some through another. In some, almonds will occasion it, or rather the skin of almonds. It is not the blanched almonds that cause it, but the unblanched, so that it is the external part that produces the disease, and the disease is induced in consequence of the skin of the almond containing hydrocyanic acid, which now and then will have the same effect. Various kernels of fruit will give origin to it in some people, in consequence of containing the same substance. Mushrooms, also, will occasion it in some people: I suppose peculiar kinds. Herrings, particularly red herrings, and shrimps, will occasion it. Shell-fish are very often the cause of the disease, but I believe muscles produce it more frequently than other kinds. You hear of persons being poisoned with muscles, and they are said to swell. I imagine the idea of swelling from being poisoned arises from this circumstance, that urticaria is produced by different substances; and when it is produced, the face often swells prodigiously, and even the whole body; and if persons have previously eaten muscles, they are sure to say they are poisoned: it is not worth the name of poisoning. So intense is the idiosyncracy of some persons in this disease as to muscles, that a gentleman informed me that he knew a woman in whom urticaria was induced by one tea-spoonful of the water in which muscles had been boiled. She always had urticaria if she tasted muscles; but having boiled some for her husband, and being extremely fond of them, she thought she might indulge herself with a little taste of them, and so she took a tea-spoonful only of the liquor, but it had the same effect. Crab-soup, which I suppose is much the same as the liquor in which muscles are boiled, will also induce the disease. Malt-liquor, white-wine vinegar, and common spirits, will, in some people, produce it. A medical man told me that his wife always had it if she took gruel. One of the most common causes in medicine is copaiba. Many persons on taking copaiba are covered with nettle-rash. I had a patient in whom it was produced in the greatest intensity I ever saw it, by the sulphate of quinine. I never knew this before; his eyes were closed; his face was so swollen, that his friends did not know him; he was in a most intense burning heat, and could scarcely breathe; swallowing was impossible. His brother came to me, and told me of the circumstance. I wished to ascertain whether it was the sulphate of quinine, and I begged him to take only a grain: he complied with my request, and it had the same effect, only in a less degree. He then took a minute fraction of a grain; there was not more quinine than, as common people say, was sufficient to swear by, and even that produced a degree of uneasiness in his throat, and a certain tingling in his skin. I have known several persons in whom the disease has been induced by landanum; in fact by opium in any common form. I mentioned that in my own case, whenever I take opium, I am sure, in two or three hours, to have an itching of my nose, which will not leave me quiet for several hours. The same substance in other persons will induce universal tingling of the skin, with bumps—in fact, nettle-rash. Pepper, and various spices, will have the same effect. Pepper and vinegar occasion in me a great itching of the scalp. I once saw the disease induced very violently by a mixture of subcarbonate of iron with treacle: whether it was the iron or the treacle I do not know. The effect of copaiba in inducing the disease is very common: a large number of people always have it if they take this medicine. External stimuli will induce it, and it may spread along the skin, so as to prevail to a considerable extent. Dr. Willan says that he knew a person in whom it was produced by a slight application of ung. hydrargi., and another who had it from rubbing the hands with oatmeal. It is worth notice, that when an irritant is applied to the skin, the effect is not always limited to the spot, but other parts, either around, or *to* some distance, or *at* some distance, may suffer. Croton oil often causes redness and vesicles far beyond the spot of application. Tartar emetic applied to the legs often causes pustules in the genitals. For this fact I beg to refer you to a paper of mine in the 13th volume of the Medico-Chirurgical Transactions, on Subcarbonate of Iron.

Treatment.—In regard to the mode of treatment, if the patient's strength will bear it, the shortest way is to take blood from the arm. Even if any thing improper have been taken into the stomach, by bleeding in the arm you produce almost instantaneous relief, and the patient will speedily get rid of the complaint. A friend of mine was taking copaiba, through his misdeeds, and the next day was seized with an eruption all over his body. His face was swollen and burning, and his lips were so stiff that he

could scarcely move them to eat. The aperture of his eyelids became very small; his pulse was about 100, and full; he was in a great heat, and red all over. Before I saw him he had taken an emetic to empty his stomach, but it was quite in vain—the copaiba had entered his system, and was there causing irritation. When I went to him, I immediately saw it was nettle-rash, and I begged another friend who was by to put a lancet into his arm, and detract a quantity of blood. Before the bason was half filled he felt relief, and as the blood continued to flow he felt more and more benefit; he became paler and paler, the swelling of his face declined, and before evening he was tolerably well. He took a dose of physic to assist the bleeding, but I dare say he would have done without it. The venesection, notwithstanding the emetic had been fruitless, instantly relieved him. A short time afterwards he found it necessary still to go on with the copaiba, his other troubles not having ceased, and the same effect was again produced. He took no emetic that time, but was again bled, and the disease instantly disappeared; he had no further trouble. However, if you are sure that the cause is still in the stomach, in consequence of the short time which has elapsed since it was taken, it would be but common sense to empty it; but I confess, if the person were of full habit, I should take away blood first, for you will find that a most speedy mode of cure. You must, as in all other inflammatory complaints, regard the constitution of the patient on the one hand, and the intensity of the disease on the other. If you take away blood, you will cure the disease in perhaps a twentieth part of the time that you will if you trust to low diet and purgatives. I would in every case back bleeding by low diet and purging. In the chronic form of the disease, the patient should avoid stimuli, and adopt antiphlogistic regimen; he should avoid eating any thing that can excite either his body or his mind; and if the pulse be strong, he should unquestionably lose a small quantity of blood. The warm bath is said to relieve the affection, and in some cases bathing has done good. Bark and acids are praised. All the cases, however, that I have seen, whether acute or chronic, have been best and most successfully treated by venesection and common antiphlogistic measures. In the case of the lady who had urticaria from taking the subcarbonate of iron in treacle, for a couple of days, the eruption began one Sunday morning, and it was supposed that she had got scarlet fever. The eruption was just of the appearance you saw in the lower figure, of a damask red, with bumps, and it came out suddenly. She was in the greatest agony; her countenance expressed great distress; but though I imagined it arose from the medicine, I did not give her an emetic; but I had her bled, and in her, while her noble blood flowed, (for she was a peeress,) the symptoms declined, and when the arm was tied up, there was no redness to be seen. No pains were taken to get rid of the offending matter, which, in all probability, was the cause of the disease. I did not know the use of bleeding in this complaint when I began practice, but I found it mentioned in authors; it seemed rational, and I adopted it in every case afterwards where the pulse would allow it. In the chronic form, if you find any other disease present, you must endeavour to remove that. The urticaria may arise from chronic enteritis or gastritis, and that ought to be remedied in the usual way, and that usual way is to apply leeches to the abdomen, or adopt general bleeding, &c. You may get great and deserved credit for curing this disease; or you may find it very obstinate. The secret of the cure lies generally in bleeding and adopting antiphlogistic means. The chlorides, prussic acid, or nitric acid, best alleviate the itching, among local applications.

Rubeola.

The next disease of which I shall speak is a severe affection, is frequently fatal, and is contagious; namely, the measles.

Etymology.—This is called among the medical men of this country, *morbilli*, or *rubeola*. We have adopted the expression "morbilli" from the Italians, who so named the disease from its being a less kind of plague—the minor plague, the little disease. The expression "rubeola" was formerly applied to scarlet fever and measles in common, and to other diseases; in fact it was Sauvages, the first writer on methodical nosology, that restricted the term rubeola to measles. The word *rubio*, from which it comes, is Spanish, and it was first written *rubiólo*, as it is pronounced, the accent being placed on the *o*.

This is a contagious and infectious disease; it chiefly affects children, and is more severe in them than in adults. There is very rarely an indisposition to it; most persons are liable to it; you rarely meet any one that will not take it. The indisposition is less frequent than the indisposition to small pox. It rarely occurs more than once, but sometimes it does. Dr. Baillie, in the Transactions of a Society for the improvement of Medical and Surgical Knowledge, describes eight cases of its occurrence more than once. When it does occur more than once, it is generally when it prevails as an epidemic disease. By epidemic I do not mean contagious. The word epidemic has been attempted to be restricted to those diseases which prevail over a number of

persons, without any contagion in the atmosphere; but the word relates to diseases that prevail temporarily over many people without a local cause, be it contagious or not contagious. It is said to have been observed at birth. Hooping-cough, I mentioned, has been heard at birth. Children have been frequently born with the small pox; and it is said that children have been born covered with measles. It chiefly prevails in winter and spring.

Symptoms.—Now this disease is very well characterized; it has very peculiar symptoms, and it is a disease that hardly any one, I think, can mistake. It is almost always ushered in by catarrhal symptoms, that is by a flushing of the face; redness of the eyes; heaviness of look; a running of the eyes and nose; soreness of the throat; sneezing; cough; a hoarse and sounding cough—a cough which old women who have been much amongst children, describe as the "measle cough." I cannot describe it—I can only say it is a hoarse cough.

Course of the Disease.—These catarrhal symptoms will sometimes last two days, and sometimes twenty, before the cutaneous affection shews itself; but in general it is on the fourth day that it appears—sometimes as early as the third, sometimes on the fifth, and sometimes on the sixth. It is upon the face generally that the cutaneous affection presents itself; it appears by a rash on the forehead and the chin, and from thence it spreads itself all over the face. The next morning it is found to have spread, not only over the face, but over the breast and trunk, and upon the extremities. On the fifth day the disease has pretty well covered the body, and it is on that day that the face is most vivid. On the sixth day the eruption is pale on the face, and most vivid on the body, and on the seventh day it begins to disappear in the latter situation. The disease altogether is of about seven days' duration. The catarrhal symptoms appear for four days; upon the fourth day the cutaneous disease appears, and this lasts three days—making seven altogether. But now and then children have catarrh for two or three weeks; and then, in the midst of the catarrh, without any previous additional symptoms, except perhaps an increased intensity, the cutaneous disease shews itself. Now and then there are patches on the back of the hand, which have not appeared before the sixth or seventh day of the fever; and in the remote parts of the body the redness occasionally does not come on till that time, and then the eruption in these situations does not decline, perhaps, till the eighth day. On the ninth day there is only a slight discolouration left—a sort of brownish appearance. The colour in this disease is by no means so vivid as in roseola, and as in scarlet fever. When it is all over, if the inflammation have been pretty extensive, there is a furfuraceous desquamation. This, then, is the course of the disease.

When the affection first appears, there are only, at the utmost, little red dots, scarcely perceptible and nearly circular: they are rather less than the spots of fleabites. They become more and more numerous, however, and coalesce into patches. All the exanthemata begin and extend in this way. The patches which are formed in this disease, you must remember, are of an irregular figure, and frequently assume a semicircular or crescent form. This is characteristic of the disease, and it is worthy of notice; not that the diagnosis is often at all difficult, but if it be difficult you may be assisted by remembering that the patches in measles affect a semicircular or crescent form—that in the midst of these patches there are circular spots, and that around the patches are spaces of the natural colour. Upon the face the disease is, of course, the most severe. The skin of the face is finer, and more abundant in red vessels, than that of many other parts; there it is that the effects of inflammation are the most severe; and from these circumstances the skin is not smooth, but roughened, so that if you pass your finger along it you will find a little roughness—hardly worth the name of roughness, but inequality. Occasionally, if the inflammation be severe, this is observed in other parts of the body. Occasionally you will find the red dots more or less hard and elevated. Notwithstanding the disease is characterized by patches, the inflammation may be so intense as to cause the face to swell and the eyes to be closed; nay, the symptoms may be so severe as to cause little collections of water, the size of millet seeds, which are called *miliary vesicles*; and sometimes there are papulæ on the hands, wrists, and fingers, elevations of the cuticle, having a distinct roughness in the midst of the patches; so that while the patches give an elevation to the feel, distinct from the surrounding skin, in the midst of these there will be another roughness arising from the papulæ. When you hear a child sneeze and cough, and see these crescent semicircular patches represented in plate xix. you may be sure it is the measles. It is on the face you usually see the disease best characterized. You may mistake it on the arms, hands, and body, but you can hardly do so on the face. It is very important to make a correct diagnosis here, although the disease may be of a slight character; because if you tell a parent that the child is about to have the small pox, when it is

going to have the measles, of course you will be thought no doctor. Sometimes the spots will go down as fast as they appear.

In this disease it is almost constantly observed, that the cartarrhal symptoms are not much lessened on the appearance of the eruption. You will find it often said by authors, that when the eruption comes out in cutaneous diseases, the internal symptoms are relieved. We all meet with this occasionally; but in a great number of cases of cutaneous diseases, I have seen the internal symptoms not alleviated by the appearance of the external. In measles, however, it is a well-known fact, that so far from there being an alleviation of the internal symptoms, they are more frequently aggravated than not; at any rate, in general, they are not mitigated. When the eruption comes out, the catarrh is confined perhaps to the bronchiæ. It appears that the catarrh is more or less bronchitic, for there is an affection of the superior parts of those tubes. But frequently the irritation of that part of the membrane below the larnyx increases so that you have decided bronchitis. Sometimes you will have an affection of the substance of the lungs—peripneumonia; and sometimes of the investing membrane—pleuritis. Frequently, when the measles are over, they leave chronic bronchitis, chronic peripneumonia, chronic pleuritis, and even phthisis: they frequently seem to give rise to tubercles. Frequently, too, there is left after measles a chronic diarrhœa, which is generally of an inflammatory character; frequently inflammation of the eyes—ophthalmia; affection of the ears—ear-ache, running of the ears, otorrhœa, deafness; frequently disease of the mesenteric glands; frequently, too, after the disease will come chronic cutaneous affections—such as ecthyma, rupia, porrigo, boils, aphthæ, and many other things; in fact there is no end to the mischiefs that measles leave behind. They may recede suddenly, and then internal inflammation take place of the lungs, or within the abdomen, or in the head; but it is chiefly in the chest that inflammation occurs when the disease recedes.

Now it is not by any means certain that the retrocession of the measles causes these symptoms; it is just as probable that, in many instances, the occurrence of the internal disease puts a stop to the external. It is a great mistake to suppose that the retrocession of an eruption causes internal disease in every case where such internal disease occurs. There can be no doubt that the occurrence of another disease in the internal part of the body will put a stop to, or suspend, a disease which has previously been going on in an external part; but it is a fact, that when measles suddenly disappear externally, for the most part there is some internal affection.

Treatment.—The treatment of the disease consists, in ordinary cases, of mild antiphlogistic diet and the other regimen. You must keep the patient cool, but not cold, lest you should induce bronchitis; you must keep him at a pleasant temperature. It was formerly the custom to keep children hot, lest the measles should go in; the consequence of which was, that it kept up an irritation of the whole system, and kept up any bronchitis that might be present. On the other hand, I should not aim at keeping the patient cold, lest there should be bronchitis induced in this way. An intermediate plan seems to answer best. Some have recommended cold affusion in this disease; but the tendency to bronchitis is such, that I have never practised it, and I would not recommend it.

From the catarrhal symptoms in this disease, and their great disposition, on the appearance of the eruption, to become severe, you will find it necessary always to direct your attention to the state of the chest. It is always necessary to observe carefully whether there is peripneumonia, or bronchitis, or pleuritis, or any other *itis* of the chest, and to treat it just as if no measles were present—to take blood from the arm or the jugular vein, or apply leeches, just as you may think proper. One would not pay such great attention to these symptoms before the eruption occurs, but if they be severe when the eruption comes out, blood should be taken. Leeches generally answer; but if the child be large you might take it from the jugular vein, or the arm. Moderate purging is proper, and low diet. The patient must be treated on the antiphlogistic plan, according to the degree of inflammation. If the eruption does not come out, or recedes, you should put the patient into the warm bath; but you should remember that this is most likely produced by some internal disease, and that internal disease, in nine cases out of ten, is inflammatory; and in eight out of that nine it is situated in the chest. The best mode to bring out the measles again is to lessen the internal disease. The measles will sometimes be suspended for many, many days after appearing on the surface; they will recede in consequence of the internal inflammation; you must subdue that, and then frequently they will re-appear. This is a very curious circumstance. Now and then there may not be internal inflammation; there may be mere debility, and then it is necessary to give stimulants—ammonia with wine. When there is diarrhœa, it generally requires antiphlogistic treatment. The diarrhœa is generally troublesome when the dis-

case is over; but it is important in all cases to press upon the abdomen, and see if there be any tenderness. In a large number of cases you will find tenderness, and the diarrhœa is only to be subdued by sinapisms, leeches, &c. Sydenham pointed out that the diarrhœa was inflammatory; that opium and opiates were improper; and that venesection ought to be resorted to. Venesection is out of the question in many cases, but it is sometimes proper. However, this is no general rule; you see cases where astringents and opium will cure the disease, there is so little inflammation; but frequently they are not to be trusted to alone. In some you must unite this plan with the remedies for inflammation; in others you must solely treat inflammation, and the diarrhœa will cease. This is a most important point in practice, although it is simple, and unless you carefully attend to it, you may do harm when good might be effected.

OBSERVATIONS ON PARTURITION,

TAKEN FROM A

Lecture delivered at the Theatre of Anatomy and Medicine, Marsden-Street, Manchester,

October 3, 1832,

BY JOHN ROBERTON,

One of the Surgeons to the Lying-in Hospital.

(*Concluded from our last Number.*)

THE next argument on which our opponents rest their objections, is the non-existence of scientific midwifery in the civilized countries of Eastern Asia: a fact which indicates, as they contend, that it is regarded *there* as unnecessary. "Among the highly-civilized and numberless ladies and women of China and the East," says Sir Anthony Carlisle, "ordinary matrons are universally employed in the sanctuary of child-birth; and they would revolt with horror from any proposal to admit the presence of a man." In reply to such a statement as this it has been common to argue, that, in warm countries, the parts concerned in admitting the passage of the child are so relaxed, by the influence of climate, that labour becomes comparatively easy; and that hence we are to account for the non-employment of scientific accoucheurs. This I regard as a very unsound view of the subject. In all those warm countries whose inhabitants live after the same manner as the mass of people in England, parturition is in no degree easier than it is here. In the town of Sierra Leone, so near the equator as latitude 8 deg. north, we are assured by Dr. Winterbottom, who resided there, that, having been present at a number of labours, he can affirm that they, in every respect, resemble those of women in the same situation of life in England. I have met (says he) with instances in England, where the fœtus was expelled with more ease than I ever knew it to be at Sierra Leone. Long also, the able historian of Jamaica, assures us (in allusion to parturition among the slaves) that labour is not so easy in the West Indies as (he supposes) it is in Africa; for many children are annually destroyed, as well as their mothers, in the hands of the negro midwives.

While on this topic, I may refer to the prophetical writings of the Old Testament, for many striking allusions to painful parturition. The Jews, you are aware, inhabited *a warm climate;* and yet, were we to judge of the nature of parturition among them, from the very frequent reference which the prophets make to it in figures and similes, when predicting the sufferings to be produced by impending judgments, we should be led to the conclusion that in no people was the *primal curse* ever so severely exemplified. Thus Jeremiah, the coming miseries of Judah passing before his eyes, exclaims, "I have heard a voice as of a woman in travail, and the anguish as of her that bringeth forth *her first child;* the voice of the daughter of Zion that bewaileth herself, that spreadeth her hands." A multitude of other passages, containing a similar allusion, might be cited. In the historical parts of the Scriptures, too, there is incidental mention of several cases in which parturition proved fatal. So much for the relaxing influence of a warm climate!—a notion which, like various others respecting the influence of climate on the human system, is totally at variance with facts.

To return to the proposition that, in China and the East, man-midwifery is unknown: this opinion is certainly countenanced by the several reports of Sir George Staunton and Mr. Barrow, each of whom accompanied an embassy to the Court of Pekin. Mr. Barrow expressly states that there are no man-midwives in China. A writer in the Encyclopædia Britannica, however, has shewn that these travellers are in error. His information, he tells us, is derived from a more authentic source than the works of gentlemen who were only a few months in China, and who, during that time, were treated in a great measure as state prisoners. He has it, through the medium of a friend, from a gentleman who resided upwards of twenty years as surgeon to the British factory at Canton, and who had both the ability and inclination to learn, during so long a residence, all the cus-

toms and prejudices of the natives relative to the preservation of human health. The information is in substance this; that although physic and surgery are, in a scientific sense, unknown in China, midwifery is in a more advanced state, and, that for a long period midwifery has been practised by a set of men destined to the purpose, by order of government. These men, who hold in society the same rank which lithotomists did in this country about a century ago, are called in whenever a woman has been above a certain number of hours in labour, and employ a mechanical contrivance for completing the delivery without injury to the infant. A certain number of such individuals is allotted to each district of a certain population. It is said that the Chinese government was led to make this provision in consequence of a representation, that, annually, many women died undelivered, and that in the majority of cases the cause of obstruction might have been removed by simple mechanical expedients. More need not be said about the efficiency of matron midwives in China and the East.

But, say our opponents, in 99 cases out of a 100 the labours of women, even in civilized Europe, are perfectly regular; and were they left wholly to nature, would terminate favourably. They further insinuate, that as it is only within the last 60 or 80 years that man-midwifery has become general in England, the change must have been brought about, not by any *new* necessity, but by the interested policy of medical men. Admitting, as I readily do, not that 99 in a 100, but that a large proportion of labours (say 19 out of 20) would terminate well, under the eye of an ordinary nurse, were they left solely to the energies of nature, *this* furnishes no argument against man-midwifery.

Waving, as unnecessary, all discussion of the importance of surgical midwifery (by which I mean the operations, manual and instrumental, requisite in difficult and dangerous parturition, and in those accidents which may precede or follow it—operations which, speaking generally, man-midwives are alone fitted to practise,) I beg to call your attention to the great and important principle upon which my apology for scientific midwifery rests: it is, that *the natural progress of labour is less interfered with in proportion as obstetric science advances.* It betrays little knowledge of mankind to imagine, that simplicity, in the practice of any art or science, is the characteristic of untutored ignorance. Simplicity in this sense, which is only another name for a profound acquaintance with nature, is of slow growth. This is amply verified in the history of midwifery. In tedious labour, among the American Indians, for example, it is the custom to fasten a belt round the abdomen of the patient, and powerfully tighten it, with the view of forcing out the child; or the woman is lifted by her assistants and violently shaken; or when other means fail, they bind a handkerchief over her mouth and nose; and this, by causing a general convulsion, sometimes actually produces immediate delivery. In similar cases among the negroes, we are informed, by Dr. Winterbottom, that it is common to suspend the woman by the heels, with the view of altering the position of the child. They sometimes also, like the Indians, employ compression on the abdomen by means of a circular fillet, which is tightened with great force by a dozen assistants. Other practices are in use in rude nations; as the employment of terror, to produce which, the attendants, on a sudden, raise a great shout—tickling the nose, to excite violent sneezing; and many besides—more than I shall trouble you by enumerating. The methods adopted to obtain the expulsion of the placenta are equally strange, and not less rude.

In the practice of rural midwives, in our own country, who are generally uneducated, it is scarcely credible to what an extent they carry their interference in every stage of labour. It is no part of their system to trust in the unaided powers of nature. They must needs be "giving help." Sometimes they rupture the membranes at an early period. Many, again, on the occurrence of every pain, introduce their fingers and pull back the perineum, in the belief that such a practice increases the bearing effort. This, by producing a dry inflamed condition of the vagina, occasionally suspends labour altogether; and is followed, after delivery, by severe irritation of the parts. In many cases, hot spirits, or hot spiced ale, is forced upon the patient; and this too, by producing fever, will often completely suspend the labour. It is, however, in the last stage of parturition that the uninstructed midwife is most busy. On the recurrence of a pain, and often when there is not a pain, the patient is loudly urged to hold in her breath and to bear down—a practice which sometimes leads to considerable exhaustion. The instant the child's head is born, the midwife has now a greatly increased opportunity of giving help; so think the bystanders as as well as she. To what purpose is the presence of the midwife, if the patient is to remain in suffering, and the child to linger in the birth? This is popular logic, and quite satisfactory to the midwife. She accordingly delivers the shoulders; it may be at the expense of a lacerated perineum; and the lower parts of the child are made to follow with still

more ease and rapidity. The speedier the labour is terminated, the more adroit, of course, is the assistant. The funis is forthwith divided, whether the child be lively or otherwise: and now the extraction of the placenta is all that remains for the exercise of her skill. This the midwife often accomplishes with more rapidity than safety to her patient. Having twisted the funis round her finger, or seized it in her hand, by means of a dry cloth, and directed the patient to hold in her breath, or to cough, she begins to drag; and one, at least, of these six consequences follows: either the placenta is safely removed, which doubtless often happens; or irregular, spasmodic, action of the uterus is excited, and the placenta thereby strongly retained; or the funis breaks, and there is an end; or the placenta being torn from the womb, in the absence of contraction, alarming hæmorrhage ensues; or, the placenta being morbidly adherent, the midwife is foiled; or, should the funis and the midwife happen both to be strong, and the placenta, as in the last instance, morbidly adherent, inversion of the uterus is the result. Such is a picture, and a very faint picture, of practical midwifery, in the absence of scientific knowledge.

I have already admitted that a large proportion of cases of labour would terminate well, unaided, under the eye of an ordinary nurse; but even here, in many of the instances, to the completion of which the natural powers are adequate, at the expense of long and severe suffering, science lends her aid in a most effectual manner. It is not in what has been accomplished by bringing so near to perfection the resources of surgical midwifery, that science most brightly shines, but rather in the safe and easy expedients which it has devised for diminishing, both in duration and intensity, the ordinary sufferings of childbirth. In labours strictly natural, terminating after a few hours of moderate suffering, scientific midwifery is passive; its interference extending only to the division of the funis. But in lingering, or in acutely painful parturition, the following, among other expedients, are of its devising; all devoid of pain, and all more or less effectual, provided they be directed, in their application, by a mature experience:—

1. In many cases, in the early stages of labour, it is of great importance to the safety of the patient that she be maintained in some certain position, in order that the uterine action may bear upon the fœtus in the direction of the axis of the pelvis: the proper position, whatever that may be, science alone can point out.

2. When the os uteri is thick and rigid, the pains severe and incessant, and the dilatations low or suspended, science interposes; and by means of the lancet, or the local application of belladonna, affords relief.

3. In metastatic labour, *i. e.* when the pains are not uterine, but seated in the loins, abdominal muscles, nates, &c. science has devised relief in the employment of friction, pressure, and under particular circumstances, the administration of laudanum.

4. In certain instances of suspended labour, *i. e.* where the regular pains have ceased and there is more or less of fever, science directs the employment of stimulating lavements, with frequent success.

5. In obliquity of the mouth of the womb, and other instances, when the pains, although severe, have no dilatating effect, the well-instructed accoucheur can give efficient aid by supporting with his finger the anterior lip of the os uteri, and thereby causing to bear upon its entire circle the equal pressure of the presenting part, whether that be the bag of membranes, or the head of the fœtus.

6. In some kinds of lingering labour, science has discovered medicines which are effectual in expediting the progress: such are the ergot of rye, and small stimulating doses of laudanum.

7. It has also discovered that lingering labours may often be speedily terminated by the well-timed rupture of the membranes.

8. By free lubrication of the passage, particularly in the latter stage of first births, the exit of the head is greatly facilitated; a remedy this, simple though it may seem, productive of much alleviation of suffering, while it likewise lessens the risk of perineal laceration.

9. In tedious labours, the comfort and safety of the patient are equally secured by the regimen, particularly the administration of cordials, being under the direction of science.

10. And how important is the negative aid, if I may so call it, which is afforded to the patient by the mere announcement, at an early period of labour, that all is right!—an announcement which only the scientific practitioner is warranted in making.

11. In the management immediately following the birth of the child, the importance of science is pre-eminently displayed, in the security it provides against hæmorrhage, as well as in contriving the safe and speedy expulsion of the placenta.

But the objector with whom I am contending will ask, cannot a matron practise these expedients; and if so, where is the use or propriety of such a class of practitioners as men-midwives? I reply, doubtless a matron may practise many of these expedients, if they have been taught her.

It is of the value of midwifery, as a science, originating with and practised by men, compared with matron or uncultivated midwifery, of which I have been speaking. A certain proportion of instructed female midwives in a community may, for aught I know, be a benefit. But what I am contending for is, that until the period when men practised midwifery, as a branch of the medical profession, it was never practised scientifically; and surgical midwifery remained stationary for centuries, at once rude in its operations, barren in its expedients, and murderous as respects the fœtus. A strong proof of the truth of this, we have in Denman's declaration, in his old age, when speaking of the employment of the forceps. "In my younger days," says he, or words to that effect, "instruments were used 20 times oftener than they are now." In fact, when midwifery was in the hands of matrons, men were called in to the lying-in chamber only in those cases which the midwife pronounced to require surgical assistance; and the surgeon himself, having no correct knowledge of the natural progress and successive stages of labour, or of the wonderful powers which nature exerts for its completion, in even the most uncompromising cases, had no other course but to apply his instruments; and so terminate, as he best could, a process which probably needed no other helps than patience on the part of the attendants, and the soothing stimulus of hope in reference to the patient. But no sooner did the practice of midwifery pass from the matron to the educated accoucheur, than both it and its kindred branches,—the diseases of women and children—by happening, in many instances, in this country, to fall into excellent hands, were cultivated with unequalled success. The mortality incident to childbed, in the course of half a century, diminished to at least one half of what it had been: and the result is, that this department of medicine, at the present hour, rests more unequivocally upon a scientific basis than any other.

You cannot, I should think, but be aware that some, even persons of note, and chartered bodies too, of high rank in the profession, have feigned to regard midwifery as a degrading pursuit. Were you to ask me why—I should not be able to inform you. Certain it is that midwifery is not altogether exempt from repulsive features. The throes and sufferings of the feebler sex, abstractedly considered, have nothing in them attractive. But what is there more attractive, I would gladly know, in the long list of diseases engendered by vice and luxury, to the practical study of which these dignified men give their days and nights? The truth is, the unkindly feeling I have alluded to is rather a corporate prejudice than one attaching itself individually to educated men. The names of Harvey, Smellie, Hunter, Hamilton, Denman, and others of perhaps equal repute, who have practised and advanced the science of midwifery, are a sure guarantee that it is a pursuit neither mean nor unattractive.

In conclusion, I would have you bear in mind what I presume you must have gathered from the tenor of this lecture—that women (and of course all that concerns their safety and welfare) are more highly regarded in proportion as mankind advance in moral culture and in civilization. This is the sole reason, and a more honourable reason need not be alleged, why scientific midwifery is of modern origin, and why it is as yet confined, in a great measure, to the more enlightened of the nations in Europe and America.

REMARKS

ON

ENLARGEMENT OF THE PROSTATE—DELIRIUM TREMENS—UTERINE HÆMORRHAGE.

To the Editor of the Medical Gazette.

SIR,

THE following notes, concerning the Enlargement of the Prostate, Delirium Tremens, and Uterine Hæmorrhage, have been gleaned by chance at the bedside, and deserve to be recorded only among the stores of miscellaneous information. A medical journal, or a medical note-book, is a quarry, from which may be hewn the rough materials for raising on a solid basis an enlarged and systematic superstructure.

1. *Enlargement of the Prostate.*—When an old man, labouring under the misery of an enlarged prostate, says, that his water dribbles away day and night, there is reason for suspecting that his bladder is full, and already distended with one or two pints of urine, and that it is but the overflowing of the bladder that dribbles away. If a catheter be passed, it will be found to be so. But even the catheter does not empty the bladder entirely; for a certain residue of urine tarries behind in the bas-fond of the bladder; in that part of this viscus which is behind the prostate gland, and below the beak of the instrument.

The most distressing accompaniment of an enlarged prostate is the prolapsus ani, which happens in the latter stages of this complaint. The rectum becomes everted at the anus, and presents itself red and excessively tender, with a copious drainage of mucus, from the exposed surface as well as from the interior of the gut, which seems to sympathise with the neighbouring disease of the bladder. The prolapsus ani, and also piles and herniæ of the groins and thighs, result from the powerful muscular efforts which the patient makes to expel his urine. In the act of micturition, he straddles his legs, bends his body forwards, and grows red in the face; the anus descends, and the fæces sometimes escape at the same moment into the old man's clothes, while the urine drips out along the urethra, drop by drop, as hot as melted lead. At this time, blood flows into the penis, and it passes into a state of partial priapism. The patient is again and again called upon to make water, and the same efforts give rise to the same disgusting accidents, so that life becomes a loathsome burden to himself, and an offence to all who are concerned about him. The mucus from the rectum dries, and chaps the exposed surface: and, at night, the patient is disturbed by an involuntary discharge of the seminal or prostatic fluids, or perhaps by the venereal orgasm without emission,—which I have known to happen in an old man of eighty years of age. There is a constant pain of the glans penis, and along the urethra an inch from the orifice. After a time, however, the penis, the nates, and the thighs, become benumbed, and the patient only suffers from the sense of a large ball lodged in the rectum, and this ball he is always straining to expel.

In these cases, the bowels become very obstinate, and are regulated only with the greatest difficulty: soda, rhubarb, and hyoscyamus, in combination, are the most effectual. Much of the local pain and misery may be relieved by an opiate suppositary at night; but, then, opium checks the bowels, and an aperient aggravates all the evils. Dr. Heberden extols a clyster, containing tincture of opium, (see Comment. c. 75, Prost. Schirr.); and Sir A. Cooper, in his lectures, used to recommend small doses of the oxymuriate of mercury.

Beyond this, I know of no medical treatment: I have tried all things, and found them of no avail. If the patient will persevere in the use of a certain diet, and live abstemiously upon light, bland nourishment, such as milk, bread, mutton, eggs, spring water, his sufferings will be greatly mitigated; for it is the object of the patient to supply his stomach lightly, and to give his digestive organs as little work as possible to do.

Œdema of the legs, thighs, and scrotum, and an obstinate retention of urine, requiring the daily use of the catheter, forerun death: the patient becomes emaciated, suffers continual pain, and droops. The pain is not in proportion to the size of the prostate, but to the difficulty of passing the urine; and this difficulty is owing to the increased size of the third lobe, which flaps over, and perfectly stops up the origin of the urethra. Last August, I opened the body of an old man, and removed the bladder from the pelvis full of water, and not a drop escaped while I held up the distended bladder in both my hands, with the orifice of the urethra, cut off short at the prostate, hanging downwards: no urine escaped till I had slit up the bladder. The muscular fibres are enlarged, and become, on the inner surface, as visible and distinct as the carneæ columnæ of the heart: this arises from the increased exertion necessary to make the bladder contract on its contents. (See Cases of Diseased Bladder, &c. by W. Wadd, Surgeon, 1815, pl. iv.) A bundle of fibres diverging upwards from behind the prostate gland externally, is enlarged, and I have seen these fibres red and fleshy as high up as the fundus. The size of the prostate gland enlarged by disease varies; and I have found it, in one case, as large as a St. Michael orange, and, in a second, not bigger than a large walnut. It is always firm, white, and cartilaginous. Small calculi are sometimes found in the gland, and I once discovered them within the cells of the vesiculæ seminales. Just at the origin of the urethra lies the third lobe of the prostate, which in disease starts up like a crest, and at every effort at making water, flaps down on the opening of the urethra, and shuts it up. In one case which I attended, the third lobe was so situated that I had to pierce it with the catheter every time I introduced that instrument: and a long catheter was necessary. At first, I lifted up this lobe of the prostate on the beak of the instrument, and then, of

course, no urine flowed; and it was only by depressing the handle very much, and pressing it onwards, that I passed through the obstruction, and cleared the beak of the instrument, so as to let the urine flow out: on dissection, after death, I found this third lobe torn through. In another case, the patient had suffered severely for three years, and then died: the prostate was not large laterally, but the third lobe was prominent, like a pyramid. In an enlarged prostate, small whitish eminences will be found, looking at first like tubercles of the lungs: when cut into, they are white and brawny.

2. *Delirium Tremens.*—This is a madness to which drunkards are liable, when exposed suddenly to any depressing causes. A drunkard becomes feverish, with a foul tongue and loaded bowels, and while in this state he falls apoplectic, with a large, full, bounding pulse. He is bled, and recovers. Twenty-four hours afterwards he is mad; tremulous, especially as to his hands, vigilant, suspicious, sitting up, and talking incoherently of his own affairs. His skin is warm, and the breast, hands, and forehead, bedewed with large drops of perspiration. The countenance is rather pale than red, and the conjunctiva of the eye is blanched, and the pupil contracted. The eye is "physically bright and intellectually dull;" and he sees phantoms, with which he holds ideal conversations. He makes believe to be steady and rational in the presence of those whom he habitually respects, and abuses his own relations, and mistakes them for strangers and enemies. He is quite harmless, and will continue awake, wild, and wandering, for nights and days together. The pulse is very small and rapid, 130: the tongue smooth, moist, tremulous, and mottled with white. In this state, the loss of more blood, and the exhibition of more aperients, will kill him; he will grow wilder, fall into hectic, and die. But opium, in large doses, will cure him: 7, 10, 15 grains of opium, may be given in 12 hours. I have given 7 grains for one dose; and once I gave, in separate doses, at different intervals, 15 grains of gum opium, 2 drachms of tincture of opium, and 1 drachm of Battley's sedative solution, and did not relieve the patient until the end of 36 hours. The effect of opium, in these cases, is to produce a profound sleep, from which the patient awakes well, comfortable, and rational. The bowels act for themselves. The appetite returns; and meat, porter, wine, or spirits, may be allowed. Ammonia, ether, and volatile valerian, seem to be useful adjuncts; and during convalescence, the compound decoction of aloes, with ammonia, is grateful and useful.

3. *Uterine Hæmorrhage.*—Flooding may arise during any of the last six months of pregnancy, as well as during any period of labour; but I speak here of flooding in its genuine form, which, after the birth of the child, sometimes enacts a short tragedy of momentary confusion, amazement, and death. In this emergency, as in most others, presence of mind is the result of forethought; and he will be the readiest to act, who has previously taken the greatest pains to think. The knowledge how to restrain uterine hæmorrhage depends upon the knowledge of the proper action of the uterus. The child and secundines are expelled by consecutive uterine contractions; and after their expulsion, flooding is restrained by the uterus remaining contracted. If, after the birth of the child or placenta, the womb do not contract, its cavity will be filled with blood, which distends the uterus to its former size, or gushes through the vagina, or lingers partly in that passage, and coagulates. In these cases, the uterus, instead of being small and hard, is soft and full, and the blood flows; then, again, it contracts, and the bleeding ceases; and "these alternations of contraction and relaxation, with cessations and recurrences of bleeding, are familiar to the observing practitioner."—(*Gooch.*) The uterus, however, may become slowly and insidiously full, and blood will gradually escape from the stream of circulation sufficient to blanch the cheek, and to induce the usually frightful train of hæmorrhagic symptoms; and, in a delicate female, in whom this accident is most likely to happen, the uterus dilating may withdraw, and contain blood enough to cause her speedy death. Consequently it follows, that whatever will induce the womb to contract, will restrain or prevent uterine hæmorrhage; and any rule, however simple, whereby to attain

this end, will be the only rule to be observed and practised in that moment of peril.

The left hand of the practitioner, applied to the belly, ought to seek for and gently grasp and knead the uterus through the abdominal parietes, and in this manner operate upon it as a stimulus of contraction; while the right hand ought to clear out the clots from the vagina, and ascertain what is the position of the placenta within the womb, if that mass have not been as yet extruded. In cases of flooding, the left hand will not at first distinguish the uterus, which is relaxed, lost, and diffused, in the belly; but shortly, if the belly be rubbed and pressed, the uterus develops itself, firmly contracting within the grasp. If the hand on the belly discovers a circumscribed hardness, too great to be mistaken, and this circumscribed tumor is reduced to the size of a cricket-ball in the umbilical region, or below it, or on one side, we may rest assured, it is the uterus containing the placenta. Thus, the womb contracts; and the action of contraction is the action of safety. The hæmorrhage lessens as the internal bleeding surface is closed by the contracting uterus; and the physiognomical signs and gestures of hæmorrhage are changed into the look of simple faintness.

The flooding ceases, but the placenta still remains to be taken away. Most likely as the uterus was contracting the placenta descended, and now lies partly within the vagina: if so, it is quite within control, and it may be left to be pushed entirely into the vagina by the uterine efforts alone. It must not be hurried away; for as floodings are obviated only by a contracting uterus, to attempt a separation of the placenta before this contraction has ensued, would be to endanger a flooding, nay, even to rouse one. Make the uterus contract—make the uterus of itself push the placenta into the vagina; from whence it may be taken away in a moment, and at the instant pleasure of the medical attendant.

While the flooding continues, the uterus must not be emptied of its contents—the uterus must first be made to contract: follow nature; nature could not expel any thing from the uterus except by the means of uterine contraction. If the placenta still remain within the uterine cavity, he would be a foolish practitioner who would remove it suddenly during the *unnatural* relaxation of the uterus. So that, during labour, during the expulsion of the secundines, and during a certain period subsequent to birth, active contractility is the attribute of a healthy uterus.

Much has been written and advised concerning the application of cold, and of pressure and bandages over the belly. As an adjuvant, cold suddenly applied with a shock is potent and efficient: the support and diminution of the relaxed abdominal cavity may be accomplished by bandages. But bandages and cold are only secondary means: the practitioner who has the sagacity to apply and exert his hands, will often dispense with the necessity of either the one or the other. When much is to be dispatched in the shortest possible time, he will be the most useful man who can do the most with the readiest and fewest means.

It is impossible to provide against all possible contingencies. In a diseased uterus, its organic contractility might be obstructed or deranged; and emergencies may arise, when the practitioner will have to exert the vigour of his own judgment, and to rely at once upon the ready talent of the passing moment. No situation is so responsible as the care of a case of desperate flooding, especially after the birth of the child; for uterine hæmorrhage is so peremptory, that, though it would be wise and satisfactory to act in concert with another man, yet it allows time scarcely for thought, much less for consultation. Success of action depends upon habitual knowledge and mental promptitude.

Velpeau, who seems to rely too much upon revulsives, refrigerants, and the tampon or plug, speaks with much gravity of a cold key down the back, or a mustard cataplasm between the shoulders, in cases of active uterine hæmorrhage; and he seems to forget here what he calls the organism of the uterus, a matter of the highest importance, involving in its consideration some of the first principles of physiology. It can be only on physiological principles that the management of flooding can ever be rightly pursued; and the sensible man will reject forthwith the idle parade of rubbing the hypogastrium with eau de Cologne, cauterising the uterine vessels, injecting astringent fluids into the uterus, or, lastly, checking the flow of

blood into the uterus by pressing with the thumbs upon the abdominal aorta. Nevertheless I submit to the instruction of Velpeau, from whose pages I have derived a large store of useful information. (See Velpeau, Traité des Accouchmens, Paris, 1829, tom. ii. pp. 613, 615, 901.) The best stimulant to be made use of, when other stimulants fail, is the introduction of the hand into the uterus, which acts at once as a tourniquet and plug, and as a means infallible, unless the woman be moribund, of rousing the organic contractility of the womb. Upon this subject consult Gooch, Diseases Peculiar to Women, chap. v.

No rational method of cure, or even of mere attendance upon the sick, can be adopted, unless we previously understand the locality and mode of diseased action; and diseased action will present many phenomena, quite inexplicable to the man who is not acquainted with the physiology and relative anatomy of the parts when in their condition of health. Sound practice consists in a knowledge of first principles, which in medicine, as in all other affairs, simplifies, facilitates, fortifies, expedites the conduct of every matter.

Your obedient servant,
JAMES ANSLEY HINGESTON.

Finsbury-Place South,
Oct. 8, 1832.

" DRY BELLY-ACHE" OF THE WEST INDIES.

To the Editor of the Medical Gazette.

SIR,

THE interesting paper on the poisonous properties of the salts of lead, by Dr. Anthony Todd Thomson, in your No. of the 1st of September, recalled to my mind a subject which interested me very much about two years ago—viz. the saturnine origin of the disease called dry belly-ache in the West India islands.

This still appears very imperfectly known to the medical practitioners residing there, though it is of very common occurrence, proving fatal in many instances, and in others followed by paralysis of the hands and feet. In a conversation which I had about the time above specified, with an intelligent Creole gentleman, who had himself suffered severely with the complaint, I inquired minutely into the whole process of grinding the canes, boiling the sugar, preparing the wash from which the rum is afterwards distilled, as well as into the structure and materials of all the different utensils made use of in these several processes, in none of which could I discover any probable admixture of lead. The large tanks, on which the inhabitants of the towns wholly depend for a supply of water, are formed of cement made of lime and sand, which in themselves are perfectly harmless; but when I further learnt it was the custom in the towns (to which the disease is in a great measure confined) to paint frequently the roofs of the houses, which are entirely constructed of wood, I at once discovered satisfactorily, at least to myself, the source from whence the carbonate of lead is supplied, which Dr. Thomson has proved to be more deleterious than any other preparation of this metal. The vertical sun of these climates speedily destroys the composition of the oil-paint, rendering it dry and friable, while the turpentine in the wood throws off considerable portions of it, almost as soon as it is put on. These detached portions are carried, by the first heavy rain that follows, into the tanks, for it is exclusively from the eaves of these painted roofs that the tanks are filled, and there they accumulate from year to year, yielding a sufficient supply of the poisonous matter to account satisfactorily for the prevalence of this malady, more especially when the water is low from a long drought. While on this subject, I will offer a few more observations on some of the peculiarities of this disease, which I made during the seventeen years I was physician to St. Thomas's Hospital, where there was a constant succession of patients labouring under cholic, from the extensive lead manufactories on the water-side, between Blackfriars and London bridges. The greater susceptibility of some individuals to be affected by this poison than others, was frequently exemplified by men suffering an attack of it after working only a very few days in those places, while others resisted the same exposure for ten or even twenty years. I have invariably found that, when a person has once experienced an attack, he becomes liable to relapses almost immediately after returning to the same deleterious work. I once had a patient

whose hands were paralytic solely from rubbing bougies with the tips of his fingers, and who, after recovering entirely the use of them, lost it again after he resumed his former occupation.

In the treatment of this disease I have seldom, if ever, had recourse to any other medicine than sulphur, with or without senna confection, and opium at the commencement, to allay the severity of the spasmodic pains. I was led to this practice by some observations made by Dr. Hope, in his chemical lectures, while I was a student in Edinburgh. The learned Professor, in explaining the chemical agencies of sulphuretted hydrogen on the salts of lead, recommended the use of sulphur in this disease upon theoretical grounds, if I remember rightly, rather than from positive experience of its beneficial effects. From the success which has attended this practice, I am led to recommend it in preference to any other.

A gentleman whose hands had long been paralytic, from frequent attacks of this disease in the West Indies, recovered the use of them by a six weeks' course of Harrowgate waters, taken internally and in baths.—I remain, sir,

Your obedient humble servant,

THOMAS TURNER.

31, Curzon-Street, Oct 8, 1832.

TREATMENT OF CHRONIC HYDROCEPHALUS BY PUNCTURE.

To the Editor of the Medical Gazette.

Aberdeen, Oct. 8. 1832.

SIR,

IN giving insertion to the following remarks, you will much oblige, sir,

Your obedient servant,

R. C. RUSSEL.

The employment of tapping, as a remedy in hydrocephalus, was long since suggested; but it is only lately that the practice has been attempted. Notwithstanding the success which has attended the few trials that have been made, several writers seem so averse to it as to prohibit its employment in every case as dangerous and useless. That it is accompanied with danger, I will not deny; but that it is in every case useless, I will not admit. There are cases in which I conceive it is likely to effect a cure, as, for instance, in those where the disease is confined to the membranes, which occasionally exists in the chronic forms of hydrocephalus. Dr. Bright, in his hospital reports, observes: "The apparent success which has attended one or two cases, holds out a slight encouragement to a more extensive trial of this doubtful remedy. There is no doubt that many cases will fail, for in some the tendency to pour out fluid continues unabated, and between each successive operation the head rapidly increases; but if, fortunately, as sometimes in the operation of paracentesis of the abdomen, the tendency to accumulation should have ceased, either from the effects of remedies, or from some local change depending on the abstraction, and if the cerebral disorganization should not be totally irreparable, a cure may be effected."

When the substance of the brain is diseased, no reasonable hopes of relief, I should think, could be entertained; and as it is a matter of considerable difficulty to discriminate these different diseased states, I think it may be laid down as a rule, that in no case ought the operation to be attempted when the functions of the body are much disturbed, as in such a case we may suspect the cerebral disease to be extensive and irreparable. In recommending the employment of tapping, I do not mean that it should supersede the employment of other remedies; but after they have been tried and found ineffectual. In such cases I think the ventricles ought to be punctured, as the presence of water in them will be almost invariably found. It is of little consequence which of the lateral ventricles is punctured, as the free communication which generally exists between them allows the water to be discharged from either. In evacuating the water, I perceive that, in many instances, it has not been permitted to pass in a continued stream, from fear that a sudden abstraction might prove fatal. In a case which I operated on, the water was permitted to flow in a full and continued stream, employing, at the same time, pressure on the head, and without producing any inconvenience. The period for operating, I think, should be before the time of teething, and before the bones of the head are firmly united.

PLACENTAL CIRCULATION.

To the Editor of the Medical Gazette.

The Manchester Theatre of Anatomy and Medicine, 6, Marsden-Street, October 18, 1832.

Sir,

At the last weekly meeting of the Students' Medical Society belonging to this school, held October 11th, at which I presided, the subject for the evening's discussion was—"What is the connexion subsisting between the maternal and fœtal circulations?" As this topic is now exciting much interest among our students, the discussion was very animated, and the opinions expressed, as might be expected, were various. The object of my communication, however, is not to give you the opinions of the Society on this important point, but for the purpose of describing briefly certain injected preparations which were exhibited on the occasion, obtained from the museum of the school. These preparations, which are beautifully put up, were made by Mr. Fawdington several years ago, and, consequently, not with any reference to the dispute now pending between Dr. Lee and his opponents. In order that your readers may more readily understand my description of the preparations, I may be allowed to preface it with the following remarks. The Hunters' opinion respecting the placental circulation, it is well known, was this: that the placenta is composed of two parts, a fœtal and a maternal, and that each of these parts has its own system of arteries and veins. Consequently, that the blood passing from the fœtus to the placenta by the umbilical arteries, returns by the umbilical vein; and the blood of the mother sent by the uterine arteries, is collected again in cells which constitute the commencement of large veins, and thus returns to the maternal system. In opposition to this universally received opinion of the Hunters, Dr. Lee contends that the uterine surface of the placenta—*i. e.* the surface which adheres to the uterus—is covered by a decidua, which membrane is consequently interposed between the uterus and the placenta; that on cautiously separating the placenta from the uterus, many *very small*, but no *large*, vessels are seen to pass from the one to the other through the decidua; and that with regard to there being cells in the placenta from which veins are alleged to take their origin, no such cells are to be detected. Further, Dr. Lee contends, that at that part of the uterine surface to which the placenta has been adherent, there are a number of openings passing obliquely into the uterus, and large enough to admit the point of the little finger; that the edges of these openings are smooth, and have no appearance as if they had been lacerated by the removal of the placenta; that over these openings the placenta, covered by the membrana decidua, closely adheres and seals them, so that the blood in the uterine sinuses cannot possibly pass into the substance of the placenta.

The preparations (four in number) to which I allude, appear, as far as they go, to corroborate the views of Dr. Lee, and to be altogether incompatible with the Hunterian notion.

I shall give them numerically, as they stand and are described in the catalogue of the museum, merely premising that the first was put up in 1828, and the three others in 1829.

"No. 133. *Section of the Uterus and Placenta, minutely injected from the Funis.*—The vascular connexion between the two is manifest; not only by the existence of demonstrable vessels, but also by the presence of the injection in the uterine sinuses which are purposely displayed in the preparation. It does not appear that the placenta contains cells, or any impenetrable separation between the fœtal and maternal portions, if any such exist; as its substance is *uniformly* reddened by the injection which was introduced through the umbilical artery. It seems probable, therefore, that the internal portion of the uterine parietes, cellulous decidedly as it is, has proved a source of error; the line of demarcation between the external placental surface and the internal corresponding aspect of the uterus not having been sufficiently observed, perhaps, by former anatomists. The preparation distinctly shows vessels of small calibre filled with injection passing from the placenta to the uterus, or rather to its investing decidua. The woman died in consequence of disease of the brain, about the seventh month of pregnancy.

"No. 134. *Another Specimen of Uterus and Placenta similarly injected*, exhibiting the fact of vascular continuity between these structures. The woman

committed suicide during the progress of her labour.

"No. 135. *A portion of the same Uterus.*—The cells were inflated, and the part afterwards dried and preserved in spirit of turpentine, to show that the capillaries of the uterine parietes are also minutely injected.

"No. 136. *The deciduous membrane of the same uterus, injected from the same source, and reflected.*—The vascularity of the inner surface of the uterus, where the decidua is detached, is clearly shown; and few preparations better display, as injected, the arborescent arrangement of capillary vessels than may be observed in the decidua, which is here, in part, undisturbed from its connexion with the uterus."

On inquiry, I find that the injection used, in each instance, was coloured size. I may add, also, that the uterine and spermatic arteries of the uterus, from which the three latter preparations were made, were found completely occupied with the injection.

Any further explanation respecting these preparations, which your readers may require, will be furnished with pleasure.—I am, sir,

Your obedient servant,
GEORGE SHAW, M.D.

ANALYSES OF SIXTEEN REPORTS ON CHOLERA.

Transmitted to us by the Central Board of Health.

MR. CURTIS, of Camden Town, (Sept. 25.) Is surgeon to the Police; has had 142 cases of diarrhœa; in no instance has collapse come on; attributes this, in great measure, to the men being obliged to see their medical attendant, if incapacitated for duty by illness even for one hour. Gives two table-spoonsful every four hours of the following mixture:—

℞ Mistur. Cathartic. ℥j. Aquæ Puræ ℥v. Acid. Hydrocyan. ♏xx. M.

The cathartic mixture is made thus:—

℞ Rad. Jalapæ ℥j. Magnesiæ Sulphat. lb.j. Aquæ, lb. ij. M. et decoque ad lb.ij.

If purging continues on the second day, the prussic acid is exhibited without the aperient. Makes no difference in the treatment, whether the evacuations be bilious or rice-water.

MESSRS. SHUTER and GREENWOOD, of St. John's, Southwark, (Sept. 25.) In the state of simple diarrhœa have found rhubarb and magnesia; chalk, aromatic confection, and opium, "answer exceedingly well;" speak highly of catechu in the form of tincture; have only had one case pass from this stage into collapse. (Numbers not mentioned). During rice-water evacuations, give opium, belladonna, cordials, weak brandy and water. The average of eight out of ten have recovered. In collapse, first object is to arrest vomiting: this done by means of opium or belladonna, in doses of one grain every half hour; these followed by warmth, frictions, &c. If cramps violent, occasional injections of warm water, with a drachm of laudanum, and a like quantity of spirit. ammoniæ fœtid. Of 20 cases of collapse, only 3 recovered.

MR. NIGHTINGALL, of Liverpool Fever Hospital, (Sept. 17.) In bilious diarrhœa, opiates, aromatics, chalk; alterative doses of mercury. In rice-water evacuations, the saline treatment, with calomel and opium; opiate enemata, with minute doses of sulphate of copper; copious diluents. Premises bleeding, and in many cases with decided advantage. In collapse, saline treatment, with stimulants, &c; but has little to say in favour of any thing. Venous injections failed. No numbers stated.

MR. PEARSON, of Liverpool (Sept. 25), makes little distinction between bilious diarrhœa and rice-water evacuations. Trusts to solid opium given "in proportionable quantities," and repeated "at different intervals of time;" blisters to stomach, stupes to abdomen, &c. Saline mixture, tinct. catechu comp. Small quantities of fluid at a time. Has seen "some hundred" cases; "cannot say he has lost one;" adding the following qualifications—that he has been called in in time—that his directions have been attended to, and that he has himself visited the patients.

MR. TRIGG, of Flint (Sept. 25). In bilious diarrhœa, &c. an emetic of sulphate of copper, followed by rhubarb and magnesia in peppermint-water. In rice-water evacuations, calomel and

opium (grs. v. to xv. of former, gr. i. to gr. iss. of latter); afterwards continued in much smaller doses, till the evacuations are tinged with bile. In collapse, adopts venesection "even when the pulse is imperceptible;" presses out the blood with his fingers; thinks this facilitates re-action. Frequently bleeds in the con-cecutive fever; finds the blood to be much buffed and cupped. Follows up the bleeding by calomel and opium; plaisters of mustard and vinegar to the stomach; warm-bath and frictions when cramps are severe. Has had 107 cases of "malignant cholera," including himself, wife, three sons, three daughters, and a nephew—31 deaths. Mortality occurred chiefly at first, and under the stimulating treatment.

Mr. Genis, Jun., of Ashburton (Sept. 29). Trusts to large doses of calomel, (in one case gave 180 grains in 24 hour); as soon as bile flows, patient is convalescent. Gives a scruple of calomel every quarter of an hour, till vomiting stops; afterwards, two grains, with a minute proportion of opium, every half hour, or every hour. Where bilious vomiting supervenes on the use of mercury, finds "decided advantage" from a full dose of diluted sulphuric acid.

Mr. Thomas Eder, of Liverpool. In bilious diarrhœa, calomel and opium, or equal parts of Dover's powder and hydrar. cum creta, followed by ol. ricini, or magnesia and rhubarb, &c. In rice-water evacuations — calomel, ℈j.; if cramps and pain, adds ℥ss. of laudanum; sometimes gtt. xx. of essence of peppermint. Often bleeds to ℥x. or ℥xx. Leaves a dose similar to above to be given if necessary. Does not think well of stimulants. Sometimes allows effervescing draughts, or Dr. Stevens's powders. In collapse, continues calomel, with little or no opium. Has seen hot-air bath useful, especially soon after bleeding. Has seen six recoveries from, and sixteen deaths in, collapse.

Mr. Welchman, of Ensham (Sept. 28). In first stage, has found the greatest benefit from bleeding and warm-bath, and, when not attended with sickness, ℥iss. of magnesia, in mint-water, every four hours. In second stage, two grains of calomel, with a fourth of a grain of opium, every half hour or hour. In the third stage, calomel and opium, with salines in a state of effervescence, and cold water *ad libitum*.—No numbers mentioned.

Mr. J. M'Nichol, of Inverary (Sept. 22). In first stage, calomel and opium, followed by rhubarb and magnesia; afterwards chalk mixture, with small doses of Dover's powder. In second stage, if vomiting, the patient made to drink plentifully of warm water, and afterwards ten grai s of calomel with a grain of opium given, and repeated in six hours if necessary; ℥ss. of carbonate of soda every two hours; friction with mercurial liniment over liver and abdomen, till mouth became affected. Starch injections with laudanum; heat frictions and mustard poultices to extremities, &c.; temperature of apartment kept about 78 deg. of Far. In third stage, perseverance in the above treatment, stimulants and tonics added—viz. brandy and water; quinine; aromatic sulphuric acid! carbonate of soda!! copious enemata with warm water, with a few drops of laudanum—if constipation came on, purgative clysters; if congestion about the head or liver, leeches; diet light; drink barley-water, or toast-water, sparingly. Twenty-six cases; sixteen recoveries;—eight having been in collapse.

Mr. Hickin, of Gomal, Staffordshire, (Sept. 29), after some preliminary remarks, chiefly in reference to the more advanced period of the disease, proceeds to recommend bleeding, "however late we may be called in;" to which other remedies are deemed but secondary;—one drop of croton oil, calomel, salines. Where there are rice-water evacuations without pain, chalk mixture, or the decoct. cort. granat. (℥j. to ℥ss. or ℥x.) with or without opium. If, after evacuations are arrested, there be any uneasiness at stomach, recommends an emetic of ipecac. or tartarized antimony, ℈j., in four doses—one every quarter of an hour till it operates. This emetic is also recommended in the bilious diarrhœa, followed by chalk mixture and twenty drops of laudanum. Numbers not given.

Dr. Young, of Kensington-Lane, Vauxhall, (Oct. 8.) In bilious diarrhœa, calomel gr. ij. opium gr. j. followed by rhubarb and magnesia, and after-

wards by chalk mixture, with a little laudanum. Cases "very numerous;" all terminated favourably. Rice-water evacuations have been so much associated with collapse, that can scarcely consider them separately. Trusts to calomel and opium (gr. iij. of former, gr. ¼ of latter,) about every hour. Ammonia in a state of effervescence. In decided collapse, the above, with the moderate use of stimuli; mustard poultices; and warm injections. Bleeding tried without benefit; and saline treatment, in three cases, with the same result.

Dr. Bullen, of Cork, (Sept. 27,) has treated about 1400 cases of cholera. In first stage gives an emetic (perhaps tartarized antimony,) encouraging the vomiting by means of abundance of warm water: after this, a glass of warm brandy and water, followed up some hours after by a purgative. If after vomiting, pain or cramp continues, bleeding to xvi. or xx. ounces, and a large dose of calomel; if cramps particularly severe, an enema, with two ounces of Ol. Terebinth. If the symptoms be of a colicky nature, with severe pain and spasm along the transverse arch of colon, a drachm of tartar emetic in a pint of warm water, administered as an enema, is highly praised, producing feculent motions within half an hour. Laxatives must be continued for some days. Brandy and laudanum, on the onset of the symptoms, particularly injurious.

In the second stage (in which that of collapse seems to be included by Dr. Bullen,) calomel—the great remedy; must be given in scruple doses, the first combined with a grain of opium; repeated in two hours with half a grain; and, if any improvement takes place, continued in diminished doses. Artificial heat, but not pushed too far: extensive application of external stimulants "eminently beneficial." Stimulants to be used, but with caution. "Many patients cry out incessantly for cold water, and have never appeared to suffer from indulging them with it." Turpentine and tartar emetic the best enemata in cramp and colic; but a starch clyster, with a drachm of laudanum, if serous fluid be draining away insensibly.

Mr. Rance, 4, City-Road, (Sept. 29. —In bilious diarrhœa, calomel and opium, followed by a dose of rhubarb, &c. invariably successful. Has found the malignant disease confined to a particular district, bounded on the east by Bunhill-Row, west by Goswell-Street, south by Chiswell-Street, Barbican, and Beech-Street, and on the north by Old-Street. First case occurred 25th Feb. in a woman in St. Luke's parish, a nurse of the Lying-in ward, who had not been out of the house for two months: no source of contagion to be traced. Four days after the above, two men were seized, in neither of whom contagion could be traced. Fifty-five cases under the writer's immediate care, and has seen upwards of a hundred others, in almost all of which the evacuations were nearly destitute of bile. Has found opium of use in allaying spasmodic action: has almost invariably given it in combination with calomel, but has been deterred from repeating it on account of tendency to apoplexy. Prefers mustard as an emetic, and externally as a cataplasm. Tried bleeding, but relinquished it from its inefficiency. The hot air bath disappointed him; prefers tins filled with warm water. Used hot brandy and water at first, but found it to be injurious. Writes of the saline treatment as follows:—

"The last remedy for cholera that I shall notice is the saline, as recommended by Dr. Stevens: our attention was directed to its use by the reported success of the cases at the House of Correction for the County of Middlesex. The salutary effects at the first administration were not equal to the extent we had anticipated. Since our personal interviews with the Doctor he has kindly furnished us with more minute particulars of his plan. Dr. Cambridge, (the medical gentleman appointed by our local Board of Health to the care of the cholera patients of this parish,) with myself, have seen in a large number of cases its exhibition attended with the happiest result, not only in the rice-water evacuations, but also in the stage of collapse. From what I have witnessed, it is but justice to Dr. Stevens to acknowledge that I place more reliance upon the saline treatment than on any other that has as yet been recommended."

Thinks favourably of venous injection; has tried it five times: two recoveries.

Dr. Pennick, of Penzance, (Oct. 2.)—

Has seen 76 cases; 9 deaths, 65 recoveries, 2 remaining. Attributes several of the deaths to destitution. Tried bleeding from the head, by dividing the sealp, in two cases; both died. Employed mercurial fumigation in twelve cases; eight recovered. "With regard to what has been called the saline treatment (says the writer) I must remark that trial of it has not enabled me to discover its advantages." Has applied mustard poultices to the abdomen, covered them with several folds of flannel, laid a thin board over this, and a firm calico roller over all. When the cataplasm is taken off, the other parts of the swathing reapplied as before: "the result has been most satisfactory." Generally commences with a small bleeding. If stomach loaded, an emetic of ipecacuanha: opiate enemata. In one case, where reaction followed collapse, there was much determination to the head, stomach, and mammæ. An old woman sucked the breasts repeatedly, and suffered no inconvenience. In another case, where the patient's child was put to the breast, it was taken ill next day, and died. Conjectures the different result to have depended on this—that the old woman spat the milk out, whereas the babe swallowed it.

Mr. W. Collyns, of Kentor, near Exeter, (Oct. 3.)—At any period anterior to collapse, an emetic of mustard, salt, or ipecacuanha, and an aperient of rhubarb, gr. x., sulphate of potass, one drachm to a drachm and a half, aromat. confect. gr. x., and T. opii, gtt. x. If stomach would not retain this, effervescing draughts, with ammonia; afterwards, pulv. kino comp.

In vomiting and purging of watery fluids, an ounce of common salt in a tumbler of hot water, as an emetic; then a tea-spoonful of salt in a tumbler of cold water, to be drank *ad libitum;* saline effervescents; lime-water and milk; toast and water; solution of isinglass, with 20 or 30 drops of laudanum, as an enema. Very large quantities of the above beverages were taken and rejected by some—3 or 4 gallons of a night; "but (says the writer) I found those who drank most salt and water began to have a yellowish tinge of bile in the evacuations sooner than the others." Thought the lime-water (two parts with one of boiled milk) did good, particularly in children. The liniment hydrar. fortius assiduously used. Recovery began when gums became sore. During the collapse, external heat and mustard cataplasms employed: free ventilation of great use. All stimulants hurried on the stage of collapse.

Mr. G. Dickens, of Hertford, (Sept. 28.)—In first stage of diarrhœa, tincture of rhubarb 3ij. in compound tincture of senna 3vi.; to be followed in half an hour by a table-spoonful, after each liquid evacuation, of a mixture containing infus. catechu, with a little tincture of cinnamon, and a drachm of laudanum, in six ounces. If there was vomiting, 3ss. of ipecacuanha, followed by catechu mixture, as above. In the more advanced stage, gives the compound soda powders (sodæ carb. gr. xxv. ammoniæ carbon. gr. x. pulv. cornu ust. c. opio gr. x. M.) every hour, "which (says Mr. D.) I have almost invariably found to answer every expectation;" generally continues them for four or five hours; after which he exhibits a scruple of calomel, with ten grains of pil. cornu ust. c. opio. Lastly, gives bitter tonics, to promote convalescence.

RECENT VARIATIONS IN THE TYPE OF CHOLERA.

To the Secretary of the Central Board of Health.

Cork, Sept. 18, 1832.

Sir,

I perceive by the periodicals that the Central Board of Health are anxious to obtain every information respecting the various modes of treatment adopted by the physicians who have had charge of the Cholera Hospitals. Enclosed is a pamphlet I published in the month of May, after having treated about three hundred patients.* Since that time I have had under my care more than eleven hundred cases of malignant cholera, and the result of my further experience has been to confirm, in every respect, the opinions expressed in the pamphlet. When the epidemic first appeared in Cork, a number of cases were accompanied by colicky symptoms, which we have not seen at all during the later months. In these, bloodletting was extremely beneficial; but we now seldom or never can have recourse to it. The number of persons attacked at pre-

* See preceding page.

sent is comparatively few, but the type of the disease is infinitely more malignant than at first. Cramps are no longer a prominent symptom; the quantity of the serous discharge, whether by vomiting or purging, is comparatively trifling; and the patients die with no other symptoms than coldness of the body, clammy sweats, and extreme anhelation. For some weeks, in the North Cholera Hospital, all the fatal cases have terminated in coma; the type of the disease has thus appeared to have undergone a change, and the patients sunk, passing bloody stools in quantity. After a short period, these leading symptoms would again become of rarer occurrence, and the cases would terminate in profuse and uncontrollable vomiting and serous diarrhœa. In every variety, the treatment must be modified; but whilst I found calomel always indicated, opium required the greatest care in its administration. The neutral salts, bichloride of mercury, croton oil, &c. have all been tried, and laid aside.—I am, sir,

Your obedient servant,

DENIS B. BULLEN, M.D.

3, Grand Parade.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Practical Treatise on Cholera, as it has appeared in various parts of the Metropolis. By CHARLES GASELEE, M.R.C.S. Surgeon to the Marshalsea Prison, and ALEXANDER TWEEDIE, M.R.C.S Resident Medical Officer to the City of London Cholera Hospital, in Abchurch-Lane.

AMID the host of productions of all sorts and sizes, relating to cholera, which are daily, and we may say hourly, claiming our notice, we have selected the one at the head of this article, as different in some essential particulars from most others. It is written to support no new theory and to recommend no treatment, old or new, as specific and infallible. The authors have seen much of cholera, and it is evident that they have seen it with observing minds. All the different methods which have been adduced with any respectable claims to attention, they have tried fully, and it appears to us fairly; looking upon the subject without the partiality with which the proposer of a novelty may be supposed to contemplate his progeny, but also without the jealousy of those who have some offspring of their own to countenance and support. We have already had occasion to publish some of Mr. Tweedie's opinions, in the form of original communications to this journal, and an abstract of a report, by Mr. Gaselee, in our last; from the brochure before us we shall therefore content ourselves with making two selections—the first relating to contagion, the second to the experience of the authors as to different plans of treatment.

"*Contagion.*—If, by these terms [viz. contagion and infection], either, or both, be meant the power of one body labouring under disease to generate a specific poison, which can communicate to, or cause the same specific disease to arise in another, we simply state our conviction that the bodies of patients labouring under cholera are possessed of such a power, and that, consequently, the disease is contagious or infectious: but to expect to be always able to detect the operation of such an agent in cholera, is as unreasonable (particularly when the air is contaminated by a poison) as to look for the source whence a person may have contracted the virus or morbid impression which has induced other diseases acknowledged to be contagious, with the expectation of invariably finding it. Neither do we admit the propriety of the term "contingent contagion," which we believe to be supported by a species of paralogism, to which all sound argument is opposed. If by it be meant that an entirely new property is superadded to a disease by external agents, we deny the position 'in toto;' if it means that the disease is contagious under certain circumstances, we cannot admit it as a term of distinction, because all diseases may be said to be so, inasmuch as they do not always shew that they have such a property: 'for in infection and contagion from body to body, as the plague, and the like, the infection is received many times by the body passive; but yet is, by the strength and good disposition thereof, repulsed*.'

* Bacon.

Cow-pox virus is contagious, under the circumstance of its being *inoculated* into a body capable of receiving its influence. Small-pox virus does not ordinarily affect those who have been fortified by the vaccine action, because the natural property is counteracted by a superior power, but the property is not, on such an account, the less inherent in small-pox virus. The real explanation of these things we believe to be, that external or certain circumstances have the power either of developing, counteracting, or mitigating, the naturally inherent contagious qualities of a disease, but we must again pause before we admit their power of generating a property entirely new. We know not what other meaning to attach to the term, and look upon the epithet 'contingent' as superfluous, and 'contingent contagion' as paradoxical. The notion of the doctrine of contagion being disheartening or injurious in its operations, is from an erroneous view of its bearing, and a total misapprehension of its principle; and to arraign a doctrine as unchristian in its effects, appears to us to be a censure on him who ordained it. The error lies with those who misunderstand its nature, and from it form wrong deductions, and does not rest with *the* doctrine or its supporters; and if we could choose between such a disease as cholera being contagious or otherwise, we believe that a right view would lead us to prefer that it should be the former. These remarks may appear, at first sight, speculative; but will be found, on examination, to have a practical tendency."

"1st. *Large doses of Calomel.*—To the plan of administering very large doses of calomel, such as ten or twenty grains every hour during collapse, we have this objection—it is altogether unnecessary, and sometimes succeeded by bad effects. To calomel itself, in more reasonable doses, we have no objection, as may be gathered from the purport of our former remarks. Every useful purpose that mercury can be expected to accomplish is realized by the more moderate doses, but the effect of the larger quantities is to promote an inordinate excretion of bile, *unmixed with fæces*—to excite irritation of the intestinal mucous membrane—to bring on frequently bloody stools—and to terminate the case either by relapse into collapse or by a severe attack of gastric fever; such, at least, has been the result of those cases in which we have pursued this plan of treatment.

"2dly. *Venous Injection.*—We have tried this in twelve cases, and the event has been twelve deaths: all these case were, it is true, apparently moribund when the operation was performed. We have varied the method of performing it; in some instances injecting only a few ounces, in others, as many pints; and though the immediate effect in most of them was to bring on, as it were, a resuscitation to life, yet was the termination of all alike. Some relapsed into collapse, and died rapidly; some had difficulty of breathing induced, which contra-indicated its repetition, and others died with symptoms of cerebral oppression. In one of these last examples, on examination after death, we detected effusion on the brain, and within its ventricles, of a fluid, very similar in taste, appearance, and alkaline reaction, to that which had been injected into the vein. We have found the blood in the bodies of such persons just as black as in those who had died without this medication.

"The injection of warm water alone produced the same re-action as that of the saline solutions, from which we are led to infer that this method of treatment acts only as a mechanical, and not as a specific stimulant; but since we know that it has succeeded in the hands of others, and that it is a remedy applicable only to otherwise hopeless cases, we see no reason to despair, that in the progress of improvement new and satisfactory data will be elicited, which shall enable us to discriminate, without empyricism, the conditions under which it may be rendered available as a remedial agent.

"3d. *The Saline Treatment.*—The result of our trial of this treatment is as follows:—

"Treated upon salines up to the period of their termination, 16; recovered, 1; died, 15.

"Salines at first, and when collapse was not averted by them, or when they disagreed, other means adopted, 6; recovered, 4; died, 2.

"A mixed saline treatment, other remedies being given at the same time, 8; died, 8."

THE ROMANCE OF CHOLERA*.

A Tale founded upon Fact.

WHAT a subject for a tale to interest the public! "The Cholera Morbus at Paris" an article in the "Book of the Hundred and One." We know, to be sure, what Boccaccio made of the plague of Florence, and our own Defoe of that of London: but is not M. Bazin a little too hasty? Cholera still rages in the French provinces; nor is Paris entirely free from it: yet here it is already dressed up into a story for the popular palate. The novelists of Italy and England waited awhile, to allow time to throw its romantic and cloudy veil over the dismal occurrences which they undertook to record: but the Frenchman cannot afford to wait; he has his quota to contribute to the bookseller's fund—and he lays hold on the pestilence, to work it up, after his own fashion, and for his own object. And a French dish he has certainly made of it. We know not whether M. Bazin is a professional man or not—but we should suppose not—we are almost sure of it—from the internal evidence which his performance affords: this, however, may be a *ruse* of his authorship. In his account—which we must allow to be a very amusing one—he does not enter of course on the pathological phenomena of the disease, from the perusal of which he knows the public would willingly be excused, but he describes the general effects which its sudden presence produced in a population which it nearly decimated. He presents us, moreover, with a picture of manners at once so characteristic and so lively—and, we believe we may add, so true, that he stands a good chance of being hereafter reputed as the veritable historian of the period. Defoe has more than once been quoted as good and grave authority—and why may not M. Bazin? A French editor, we may observe, has already spoken strongly in favour of his productions. "Our monographs on cholera," says the *Gazette Médicale*, "will be imperfect, unless they include this piece, by way of appendix, to complete the history of the disease." On this side the Channel, however, we rather fear that the style of M. Bazin will not entitle him to our unlimited confidence. We shall present the reader with a few passages. We take a specimen from our author's opening paragraph. What can be more historico-poetical?

"It was on one of those beautiful but perfidious days of spring, when the rays of a prematurely hot sun boil up our blood, and then expose us, palpitating under their influence, to the chill of evening: a time fertile in rheums, catarrhs, quinzies, and checked perspirations. It was, moreover, a sort of festive time; for we had not yet spent the day which relaxes the austerities of Lent. The mass of the population was poured out on the boulevards, eager to see, or rather to have seen, the secular drollery which the children salute with the old cry of the carnival. All was gaiety, and bustling, and dust; no municipal guard—for the police have nothing to do with this joyous period—every one may amuse himself at his own risk and peril. Thirty or forty merry masquers might be seen amid the crowd, anxious to catch attention, and to attract personal notice, which was plentifully bestowed upon them with the witty compliments of their admirers. The weather was enchanting, but there was blowing a harsh wind from the north—a wind that was calculated to give a sudden blight to the tender flowers of the almond tree. It was then—it was in the midst of a multitude full of mirth, and laughter, and gay discourse, and boisterous enjoyment—that a frightful report was first circulated amid the throng. Luckily it was the *Moniteur* that spread it: it came with an official air, and there was time to doubt of its veracity."

This report was the news of the arrival of the cholera, which set all the speculators on the *qui vive* to find out how it could possibly have come. The positive people held that it could not have come; but the government had promised to take every precaution; and the positive people were dying with fear. Things were worse the next day, when the proclamations were published bidding the people to be calm. Cholera was now perceived in every thing: it was smelt in the sepulchral gas of chlorine, which was universally employed; it was felt in the flannel drawers, and flannel every thing that was put on; it was heard every where; in short, it was seen in the ladies' faces. "It was a bad sign," says the author, "when the women took fright."

"It was pitiable to see those lips, from which the charming words of consolation and hope used formerly to flow, now frozen

* Le Livre des Cent et Un. Tome v. Paris 1832.

with terror and shrivelled with camphor: those figures pale and ghastly: eyes sunk and haggard: foreheads yesterday smooth and fair as polished ivory, to-day wrinkled with the incessant snuffling up of a volatile salt or essence: no longer to inhale near a pretty woman, her balmy breath and the perfume of her hair; but, instead, an abominable odour of pharmacy!"

This was certainly most shocking.

The author then proceeds to bewail the revolution in culinary matters, the interdiction laid upon good-living, and the total desertion of the cooks' shops. The time hung heavily on the hands of the whole French population: "our days," says M. Bazin, "were long and weary—*bien tristes*; our nights—*sans amour et sans sommeil*" (!)

"In the morning, the journals were turned over with fear and trembling; it was not politics that was looked for; nobody cared for the Chambers, the telegraphic despatches, or the results of diplomacy. A new insurrection, if such a thing could have been got up, would have found no sympathy. The cypher—the terrible and growing cypher of deaths—was the all-engrossing object of public attention."

The state of the public streets, too, was calculated to spread alarm; not that there were fewer people moving about than usual, but wherever you went you were sure to meet *coffins*; if you happened to turn round, you saw a man in black, who was walking behind you and carrying on his shoulders the last purchase for some rich man or the last alms for a pauper—in short, a wooden suit which seemed just your own fit! Then you beheld abundance of hearses and mourning-coaches, with their long black palls, and those strange funeral Omnibuses, now for the first time made familiar to the eye, bringing their numerous passengers home to their last abode. But what was most striking, you probably fell in with a party of stout labouring people who either could not wait for, or could not afford to use, the ordinary conveyance, and were carrying a corpse in their arms, with a sheet simply thrown over it: this you could not avoid allowing to pass—you involuntarily paid it a tribute of respect by standing still; yet it might be all a smuggled affair—a subject for the novelist or for the prosecutor!

"Business, however, was by no means at a stand; and every morning brought its new bills of fare for the pleasures of the day. The shops were all open as usual—the restaurateurs had their ovens hot—the cafés merely added mint and *tilleul* to their ordinary beverages—the fiacres rolled about town—the citizens mounted guard—the journals were full of discussions and news as ever; justice pursued her steady course; the Bourse had its movements of rising and falling, and the political world its hopes and its miscalculations. There was rioting, too, for a time, about the first few days of the epidemic, as if to add to its severity. Paris, in fact, seemed to have given up none of its customary practices, saving one—that of *marriage*: nobody seemed sufficiently assured of his life, body, or estate, to be willing to connect them with those of another. In every other respect people were as industrious as usual—as if not to let their hands out of practice. I have been assured, though I will not vouch for the fact, that a novel (*un Roman*) was published at this time. But the theatres were, perhaps, the scene of the greatest calmness and courage; their doors were thrown open night after night, and, in presence of a semblance of a public who were probably more regardful of their bowels than of the business of the stage, the poor actors, themselves disturbed in their bowels (*inquiets eux-mêmes de leur entrailles*), or blighted in their affections, came forward to play their mimic parts—to grimace gaiety—or to put on sorrows other than those which they really felt. The proprietors, we know, had their losses made good to them: that was as it should be; but surely the actors deserved civic crowns for their noble conduct, if those who ran from their posts had but the generosity to reward them who remained firm at their benches."

There is but one passage more with which we shall trouble the reader; and it is one which we feel too gratifying to our professional pride to allow it to pass silently by.

"But if civic crowns were to be disposed of, the medical profession should have of them amply. The pestilence is not far enough from us yet, that we should begin anew to banter medical science. If the art has been weaker than the evil—if it has proved uncertain—if it has stumbled—if it is still in doubt, after a long and painful experience—the zeal, at least, of the artists has been immense, heroic, admirable. In the bold struggle with a murderous foe, let it not be forgotten that beside the victims there were martyrs. The profession have been courteous too: they suffered the severity of the disorder to pass over before any *doctrines* were pro-

posed before any discussions were broached; *they never disputed by the bedside of the dying.* There each did his best, whatever were his principles; and the excellence of each method was shewn in the numbers which it saved. Let us not, then, unkindly notice their differences, lest they, in their turn, should begin to speak of our alarms and our weaknesses—of the fancies which they had to humour, and the terrors which they had to appease—nay, of the rude health which they were often called in to cure!"

M. Bazin is really very polite to the faculty—notwithstanding his hits in italics. We vote that he be himself entitled—to one of his own civic crowns.

MEDICAL GAZETTE.

Saturday, October 20, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MEDICAL REFORM—EDUCATION.

In no other part of the world does the medical profession hold so high and honourable a rank as in this country: here it truly deserves the title of a *liberal* profession: no where else can such a beadroll of distinguished names be exhibited:—

"Great men have been among us: hands that penned
And tongues that uttered wisdom, better none."

But there are those among us now who would have the profession liberal in quite another sense of the word—and would make it permanently so, by beginning at the root. There is abroad the cry of a party clamorous—not for the reforming, but for the revolutionizing the whole state of the medical commonwealth. These liberals, however, are luckily not a numerous party—not near so numerous, at least, as they would have the world believe: nor is their object any thing more than to try the fortune of an experiment—to make a bold push at whatever hazard to others; for themselves, they have nothing to lose, while they have every thing to hope for from the issue of their adventure. They proceed plausibly: they advocate the doctrines of unbounded freedom, free trade, free *grade*, free—every thing! They preach against the professional corporate bodies, not so much on account of those circumstances in which they are really exceptionable, as on account of the obstacle which their power and influence present to the adoption of their own wild and Utopian innovations. Education is the grand theme on which they found their complaints—and this they promise to remodel altogether: they will make it *free*—there shall be no restraint upon genius; no forms to curb the ambition of rising merit; expenses shall be but a mere trifle; and examination the sole test of qualification. Few, we should hope, if any, are the dupes of these malcontents; yet, lest any there should be, we will take the opportunity of considering what would be the consequences of this same *liberal* system of education—if system that may be called, where system there is none. It might, indeed, render further allusion to the schemes of these wholesale subverters of educational discipline unnecessary, were we to examine the pretensions of each of them individually, whether they themselves ever enjoyed, so as to understand the value of, those departments of medical education, the regular acquaintance with which they look upon as so useless. But though such an exposure were easy, it is notoriously unnecessary, and could not well be made without being more personal than we desire: we shall, therefore, confine ourselves to the fruits of the plan proposed—for by their fruits may the producers best be known.

Only let us fancy the attendance of all the classes in our medical schools

made optional, and then let us inquire how many pupils would attend? how many schools would remain open? May we not fairly judge from the attendance on those classes which have hitherto been optional? And, with regard to the schools, may we not form an idea from the number of them that existed previous to the regulations under the Act of 1815? The number of general practitioners who have passed the Court of Examiners of the Apothecaries' Society, and are now exercising their functions all through the land, are calculated at about 12,000; and so many, at least, are required for the wants of the population: how many of these would be the competent persons they are but for the Society's regulations? No doubt the number, and perhaps five times the number, would be distributed, in *practice*, throughout the country: but in knowledge, unlike physics, numbers are not strength—neither is there a talisman in a mere name. What a state of things would it be, were the barriers removed, and the entrance to our profession left carelessly open!—the irruption of the Gothic hordes upon the civilized world, were but a type of the plunder and blood which must ensue. Medical callings would revert to what they were in times gone by, when every desperado and person of broken fortunes might think himself qualified, or at least entitled, to practise medicine, as a last resource. Then, indeed, adieu to all attempt at control,—or even to that which the semblance of an examination would afford! Examinations! who would be the Examiners? Who would be the accessaries before the fact to incalculable slaughters?

Such is a sample of the levellers, or rather the annihilators, of all medical education: but, in the wildness of their schemes, is found the best security against them. There is, however, another class, proposing to themselves the same general object—a reform in the system of education—which may be distinguished and characterized by their choosing the French for their *beau ideal*. "They manage these things better in France," is the alpha and omega of their argument, as still they prate of the anatomical arrangements,—the inscriptions,—and, above all, the concours. Now, as the first party that we have above described, by their hot-brained intemperance, overdo and mar the very plot which they desire to carry into effect, and stand in the way of all reform by the extravagance of their pretensions; so neither are the present class much better calculated to advance their cause. They forget the very latitude in which they live—they overlook the existence of a whole system intrinsically dissimilar—they allow nothing for national peculiarities—or, with a complete ignorance of human nature, they would attempt to drown them. Granting that the French system works well—a fact which might be made serious matter of question—what is there, in the whole history of the profession in England, that can induce these people to believe that the introduction of Gallican arrangements could possibly tend to improve us? Our educational machinery, such as it has been—such as it is, has produced, and is producing, a race of practitioners of which no nation in the world need be ashamed; the natural inference from which would be, that if our system be not absolutely the best that can be devised, it is, at least, essentially and in principle, the best for us: not that, in saying so, we are not fully sensible that certain improvements are required, of which we shall more particularly treat anon; but what we maintain is, that all such improvements and alterations must be made in the spirit of the national character, and in accordance with the feelings and principles still cherished in this country.

Those who advocate sweeping changes borrowed from foreign institutions, we are disposed to believe can scarcely be aware of the nature and extent of what they propose; nay, we suspect that they would themselves be among the first to find fault with them, were they once introduced among us. Of the French system, generally, it may be sufficient to remind the reader, that it exists under the regulation of a species of martial law: the government has a voice—and a voice potential — in the nomination of every teacher; and the whole *Ecole de Médecine* may be regarded as an engine of state, the most minute portions of the machinery of which are committed to the surveillance of police officers. Hence the close connexion of political changes with the repeated alterations in the medical establishments of that country: hence the frequently disturbed condition of the Parisian students, carrying the violent and factious conduct of political partisans into the theatres of the schools: and hence, we may add, the frequent presence of *gens d'armerie* in the saloons, for more than a guard of *honour* to the professors. How far would the admirers of our Gallic neighbours go?—would any of these latter arrangements be suited to their tastes?—would they prefer seeing our lectures attended by military—as we have seen Cuvier, during a whole course, address his audience having a sentinel, with fixed bayonet, mounted beside his chair?

Of the concours, and certain other peculiarities in the French form of medical *regime*, we have, on several occasions, expressed our opinions freely: and how well those opinions were founded, later events have shown. The concours, after having been clamorously demanded, and obtained, after the "three glorious days," almost as the first-fruits of the second revolution, has already, after numerous changes and chances, and abortive attempts to get it up to the summit of imaginary perfection, fallen into a state of ridicule and contempt, like the cast-off bauble of some spoiled child. The unsatisfactory and unsettled condition of the Parisian school of late, must give pain to every observer; while it amply demonstrates that it contains little or nothing that we should desire to make our own.

The liberality of the German school is of a more congenial sort. With less pretension, it possesses in it more of the elements of real utility—more to admire and to imitate, than can be found in the French institutions. The excellent method of clinical instruction, which has been brought so conspicuously before the public, in a paper published by Dr. Graves in this journal, is confessedly of German origin and German growth.* But it would be to anticipate some of our observations on the subject in hand, to notice this topic at present more particularly.

From some of the preceding remarks, it may obviously, and not improperly, be inferred, that we are no advocates of optional education—and that we put no faith whatever in the principle, that the knowledge requisite for entering into the profession will be obtained, either in degree or kind, by the unregulated student. We admit that there are and have been exceptions: but rules must be adapted for the mass, and not for the individual,—or, as the old maxim has it, *leges fiunt de his quæ vulgo, non de his quæ raro, eveniunt.* Our impression is, that nothing should be left to mere recommendation; nothing deserves to be recommended that ought not to be insisted on; and if the recommending party have not the power to insist upon what they recommend, they may as well save themselves the trouble of merely

* Some valuable remarks on clinical instruction, were made by Dr. Latham, in a lecture which he delivered a few days ago, at St. Bartholomew's—we shall give them a place in our next number.—E. G.

suggesting that which the natural freedom characteristic of the English student prompts him to disregard. And why, may we ask, in the first place, why is so all-important a step as the preliminary one of a classical and scientific education — left to mere chance, by one, at least, of our regulating bodies? Is there any thing, perhaps in the whole *curriculum*, framed and disposed for the student's use, so necessary as that this groundwork should be strictly and strongly secured? that the mental discipline, inculcated by a liberal education, should be positively insisted on—as the best, if not the only, preparative for a successful prosecution of medical study, and as, subsequently, the most trust-worthy passport to that rank in society which the practitioner of medicine should hold? The absence of such a regulation we conceive to be a fundamental imperfection; nor can we promise ever to contemplate any code of educational rules, with satisfaction, while such a hiatus is staring us in the face.

If we still keep to fundamentals, we pass from the essential groundwork of the arts to the elements of professional knowledge — the study of anatomy. Much, we are aware, has been done in this department of late, and much, we are sure, will continue to be done, as the clouds of popular prejudice pass away under the influence of the new enactment. But there is one step that ought to be taken in time—and the sooner the better, for the sake of our anatomical character: the measure we allude to is the necessary one of establishing courses of a fitting length. Nobody will misunderstand us on this head: our protest is directed against the inconceivably absurd regulation of countenancing *three months'* courses. Who that has ever handled a scalpel and forceps has not been at once convinced of its absurdity? and yet as a *regulation* it has continued to disfigure the codes of our corporations even unto this day. The same arrangement, (we are almost ashamed to recollect) has existed with regard to the theory and practice of physic! How will this look hereafter? Surely no better than an injunction of a three months' course of Chinese.

Here, for the present, we must break off; but it is with the intention of returning to the subject.

THE RESURRECTIONISTS.

Some of those desperate men who heretofore have lived by the plunder of the grave, have been endeavouring, in various ways, to annoy and disturb the anatomical teachers in the metropolis. In some instances they have endeavoured to create disturbance, with a view of extorting money — in others, they have tried to obtain employment at their old occupation, offering to furnish "subjects" for two pounds each, instead of twelve, the average price of last year. Thinking the temptation would prove too strong to be resisted, a party of them last week went one night to several schools with two bodies, offering them for any thing or nothing: at last they pressed one gentleman for heaven's sake to take the bodies, were it only to bury them, for they were fearful of being detected, as no one would give them admission. We can confidently state, that the determination peremptorily to decline all connexion with these men, has not been deviated from in a single instance, and thus the public has been the first to gain by the new act; for the temptation to rob the grave ceases with the possibility of disposing of the plunder, and thus may the friends of the deceased feel assured that their "*requiescat in pace*" will not be in vain—that hereafter the grave will, indeed, be sacred.

WINE FROM POTATOES.

M. Jacob, an old army officer, having an estate at Forges on the Meuse, has occupied himself in endeavouring to make wine from potatoes; and, after many ingenious experiments, has at length obtained a liquor like Muscadel. He confidently anticipates producing other varieties, and constituting a new and important article of commerce.

EXTRACTS FROM JOURNALS,

Foreign and Domestic.

INCREASED POPULATION OF AUSTRIA.

The number of births in Austria during the years 1828-29-30, amounted to 2,275,532, and the deaths to 1,928,434; so that during the three years above mentioned, the increase in the population was 347,098. The greatest increase took place in the maritime provinces, and in Dalmatia, Bohemia, Moravia. On the other hand, in Lombardy, Styria, Venice, and Carinthia, there has been no change.—*Gazette Médicale.*

EXCORIATED NIPPLES.

Pyroligneous acid, mixed with white of egg, is stated, by Dr. Burshardt, to be an excellent application to excoriations of the nipple; even when attended with great irritability.—*Ibid.*

ARRESTING HÆMORRHAGE.

Dr. Arentz, of Norway, recommends nitric acid as the most powerful means of arresting hæmorrhage. In bleeding from a vessel too deeply seated to be easily accessible, or in false aneurism, he pours eight or ten drops of nitric acid into the wound.—*Casper Critisches Repertor*, t. 30. c. I.

FECUNDITY OF HYOSCYAMUS.

According to some experiments, the hyoscyamus produces more than 50,000 seeds; but assume the number to be only 10,000, the seeds would amount at a fourth crop to 10,000,000,000,000,000; and as the quantity of solid land on the surface of the globe is calculated to be about 1,400,350,599,014,400 square feet, it follows, that each square foot must contain seven plants, and therefore the whole earth would be insufficient to contain the produce of a single hyoscyamus at the end of the fourth year.—*Penny Magazine.*

COMPARATIVE PRODUCTIVENESS OF CERTAIN VEGETABLES.

A spot, of a little more than a thousand square feet, will contain from twenty to forty banana plants. A cluster of bananas, produced on a single plant, often contains from one hundred and sixty to one hundred and eighty fruits, and weighs from seventy to eighty pounds. But on reckoning the weight of a cluster only at forty pounds, such a plantation would produce more than four thousand pounds of nutritive substance. M. Humboldt calculates, that as thirty-three pounds of wheat, and ninety-nine pounds of potatoes, require the same space as that in which four thousand pounds of bananas are grown, the produce of bananas is, consequently, to that of wheat as 133, and to that of potatoes 44·1.—*Ibid.*

CLINICAL REPORTS FROM THE HOTEL DIEU, PARIS.

CASES AND OBSERVATIONS ON CERTAIN FORMS OF GANGRENE,

By M. Dupuytren.

Arteritis:—Coagulation of the Blood—Symptomatic Gangrene—Death.

A woman named Sigolet, 40 years of age, and of regular habits, was admitted into the Hôtel Dieu, July 15, 1832, for incipient gangrene of the right leg. She was of delicate constitution, but had always enjoyed good health, with the exception of having recently suffered from cramp in the right lower extremity. She had dull pain, of but little severity, which was first experienced in the right iliac region; from this it descended along the inner part of the thigh, and then to the back part of the leg, till it reached the sole of the foot and toes. These parts were affected with prickings and acute shooting, which passed into fixed burning pain. It was only then, being about eight or ten days before her admission into the hospital, that the foot began to grow cold: purple spots appeared, and the pain became so great as to prevent sleep.

On his visit of the 16th, M. Dupuytren found that the foot and leg of the right side were swollen to twice their natural size as far as the knee: the skin was tense and shining, as in phlegmonous erysipelas. The foot was of a deep purple towards the toes, which became less intense a little farther up, and shewed itself in marbled patches on the leg. The cuticle was removed at some points. The part was extremely cold at the upper third of the leg, and this continued increasing down to the toes: the sensibility was diminished in the

direct ratio of the heat; the power of motion still remained entire,—a circumstance easily understood, when it is considered that most of the muscles of the foot are situated on the leg, and chiefly at its upper third. The pulsation of the femoral arteries of the left side was felt to be full and regular, while in the right one the pulsations were so extremely weak as to be almost imperceptible: the artery seemed to be converted throughout its whole extent into a hard and nearly incompressible cord. The diagnosis made by M. Dupuytren was—"arteritis, of which the gangrene is but a symptom." The patient was ordered to lose three paletts of blood, to have a large poultice applied to the limb, and slop diet.

The bleeding had the effect of alleviating the pain and indueing sleep. It was repeated next day, and on the 18th its effects were still more marked: the pain was nearly gone, there was less swelling, and both the heat and sensibility had returned at several points. On the other hand, the mortified part was covered with vesicles containing dark fluid, which bursting, discovered the cutis, black, gangrenous, and fœtid. The limb was enveloped in camphorated spirits.

On the 22d she was bled for the third time. For some days after, the gangrene appeared to be arrested about four fingers breadth below the knee: it was supposed that the whole thickness of the limb beneath was mortified. The movements of the foot were now entirely lost, but the leg could be bent on the thigh. Nevertheless, whether the nerves had resisted the sloughing, or whether it was from a phenomenon analogous to that which takes place after amputation, the patient still occasionally experienced exquisite pain in the foot. Up to this time the treatment had not overcome the diseased process, but yet it had appeared to be retarded. However, about the end of July, notwithstanding two more bleedings, the icy coldness pervaded the knee, and progressively extended upwards. By the 11th of August the mortification implicated the lower part of the knee-pan, the coldness being well marked two inches higher up, and no pulsation was now perceptible in any part of the femoral artery. On the 16th the lower third of the thigh was involved in the gangrene, and then the strength, which had hitherto held out, began to break very rapidly: diarrhœa came on, and she died on the 19th, being thirty-five days after her admission.

Autopsy.—The body and limb externally presented nothing to remark in addition to what is above described as present during life. The vessels were first examined in the part of the thigh which had remained sound, at least which was not gangrenous. About the middle of the limb the artery, though natural in appearance, was diminished in size, and contained a thread-like coagulum, of a red colour, and which was supposed to have been formed after death. Towards the crural arch the vessel regained its ordinary size: it was hard, incompressible, and filled with a clot, red on the surface, and slightly adherent to the sides of the artery; within it was of greyish colour, and appeared to be formed of fibrine. This was continued up as far as the origin of the primary iliac, and even extended a little into the left iliac, but without obliterating it. The internal iliac was also obstructed by a clot of the same kind. The right crural vein was filled with a firm red clot. The vessels of the left lower extremity, the aorta, and the heart, were all nearly empty. Between the parts which remained sound, and the gangrene, was interposed a space of from two to three inches, which had been cold during life: there the cellular texture displayed the appearance of a reddish grey and very marked capillary injection, alternated: lower down, at the margin of the gangrene, the vascularity disappeared. The skin was black, hard, and dry as parchment; the subjacent cellular tissue of a yellowish grey; the aponeuroses pale; the muscles of a bright red, moist, and streaked with layers of cellular tissue more white than natural; the nerves rose-coloured; the vessels in the ham containing a greyish clot, like that found higher up; the bones of a pale grey, with the periosteum firmly adherent.

M. Dupuytren remarked, that this constituted an excellent example of what used to be called "spontaneous mortification"—the "gangrene of old persons"—"gangrene without a known cause;" but that these appellations must now be discarded, as pathology has explained the disease. Gangrene of the extremities may take place from very different causes. In old persons ossification is generally found in the arteries of the limb, and then too the dead parts are almost always dry, and not tumefied, as in the preceding case. In other instances the evil is caused by an organic affection of the heart—a circumstance remarked by Corvisart. In adults, at an earlier period, we also sometimes meet with arterial ossification; or gangrene may result in them from ligature of the great vessels—events sufficiently well known. But a more frequent cause, and to the merit of first discovering which M. Dupuytren lays claim, is acute inflammation of the artery, with coagulation of the blood, obliteration of the vessel, and consequent complete interruption of the circulation. Formerly, reasoning from views

purely theoretical, and likening this kind of mortification to what was seen from frost-bite, it was asserted that it occurred most commonly in winter, whereas just the reverse is true, for it is particularly in the summer months that it occurs. The woman whose case is above detailed was attacked during the period of the greatest heat. M. Dupuytren it was who first pointed out this fact, and it was the circumstance of its greater frequency in summer which led him to suspect that there was some error in the old hypothesis. The above case is also curious, as exhibiting the disease in the female, (women being decidedly less liable to it than men,) and at an early period of life (10). It is remarkable, however, that M. Trioen has seen two cases in young girls, one of 23 and the other of only 9 years. At first the disease is purely local; the respiration and circulation, as well as the functions of the brain and of the alimentary canal, remain undisturbed, and it is only when the disease has made some progress—doubtless only when absorption has commenced from the putrid mass—that the general system sympathizes, and fatal consequences ensue.

The progress of the gangrene is marked by an extraordinary sense of cold and paleness of the part. It is not, as might be supposed, a reduction of temperature analogous to what takes place in the dead body, and which only happens because the corpse assumes the temperature of the surrounding medium—it is an icy coldness, and is greater than that of the dead body, nay, the thermometer sinks lower than in the air, or even than in a current of water. M. Dupuytren long since made many experiments on this point, and ascertained that the temperature of the part about to fall into this kind of gangrene became less than that of the dead body. The pulsations in the artery, as seen above, cease, or nearly so, and in the situation of the vessel a firm cord is felt. It was predicted before death that the artery would be found obstructed as high as the aorta; but in one respect the diagnosis was not complete; for though the artery was obstructed at the aorta, yet lower down the clot was a mere thread, and it was the coagulum in the vein which gave the feeling of a cord along the inner side of the thigh. During fifteen years M. Dupuytren witnessed the exclusive use of bark and similar means, which proved quite unavailing: since the cause of the disease has been better ascertained, and repeated bleeding adopted, "we have cured two-thirds, and even three-fourths, of our patients."

[The reporter asks why opium, as recommended by Pott, was not used in conjunction with the bleeding; and why, as the disease still advanced, amputation was not had recourse to, in the manner practised by Larrey—a practice which has been followed by some well-marked examples of success.]

Ascites:—Gangrene of the Foot supervening immediately after Tapping.

A woman named Bourbon, aged 56, apparently exhausted by fatigue and privation, so that she looked twenty years older, labouring under dropsy. About three months ago, the ascites having become very considerable, she had the operation of tapping performed. Immediately after, the foot swelled, and in two days, to use her own expression, it was "dead." The gangrene had reached the ankle, and the bones were separated at the articulation, and the soft parts a little higher up, the tibula and fibula projecting, and being in a state of necrosis. The patient had no pain; the arteries pulsated freely, and no ossification could be detected. The tapping required to be repeated, and was followed by no inconvenience. The belly being thus emptied, led to the detection of two hard and painful tumors within it, one to the right, the other on the left of the umbilicus, but they exhibited no pulsation, and the circulation was not disturbed.

Here was a case in which the cause of the gangrene remained unknown. M. Dupuytren expected to have found some lesion of the abdominal circulation to explain it, but was compelled to abandon this conjecture.

Peculiar Mortification of the Cellular Membrane.

M. Dupuytren afterwards made some remarks upon another form of gangrene, hitherto undescribed. We sometimes see slow inflammations, with little heat or pain, attack individuals of different age, sex, and constitution. It is a subcutaneous swelling, which takes at least two months to be developed, and which sometimes requires twelve months for this purpose. At last the skin becomes purple, fluctuation is felt, and on opening it scrofulous pus is evacuated, which discovers a slough at the bottom of the abscess. The wound is dressed in the usual way, but no progress is made, and the slough does not separate. Two or three months pass before it is detached, and then it comes away in one piece, white, hard, and excessively fetid, and appearing to be constituted entirely of cellular membrane, and yet, what is extraordinary, not becoming softened by putrefaction. After this the bottom of the wound is seen to be very unequal, partly red and partly white, and it is still a long time ere healthy granulations make their appearance. Several

cases of this kind have lately been treated in the Hôtel Dieu: in one, admitted on the 8th of August last, a very large slough of the above description separated from a chronic tumor on the right side of the thorax.

ON THE IMPORTANCE OF THE NITRATE OF SILVER IN SURGERY.

To the Editor of the Medical Gazette.

Sir,

We are very apt to be impressed by cases which occur in our own families; and such a case has forcibly brought to my mind, during the past week, how much the profession of surgery owes to Mr. Higginbottom for his Treatise on the Nitrate of Silver.

My cook wounded the back of the hand, over the tendon leading to the middle finger, very severely, by its being caught by a hook used to suspend meat in the larder. Whether this hook was merely blunt and rusted, or whether it was poisoned by animal matter, I do not pretend to say: but more frightful consequences I never beheld. In four hours the back of the hand was excessively swelled and painful; the back part of the middle and third finger was affected by extreme numb pain, and pain and redness extended up the arm.

I gave an emetic—calomel and senna. I applied the nitrate of silver deeply in the wound, and so as to induce a complete eschar of the skin, all over the painful, red, and swollen parts. The effect was magical. In two days there was no dream of danger.

I have not thought it necessary to say more on this case, my object being only to draw the attention of the profession to Mr. Higginbottom's work, in which so many similar cases are fully detailed. I cannot refrain from expressing my opinion on that work—viz. that it constitutes the most valuable addition recently made to surgery. It should be in the hands of every student.

Philalethes.

London, Oct. 12, 1832.

P.S.—The effects of the nitrate of silver are surely unaccountable. The middle joint of the middle finger was swollen and tender, from a wrench in getting out of a gig. It had been stationary for a month. The part was involved in a black eschar made by the nitrate of silver. The swelling and tenderness subsided. Before the eschar peeled off the part was well!

BITE OF THE TONGUE.

A young woman was admitted into the Hôtel Dieu last week, under the care of M. Breschet, complaining of a severe wound of the tongue. She lived, it appeared, with a man of a violent and jealous disposition, with whom she had frequent quarrels. In the midst of one of their family jars, the man suddenly seemed appeased, and offered to make it up with a tender embrace: the simple girl had soon cause to rue her consent, for the fellow seized her tongue between his teeth, and nearly severed it in two!

The pieces of tongue were put together by sutures; and the patient was reported to be going on well in the course of a few days.

Wounds of the tongue get well without much difficulty. Besides the great number of vessels which the organ posses es, and the vital activity with which it is endowed, its surface is constantly moistened with saliva, a liquid very proper for keeping the divided parts in a state favourable for cicatrization.

WEEKLY ACCOUNT OF BURIALS,

From the Bills of Mortality, *Oct.* 16, 1832.

Abscess	4	Inflammation	43
Age and Debility	72	Inflammation of the Bowels & Stomach	11
Apoplexy	10	Brain	2
Asthma	10	Lungs and Pleura	2
Cancer	2	Insanity	3
Childbirth	7	Jaundice	2
Cholera	67	Liver, Diseases of the	10
Consumption	102	Locked Jaw	1
Convulsions	33	Measles	10
Croup	1	Mortification	6
Dentition or Teething	10	Paralysis	6
Diarrhœa	2	Small-Pox	29
Dropsy	22	Sore Throat and Quinsey	2
Dropsy on the Brain	20	Spasms	2
Fever	14	Thrush	5
Fever, Intermittent, or Ague	1	Tumour	1
Fever, Scarlet	10	Unknown causes	1
Fever, Typhus	1		
Heart, Diseases of	5	Stillborn	21
Hernia	1		
Hooping-Cough	7		

Increase of Burials, as compared with the preceding Week . . . 239

METEOROLOGICAL JOURNAL.

(Not come to hand.)

BOOKS received for REVIEW.

Lectures on Anatomy; interspersed with Practical Remarks. By Bransby B. Cooper. Vol. IV.

New Theory of the Influence of variety in Diet in Health and Disease, &c. &c. By Charles Cameron, Surgeon R. N.

Mr. Lindley's Elements of Botany.

Dr. A. T. Thomson's Elements of Materia Medica and Therapeutics.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 27, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

EXANTHEMATA.

Lecture IV.—Part II.

Rubeola.

I was speaking, gentlemen, at the last lecture, of measles, but I almost forget how far we had proceeded. The general symptoms of the disease have, of course, been pointed out. I also mentioned that sometimes the measles will disappear, and then return. I think I observed that they disappear often at the same time that some internal affection occurs. Bronchitis, or some other *itis*, will come on, and as long as the internal affection lasts severely, very likely the measles will not re-appear. The internal affection may be the consequence of the measles receding, but in a great number of cases it is the internal affection that puts a stop to the progress of the disease on the surface.

Period at which there is the greatest liability to the affection.—Infants, or at least children, are thought to be much more susceptible of the disease than adults; but infants at the breast are certainly not so susceptible of it as others. It is not at all an uncommon thing to notice the disease in a family of children, all of whom have it excepting one which is at the breast. There is no doubt that extreme infancy is not so disposed to the disease as later periods of infancy: it is considered, however, that infancy at large—childhood, and the young adult period, is more subject to it than the full adult period, and much more so than old age. In considering this question, we ought to reflect on the circumstance, that although fewer adults have it than children, yet it is a disease that occurs generally but once, and it is possible that the reason why it is not seen in adults is, because almost all adults have had it when children. That may be the reason. To ascertain the fact fully, we ought to have a number of adults who never had the disease, and expose them with an equal number of children who never had the disease, and see how many of each are affected, and if a smaller number of adults still escaped than of children, even that might not be satisfactory, because those adults probably did not have the disease in infancy, from a positive indisposition, and that indisposition might still prevent them from taking it. We can draw no inference from the number of persons who have the disease in childhood, which is usually the case. Dr. Babington, I have heard say, has seen measles occur after sixty years of age; and it is a fact that we may see small-pox after seventy, and some children are said to have been born with measles, and others with small-pox, and others have had it at a very short period after birth; but, as a general rule, the extremes of age are very unfavourable to this affection.

The longer the premonitory symptoms occur, and the general indisposition before the appearance of the eruption, and the more severe they are, generally speaking the more severe is the disease itself. The affection, too, is usually more severe in the cold than in the warm months. Sometimes, in the severe form of the disease, there are about the fourth day small dark patches in the mouth (the mucous membrane being affected as well as the skin,) on the hard and soft palate, upon the tonsils, and upon the uvula.

Exciting cause—Inoculation.—The exciting cause of the disease is indisputably a peculiar

contagion, and this has been communicated by art—the disease has been conveyed by inoculation. Experiments of this kind were made many years ago by Dr. Hume, the father of the present professor, and himself professor of materia medica in Edinburgh. You will find his experiments related in a work of his, called Clinical Facts and Experiments, published in 1758. Many have thought but little of these experiments, but in 1822 an Italian physician, Dr. Speranza, in the territory of Mantua, repeated them. He inoculated six cases, and afterwards himself, with the blood taken from a slight scratch in a vivid papula. In a few days the measles appeared, and went through their course mildly and regularly. This encouraged him to make further experiments, and he says they were all successful. Occasionally the measles do produce little vesicles, and it is certainly likely that these vesicles do contain the contagion itself in a concentrated form. Many who have attempted to inoculate for measles have failed; but that measles have been communicated by inoculation, there can be no doubt; and as the disease, when produced naturally, is so severe, and that produced artificially is so slight, and most children have the disease, I almost think it a pity that the subject has not been more attended to. There is not the same facility of producing this disease as small-pox, but it appears a possible thing to communicate it, and there can be no harm in scratching a few children, and attempting to give them the measles during the favourable period of the year; and I do not see why, as most children have it, they should not be exposed to the contagion, by having the clothes of others labouring under measles placed near them, during the warm summer months.

No indemnity from a second attack, unless there be catarrhal symptoms. — The measles are sometimes said to take place on the skin, without any internal affection, without any catarrhal symptoms, without running of the eyes or nose, without sneezing, heaviness of the head, or cough, and it is said that when the disease occurs in this exceedingly mild form, it does not prevent a second attack. This was mentioned by Dr. Willan, and, as an accurate observer, he was perhaps never surpassed; but Rayer will have it that this kind of disease is not measles at all, but only roscola, that simple slight blush of the skin that I formerly shewed you. Dr. Willan, however, says, that he saw two distinct cases of measles — indisputable measles, without any catarrh; and I myself attended a family, in whom several of the children had had the measles, with catarrh, and one of them had, at the same time, an eruption exactly like the others, and which was pronounced by the medical attendant to be the measles. The rest of the family never had the disease again, but this one, a year afterwards, had regular measles. From this fact, occurring within my own knowledge, I cannot but think that Willan is right. If any one could distinguish between rubeola and roscola, it must have been Dr. Willan. Besides, all contagious diseases will occur in an imperfect form. The most intense contagious disease may be of unusual shortness, or of unusual mildness, or both, and even want some of its symptoms. Small-pox pustules sometimes occur with no indisposition. Doubtless, measles is no exception to the general truth. When small-pox has so appeared, Willan says it may begin regularly and perfectly on the eighth or ninth day from the first appearance of the pustules, *without indisposition*. Measles, again, in the same manner, will appear, and proceed perfectly sometimes in a few days after the eruption, *without catarrh*.

Lividness not a dangerous symptom. — The measles are sometimes attended with a darkness of the skin; the rash suddenly becomes yellow, or livid, about the seventh or eighth day; there is languor and quickness of the pulse, but no inconvenience arises, and the whole ceases in a week or two. It does not appear that there is any danger from the mere lividness of the patches in this disease. Many eruptions of the skin, when they subside, become of a dingy or yellow colour, and without any danger whatever; there is merely a little change of colour, independent of the present indisposition. So it happens in measles; the dinginess is more intense than usual, the part becomes exceedingly brown and yellow; but this generally ceases after a week or two. Perhaps the blood is in a state approaching to stagnation, the circulation not going on in the natural way. This is called *rubeola nigra*.

Putrid Measles. — But it is said that measles sometimes do occur really in a typhoid state of the body; that putrid measles do take place. Sir William Watson, who was physician to the Foundling, said that he saw this 60 years ago in that hospital, but others think it was an error, because like Morton, a cotemporary of Sydenham, he did not distinguish measles from scarlatina, and proposed to banish the latter word as superfluous. Indeed the original writers on measles all consider it and small-pox as the same disease in different forms. However, Dr. A. T. Thomson declares that he saw a case in 1804, where the languor and state of the pulse were alarming, and the skin rubbed off like a moist cobweb, but the patient recovered by

the use of wine and cordials. I never saw this form, but the other is not exceedingly uncommon.

In plate xx. you will see a representation of measles without catarrh, which is said not to give impunity from the disease afterwards; still I see nothing peculiar in the eruption. You observe that there are patches of a semicircular form. If a child have measles without catarrhal symptoms, it is well to tell the parents that it may have an attack again. If you do not adopt this method, the family will say, "Mr. so and so said the child had the measles, but it never had, or it would not have them now:" it is therefore well to save your character. A second attack of measles is possible under any circumstances, but if they occur without catarrh, it is almost certain that the patient will have them again. In plate xxi. there is a representation of the dark coloured measles, which Willan calls *R. nigra*.

Period of Incubation.—In regard to the time at which the disease occurs after exposure, Willan says that he knew a person who had had the measles and become convalescent, and his clothes infected a child in the country, and that child had the eruption 16 days after being first exposed. I suppose the usual period is from five days to a fortnight, but most probably there is variety, as in most other contagious diseases.

Treatment.—In regard to the treatment of measles, the first point is, I stated, to attend to any internal symptoms of inflammation that may exist. A large number of cases will do very well without any medicine at all. The child cannot eat, and therefore, if not recommended by the parent, it will not take any thing to do it harm. It is more inclined to take plain water, milk, or milk and water, than any thing else. It is right that the patient should be kept cool, but it is rather dangerous to keep it cold. It should be kept in a moderate, but by no means in a stimulating temperature, for heat would do great harm, and aggravate any disposition to bronchitis; but I do not know that there would be the same propriety in exposing the child to cold air that there is in small-pox and scarlet fever; there is such a disposition to bronchitis. I do not think it would be right to bleed generally or locally, to prevent bronchitis; it is time enough to do so when it begins. If the child be young, the moment there are symptoms of an inflammatory affection of the chest you should apply leeches, but if the child be old, you should bleed from the jugular vein or the arm. There is nothing more easy than to take blood from the jugular vein, unless the child be too fat. The treatment should be that of bronchitis. If the disease continue, you must look out for local inflammation, and if that local inflammation cause the eruption to disappear, and you can subdue it, then the eruption will return. The warm bath will be useful, and it can do no harm. Scarcely any affection occurs in a child in which the warm bath is not of use.

The diarrhœa after measles is generally of an inflammatory character, and is best treated by the application of blisters, or a sinapism if the child be too young for a blister; but blisters are very dangerous things to employ in the case of very young children; I should prefer the application of a sinapism, because it is taken off in a moment, and great external irritation is quickly produced, and may be regulated at pleasure. However, it is not improper to give astringents in the diarrhœa that follows measles, but you must look out for local inflammation, and if that exist you must combine the astringents with the proper remedies for inflammation, or employ the remedies of inflammation only. Measles are very apt to leave after them an obstinate diarrhœa, which ends in disease of the mesenteric glands, and a bronchitis that is apt to leave a disposition to the formation of tubercles. You have chronic bronchitis, and then tubercles, so that children frequently die of phthisis; but measles often set up scrofula both in the abdomen and chest.

I need not say, that in the putrid form of measles, which I have never witnessed, the opposite plan must be adopted, only we must take care not to mistake a blackness from bronchitis from extreme congestion in the lungs, for a putrescent state of the body. When there is congestion of the head and chest, wine and tonics would be exceedingly improper; but I should think that a careful practitioner would not make the mistake to which I have adverted.

Scarlatina.

The next disease among the rashes, of which I will speak, is scarlet fever, which is called, in medical Latin, *scarlatina*.

Formerly confounded with Measles.—This disease was confounded with measles till the close of the eighteenth century. Morton, who was a cotemporary of Sydenham, as I have just told you, thought they were mere varieties of the same disease. In the middle of the seventeenth century, Sennertus asks why the disease is sometimes small-pox and sometimes measles? and Diemerbroeck, who published in 1687, asserts that measles and small-pox differ only in degree. Such were those days of diagnosis. In 1769, Sir William Watson did not distinguish measles from scarlet fever. On this account, you heard, some have affirmed that Sir William did not

see the putrid form of measles; that what he saw was putrid scarlet fever, and that, as he did not distinguish between the two affections, he called it measles. Indeed Morton, who confounded the disease, wished the word scarlet fever to be banished altogether. He conceived that the two diseases, measles and scarlet fever, were but one, and he thought it a pity to use both words, —that the term measles was quite sufficient to designate the whole disease. Bateman thinks that 1793 was perhaps the first year in which an accurate diagnosis was made. Dr. Withering published an Essay on Scarlet Fever in 1788, the second edition of which appeared in 1793; and Dr. Bateman considers that the latter was perhaps the accurate date of the first correct division of these diseases. This must appear to us strange, now that the diagnosis is established between the two diseases with the most perfect facility; but so it is, and I trust that those who live a hundred years after us will be satisfied that we were an ignorant set—that science will so advance, that hereafter our knowledge will appear perfect ignorance. You see that at the present moment people cannot settle how long cholera has existed—whether it is a new disease or an old one. Some say that it sprung up a few years ago, and others assert that it has been known from time immemorial. It is just the same with scarlet fever: some say that it was not known more than two hundred years ago; that it is not mentioned in the Arabian, not to say the Greek, writers; and that it came from Africa, and broke out in Europe for the first time in Spain, in 1610. Willan says it was known to the Neapolitans before 1500, under the name of *rossalia*, or *rossallia*, and that Ingrassia describes it under that name; that others called it *rosalia*, *robelia*, *rubiola*, *rubeola*, *rubeolæ*, *rubeoli*, (from *robia*, madder, and measles, *morbilli*;) and that the French used all these words for scarlatina, and even *rugeole*, terming measles *senession*. The word scarlatina was formerly scarlattina, and derived from *scarlatta*, a red-coloured cloth.

Symptoms.—This disease is characterised by a close and diffuse efflorescence of the skin, of a high scarlet colour, and affecting likewise the mouth and fauces. There are the usual symptoms of pyrexia for about two days, and in some part, the second day generally of the pyrexia, the eruptions appear. In the greater number of cases I believe this is true, but occasionally the eruption will not take place till the third, fourth, fifth, or sixth day; and when the eruption does take place, it continues about five days.

Causes.—Scarlet fever arises solely from contagion. I use the word contagion in a generic sense. It is a disease that usually occurs but once during life; but I believe the exceptions to this rule are more frequent than the exceptions to small-pox. Small-pox occurs twice more frequently than measles, and I believe scarlet fever occurs twice more frequently than small-pox; but I am not certain, for some persons do not make a sufficiently accurate diagnosis between such a rash as roseola and scarlet fever. Still, however, it is by no means uncommon for persons that have had scarlet fever to have a sore throat if they be exposed to the infection of an individual labouring under this disease. It is by no means unusual for those who have children about them labouring under scarlet fever, to have a sore throat characterized by intense redness; and that sore throat is sometimes very severe. Occasionally, persons who have had it formerly, or are recovering, have not only sore throat, if strongly exposed to the contagion, but even spots like flea-bites, sometimes of a dark colour. Being of this infectious nature, the disease is often epidemic; but it is more prevalent at the equinoxes than at any other period of the year.

Children most liable to the disease.—It occurs more frequently in children than in others, but the extreme of infancy is least liable to it, just as it is least liable to the measles. It differs, however, from measles and small-pox in this—that persons generally are not so liable to it. Almost every body has the small-pox, unless by chance they have had the cow-pock, and are thus prevented; but you will find a great number of persons that never had scarlet fever. It is common to find persons that never had the scarlet fever, although they have been exposed to the contagion; but it is very uncommon to find persons that have not had the small-pox, or cow-pock, and measles. I have been exposed to the scarlet fever enough, but I never had it, though of course I have had small-pox, measles, and hooping-cough, and all those things which people usually have. Dr. Willan says, that he never saw the disease occur more than once, although he had witnessed 2000 cases of it. When I was a pupil, it was denied that small-pox or measles ever occurred twice; but now that there are so many persons capable of making good observation, cases have been sufficiently multiplied to settle that point.

Period of Incubation, &c.—The period at which the disease usually takes place is three, four, or five days after exposure; but in adults the interval between exposure and the appearance of the affection is greater than in children. The disease may be caught by being near a person labouring under it, and therefore it is infectious. It may be caught, too, by touching any thing

that the individual has touched; and it may be caught from a second person. If an individual visits a person labouring under the disease, and then visits another, the second person visited may catch it from him. It may be communicated too, it is said, by the exfoliated portions of cuticle. One must conceive that these are impregnated abundantly with the perspiration, and therefore that they will communicate the disease; but I do not know myself, from observation, whether this is the case.

Character of S. simplex.—In the most simple form of the disease, that called *S. simplex*, the feverishness is very moderate. On the next day from the commencement of the feverishness, innumerable red spots appear on the face and neck, and these, in twenty-four hours, will spread all over the surface, coalescing and multiplying They thus increase and multiply, enlarging the redness, and uniting together, till they form large extensive patches over the trunk and extremities. On the third day there is almost one diffuse and continuous efflorescence over the body, and especially around the fingers. The scarlet hue is usually most vivid on the flexures of the joints, the skin there being very fine, and likewise on the loins. The patches are seldom universal on the trunk, but upon the extremities they are very continuous—run to a great length. If you turn aside the bed-clothes, you perhaps observe one continuous redness from the groin down to the foot, the patient looking almost like a boiled lobster; and towards evening the redness is so intense that the patient looks as if he had been smeared with raspberry-juice. Some lobsters are redder than others; but the colour at evening is like that of a very red lobster, or skin smeared with raspberry-juice. You may find, on passing your finger carefully over the skin, minute roughnesses—asperities exceedingly minute—far more so than you observe in measles; but you do not observe the irregularity that occurs in measles. In measles you find the whole skin raised in patches, and, besides that, you feel frequently small papulæ; but in scarlet fever you do not find the patches at all elevated—you do not find continuous elevations—but you may, with the point of the finger, discover exceedingly minute asperities. The distinction between the sensations given to the touch in the two diseases, is very obvious. In measles, as I have just said, the patches are more or less elevated, and you may feel in the midst of some of them little papulæ; but in scarlet fever you will not find the patches elevated above the rest of the skin, and, instead of finding little papulæ, you find only the most minute asperities possible, resembling the large cutis anserina, such as you find in the cold stage of ague; and it is only upon the breast and extremities that you can find these in scarlet fever.

Progress of the Disease.—It is usually upon the fourth day that the eruption is at its height. On the second it comes out; on the third it has spread all over the surface, and if the lower parts were exempt before it reaches them now, and it is at its height of redness; on the fifth it declines, and it declines by interstices, so that the patches re-appear. While the disease was increasing, the patches were lost in one continuous redness; and then, as the disease declines, the continuous redness becomes again divided into patches—that is to say, there are intervals of paleness. On the sixth day the eruption becomes very indistinct, and generally it is gone before the end of the seventh. Now and then, if the disease be severe (and sometimes when it is not), between the fourth and seventh day there are, as is observed in measles, little miliary vesicles. In acute rheumatism I have seen the fingers beset with vesicles; and the same occurrence takes place in measles, and sometimes in scarlet fever. About the eighth or ninth day the cuticle comes off in the form of scurfy desquamation.

The disease attacks the interior of the mouth and fauces, and it even affects the conjunctiva. The papillæ of the tongue become enlarged, and you may see them through the white crust with which it is loaded. The tongue looks as if it had been slightly sprinkled with Cayenne pepper. There is a dry mucus on the tongue, through which are seen peeping these red points. If there be any cough in the disease, it is not that peculiar cough which I mentioned as occurring in measles. In measles there is a peculiarly sounding cough, such as sharp women and nurses know very well to be the cough of measles, but that does not occur in scarlet fever. If there be any cough at all, it is merely a short irritating cough—a cough merely from irritation of the fauces, without any expectoration or hoarseness. From the conjunctiva being affected, there is a redness of the eyes, but no intolerance of light, and no overflowing of the tears; and the ciliary glands are not affected.

If scarlatina be at all severe, you may have discharge from the ears, both within and without—discharge from the meatus; and it may give rise to sore ears—to glandular suppurations in various parts, in the parotids and in the glands of the neck; and it may give rise to pulmonary disease and to diarrhœa; or it may be followed by chronic pustular diseases of the skin, called rupia and ecthyma, but which are much more common after small-pox. After mild scarlet fever there is very often general

dropsy — anasarca. The other symptoms which I mentioned (such as discharge from the ears, suppuration of the glands, &c.), all occur after the most severe forms of the disease, particularly that called *S. maligna*; but after the mildest form you may have dropsy. This dropsy usually occurs at the end of the second week, and after the rash declines. It occurs particularly in spring and in autumn; and, if I be not very much mistaken, it is generally owing to the patient having caught cold in some way or other.

In the plate I now shew you (xxii.) there is a representation of S. simplex, in which you observe continuous patches and asperities, or a very minute roughness in the skin.

Character of S. anginosa.—If the throat be affected in a very marked manner, the disease is called *S. anginosa*. You now and then have the disease with little or no affection of the throat; perhaps there may be a slight affection, but frequently it is so slight as to deserve no notice; but if it be very obvious, the disease is called S. anginosa. There is then more violent inflammation of the fauces, which increases and decreases with the eruption; the general disease of the system and the eruption are altogether more intense. The heat may be 106 or even 112 deg.; and there is sickness, headache, restlessness, and delirium. The throat feels sore and straightened, and on inspection a dark red line is seen, in various instances, along the velum, reaching down to the lower part of the uvula. The patient is hoarse, experiences a difficulty in swallowing, and the tongue is very red, especially at the sides and the extremity. The papillæ are particularly affected, so that they are greatly increased in length. In this more severe form of the disease, the eruption often does not appear till the third day, and very often the eruption is not so universal, but is in scattered patches, and very often it does not come out fully and remain so, but appears and disappears. The whole disease is thus lengthened; from the eruption not coming out permanently it is protracted. I mentioned that when the measles recede, when they come out and go back again, the eruption may last for some weeks. So in scarlet fever, if the disease comes and goes, then the period of the eruption is increased; although I do not know that it can be increased to the period that I have seen it in measles. When the disease thus goes off, the desquamation is less regular, and, if the rash have been slight, as it sometimes is, even when the throat is much affected, there is, perhaps, no desquamation at all. Sometimes we see exfoliations of large portions of the skin, for many weeks, and these are usually upon the hands and feet. The nails have been known to crack and separate, and now and then superficial ulceration will take place on the tonsils, and for the most part there are shreds of viscid secretion, which are mistaken sometimes for sloughs, but they are merely vitiated secretion, excessively thick portions of lymph; now and then you have real sloughs, with great debility after the disease.

Character of S. maligna.—But we have another form of the affection, in which there is a great disposition to sloughing, to mortification of the throat, and to putrescency of the body, in which there is extreme indisposition; and this is called *S. maligna*. The distinctions of this disease are very proper, but you have only to remember that there is a mild form of the disease; another in which the throat is much affected; and another where there are typhoid symptoms. With respect to scarlet fever, the names of the species are not unworthy of being remembered, as is the case in many other cutaneous affections. In this violent typhoid form of the disease, the efflorescence is dark and livid; it comes out even still later than in *S. anginosa*, where the disease is attended by an inflammatory sore throat, and it is of uncertain duration; is continually going and returning, and there is less heat of the body. In *S. anginosa*, I said the heat might be 112 degrees, but here there is less heat, and the pulse, although perhaps very quick, is languid. There is great affection of the head, great delirium or coma; in fact there is encephalitis, inflammation within the head, and sometimes there is other inflammation present. The eyes are red, and the cheeks are darkly flushed. There are sordes of the tongue and mouth, dark sloughs in the throat, the bases of which are livid; and great fœtor from the nose and mouth. There is an acrid discharge through the nostrils, which irritates the skin upon which it comes. There is diarrhœa, and frequently petechiæ, black specks on the surface of the body; hæmorrhage occurs, and death often takes place in two or three weeks. Sometimes the patient sinks suddenly within the first four days. Occasionally the disease does not shew this malignant character at first, but goes on pretty mildly, and then all at once puts on these malignant symptoms.

Morbid appearances.—When the body is inspected, there are found to be various internal congestions, inflammations, and effusions, and inflammation of the surface, not of the interior, of the skin.

It is this frightful form of the disease, which, when recovered from, leaves such severe complaints, as ulceration within the ears, chronic diarrhœa, and such diseases

of the skin as rupia and ecthyma. I do not know that this form of the disease is more frequently followed by anasarca than the others. So rare, however, is this species of the affection, comparatively, that I have never yet had occasion to treat a patient with it. It is, perhaps, a singular thing, that I never yet lost but two patients with scarlet fever; but it has solely arisen from this circumstance, that they have always been mild cases which I have treated, such cases as required cold washing, cold air; and the local application of leeches was occasionally demanded. I have heard other practitioners say that they never lost a case of scarlet fever. Luckily the disease does not put on this severe malignant form except in rare cases.

OBSERVATIONS

ON

CLINICAL MEDICINE.

A Lecture delivered at St. Bartholomew's Hospital, October 17, 1832,

By Dr. Latham.

Since the commencement of this season, I have found myself attended in the wards of the hospital by a much larger number of pupils than usual; therefore I have assembled you here to-day, that you may learn what *my* notion is of clinical instruction, and what you are to expect from me as a clinical teacher.

I have always thought that hospitals are not converted to half the good they are calculated to serve as schools of medicine and surgery; and I think so still.

I have always thought that, in hospitals, knowledge is perpetually running to waste for want of labourers to gather it; and I think so still.

I have always thought that, in our schools, every mode of lecturing has been unduly exalted above clinical lecturing; and every place where knowledge is to be had, or is supposed to be had, has been unduly preferred to the bed-side; and I continue to think thus.

With respect to clinical lecturing itself, custom has robbed it of its peculiar character, and, withal, of half its advantages, and half its popularity. It has been separated too much from the wards and the bedside, and has deviated into a discussion of abstract pathology and therapeutics. There may, indeed, be things which can be discussed with convenience and propriety only apart from the patient; and so let them be. But these bear a small proportion to the multitude of things which can only be learnt at his bedside, and in his very presence.

Here is a hospital containing 500 patients—a wonderful spectacle! Hither resort hundreds of students from every part of the empire. Here they see what the majority will never see again, after the period of their pupillage is over. They see collected in one place every variety of disease, and every variety of injury; and numerous specimens of each. What an opportunity of instruction gained, if rightly used—what an opportunity lost, if neglected!

And which is generally the case? Is the opportunity, in fact, generally used or neglected? I speak from my own certain conviction, and I answer that it is generally neglected. I know that five out of six of those who profess to attend the medical and surgical practice of this hospital (and it is the same at other hospitals), never watch a single case of disease, either medical or surgical, through its entire course, during the whole period of their pupillage. I say this with great sorrow, and as a warning to those whose pupillage has yet to begin. This is what I mean by the materials of knowledge running to waste.

Now, seeing among the students of our profession that zeal, that hunger and thirst after knowledge, which I do, I must be slow to charge upon them a systematic disregard of things most essential. May I presume rather to suspect that the discipline they are subjected to is a little faulty? I should be sorry to prejudice students against the course of instruction laid down for them—I would rather urge them to greater diligence, that so they might overcome any little impediments which lie in their way—nevertheless, my situation of physician to this great hospital having given me some insight into the system of instruction pursued, and convinced me that it does not work so well as it ought, it becomes my duty to point out where I think the machinery labours.

I think, then, considering the limited period which the majority of students can devote to their education, a great deal too much is required from them as preparatory to their becoming practitioners. Among the multiplicity of things which they must bring certificates of having learnt, there is a fear that they learn some very imperfectly, and some they do not learn at all; and there is a chance that what they thus learn imperfectly, or not at all, may be the very things concerning which it is most important that they should be competently informed. And such is really the fact. So pressing upon the student's mind and time is the neces-

sity of attending a multiplicity of lectures, that he has neither attention nor leisure left to bestow upon the observation of diseases and the effects of remedies.

But how are you to abridge the catalogue of lectures, and what is there now taught which you could fairly exclude, in order to make way for a more ample observation of disease in the wards of hospitals?

Anatomy must be learnt: the form, the situation, the structure of parts, must be known; even their intimate healthy structure should be much and often examined, by the medical student especially, that his eye may become skilled in detecting deviations from that structure, and tracing the visible vestiges of disease. Dissection, too, must be practised, by the surgical student especially, that his hand may be accustomed to the ready use of the knife. All the time that is bestowed upon it is therefore fairly due to anatomy.

Then come chemistry and the materia medica. And let no man who is making his entrance into the medical profession henceforth ever neglect chemistry. Chemistry was once thought to be conversant only with the physiology of external nature; but every day is bringing us to look more and more to chemistry to explain the physiology of our own bodies. It cannot, therefore, be suffered to become a less prominent part of medical education than it is. The same may be said of the materia medica. The articles of the materia medica are not likely, upon the whole, to increase in number; but those in use will require a more accurate study; more will be known concerning them, and more will consequently be to be learnt. Besides the natural history of many vegetables, there is also their chemical analysis. Chemistry has already detected, in several, the simple principle to which the whole plant is indebted for its medicinal virtue; and these simple principles are beginning to be largely and beneficially employed in practice. This, then, is not a time to abridge the study of the materia medica, when science is making in it new discoveries every day, and drawing from it more powerful and more convenient agents.

Then there are lectures upon botany—lectures upon midwifery, and upon the diseases of women and children—lectures upon forensic medicine. Now I dare not say that the subject matter of all these lectures is not of the highest order; and therefore I must not tell the student that *this* knowledge is less important than *that*, and that one lecture he may attend less diligently than another; I must only speak generally upon so delicate a subject, and contrive to intimate my opinion without giving offence. The prudent householder, when he would furnish himself a house, sees well enough that some things are of mahogany, and some of rosewood, and others of ebony and gold. He sees much for beauty and much for use, and longs perhaps to possess all. But his question is, "Can I afford to possess them?" and his answer, "No, not at present; and I must wait until I can." So, when there is laid before the student this magnificent furniture of the mind, and he asks himself, "Can I possess it?" I will answer the question for him—"No, you cannot at present." "But can I ever possess it?" "Certainly you can." "But how?" "By diligence and by *time*. Your studies will not be limited to the period of your pupillage, and you will know all these things in *time*; but certainly not in the brief space of two years."

Observe, I am not captiously finding fault with those formal requisites of medical education. The things themselves are excellent. But I cannot help wishing, either that fewer had been demanded, or that more time had been allowed for mastering them.

But, after all, perhaps I am wrong. I am judging other men by my own standard; I am taking my own capacity as an average of the generality, and concluding that what I could not do satisfactorily in a certain time, so neither can others. Perhaps this does not follow: I am more than twenty years older than you are; and they say that young men are much cleverer now-a-days than they used to be. I have no doubt they are; therefore pardon my impertinent remarks, and go and learn twice as much as I have fancied you will, and, by a double proficiency, give a noble refutation of my fears—to your own exceeding honour and my exceeding discomfiture.

But when all the lectures in question have had their share of attention, and you have brought away from each what information you can, your most important business, to which all these serve but as the humble instruments, is still to be performed:—you have to learn disease, and how to treat it; and there are lectures immediately subservient to this purpose, viz. lectures on the principles and practice of medicine; also clinical lectures; also attendance at the bedside of the sick; also examination of the bodies of those who die.

Now lectures on the theory and practice of medicine profess to teach physic systematically, and to give an entire view of the subject down to the present day. They are a kind of medical orrery, in which fevers and inflammations, exanthemata and

hæmorrhages, profluvia and cachexies, are made to perform their circumvolutions with wonderful order and propriety. But, as the youthful astronomer needs to contemplate some mimic shew of the heavens, before, with Galileo, he can profitably scan the heavens themselves, "at evening, from the top of Fesolè;" so the youthful physician needs some orderly representation of the whole, to make him know and admire the extent and nobleness of his art, before he begins to deal with its important realities.

Beware, however, of mistaking the intention of these systematic lectures on medicine, or of allowing your minds to rest in them for purposes which they are not intended to serve. They are introductory, and only introductory, to knowledge which is to be acquired by other means. These means are necessary and indispensable—so absolutely indispensable, that, without these means, there can be no knowledge. The knowledge in question is the acquaintance with diseases in all their forms, and the acquaintance with remedies in all their kinds, and all their modes of application; and the means in question are intercourse, continual intercourse, with the human beings who are the subject of diseases. Diseases are not abstractions; they are modes of acting, different from the natural and healthy modes—modes of disorganizing, modes of suffering, and modes of dying; and there must be a living, moving, sentient body, for all this.

This body must be your study, and your continual care—your active, willing, earnest care. Nothing must make you shrink from it. In its weakness and infirmities, in the dishonours of its corruption, you must still value it—still stay by it—to mark its hunger and thirst, its sleeping and waking, its heat and its cold—to hear its complaints, to register its groans.

And is it possible to feel an interest in all this? Ay, indeed is it; a greater, far greater interest, than ever painter or sculptor took in the form and beauties of its health.

Whence comes this interest? At first, perhaps, it seldom comes naturally—a mere sense of duty must engender it; and still for a while a mere sense of duty must keep it alive. Presently, the quick, curious, restless spirit of science enlivens it; and then it becomes an excitement, and then a pleasure, and then the choicest food of the mind.

When the interest of attending the sick has reached this point, there arises from it, or has already arisen, a ready discernment of diseases, and a skill in the use of remedies. And the skill may exalt the interest, and the interest may improve the skill, until, in process of time, experience forms the consummate practitioner.

But does the interest of attending the sick necessarily stop here? The question may seem strange. If it has led to the readiest discernment and the highest skill, and formed the consummate practitioner, why need it go further?

But what if humanity shall warm it? Then this interest—this excitement—this intellectual pleasure, is exalted into a principle, and invested with a moral motive, and passes into the heart. What if it be carried still further? What if religion should animate it? Why, then happy indeed is that man whose mind, whose moral nature, and whose spiritual being, are all harmoniously engaged in the daily business of his life; with whom the same act has become his own happiness, a dispensation of mercy to his fellow-creatures, and a worship of God.

Such a man any of you may be; but you must begin by learning to stand by the sick bed, and make it your delight.

But the interest of attending the sick (I have said) seldom comes naturally; it begins in a sense of duty. All men, especially young men, have a repugnance to scenes of misery. A single object of wretchedness is enough to disturb one at first; but to find one's self at once transported into a throng of objects, where all are wretched, is apt to give a wrench to the spirits from which they do not always easily recover. It is here then, just at the threshold of his practical studies, that the young man must rest upon his sense of duty. His sense of duty must rally him, and support him, and bring him back to the objects which he is so reluctant to face; and the interest will follow, if he is but just to himself.

I have now been a hospital physician many years, and many a succession of students has passed before me. I have not been an inattentive observer of their habits, and have remarked some things respecting the growth of this interest for the practical objects of our profession, which are really very curious.

At first all students are averse from visiting the sick; they have no fancy for the wards either medical or surgical, and they especially shrink from the surgical. But when the repugnance is got over, and an interest begins to be felt, that interest is almost sure to be for surgery in preference to medicine; and yet, when they settle in life, their skill in surgery will be little called for, but nine out of ten of the cases which they treat will be medical.

Now one reason why surgery is more popular than medicine, is, that it is easier. Do not, I beseech you, imagine that I wish

to disparage surgery. In a profession like ours, nothing can shew such bad feeling, or such bad taste, as purposely to let fall expressions which cast an imputation of inferiority upon those who happen to cultivate a different portion of the same field of science and usefulness from ourselves. And even here I will allow, if you please, that cases occur in the department of surgery, beset with difficulties and perplexities, which we in the department of medicine do not meet with, and which require information and judgment and skill of the highest order to surmount.

But I am now speaking of the ordinary routine of cases, such as we find them in hospitals; and, upon a comparison of such cases, surgery is certainly much easier than medicine; and students take to it the more kindly because it is easier.

Surgery, for the most part, requires fewer circumstances to bring you to a knowledge of its object than medicine does. In surgery there are prominent points of interest, which arrest and command the attention at once; in medicine the points of interest are to be sought after, and, being found, are to be retained and cherished by much labour of the understanding. External sores, external inflammation, and broken bones, require only to be seen and handled in order to be known. But the same knowledge which in surgery is obtained by the use of the senses, in medicine, which is conversant with internal disease, can only be acquired by a process of reasoning; and reasoning is more difficult than seeing and touching, and its conclusions are more uncertain, and much more liable to error.

Moreover, the adaptation of curative means requires more vigilance in medicine than in surgery. There is no end of the circumstances to be taken into consideration, day after day, in order to practise medicine with tolerable success. A man has an *external* inflammation: the surgeon sees it, and is at once sure of its existence; he prescribes for it, and sees its gradual decline as plainly as he first saw its rise and progress. A man has an *internal* inflammation; but the physician, not seeing it, is obliged to come to the knowledge of its existence by a great variety of considerations: he prescribes for it, and is again obliged to enter into a variety of considerations before he can know that it has begun to decline or has ceased. The uncertainty of physic I readily admit; but I do not admit the vulgar reproach which has followed from it. There is nothing absolutely sure but what rests upon the basis of numbers, or falls within the sphere of the senses. Where reasoning begins, there begins uncertainty; and on this account the highest and the best things in the world are all uncertain, and so is our glorious profession. But from this very uncertainty those who practise it successfully claim their greatest honour: for where there is no possibility of error, no praise is due to the judgment of what is right.

Another reason why surgery is more popular than medicine, is, that it is easier for pupils to make surgical cases a matter of discussion and conversation among themselves, and thus to convey an interest to each other respecting them. They can agree about the extent of this burn and that fracture, and understand each other when they talk about them; but concerning the progress of a fever, and all its circumstances—how they differ to-day from what they were yesterday, and what influence the means employed have had in determining the changes which have taken place—it is quite impossible that they should have any very general conversation. It is necessary to be in the presence of the patient to point them out. Language often fails of terms to designate them; and the most experienced often find a difficulty in making themselves intelligible to each other in speaking of them. There once flourished within these walls "the Medical and Philosophical Society of St. Bartholomew's Hospital." I fear it exists no longer. The time was that it was attended weekly by at least an hundred students and others. There was often no lack of discussion, and good discussion too, upon professional subjects: but the subject was almost always a *surgical* subject. I have already shewn the reason why it was so—it could not be otherwise.

Again: young men like to be doing something—something that shall be real employment. Thus they are gratified while they are plaistering, and binding, and dressing, &c. They see and they feel that they are promoting some object daily and hourly, with their own hands, for the benefit of the sick. But in medicine, the quiet and almost passive manner in which they are engaged about the sick requires a state of mind which is seldom possessed in early life.

Why do I mention all these things? In order to shew you that I am well aware of all the circumstances which are apt to abate your interest for that department in which it is my duty and my desire to promote your instruction, and of all the difficulties I have to encounter, when I attempt to win you to it.

May I here be permitted to say a few words concerning myself? My office, as one of the physicians to this great hospital, makes it my first professional duty to further the studies of those who resort hither for instruction. A certain depart-

ment is allotted me, and within that department I have, upon deliberation, chosen a certain course. If it be not essentially the best, it is at least that in which I feel myself to have the greatest capacity of usefulness. I desire that you should know what that course has hitherto been, in order that you may understand what it will be henceforward, and what you are to expect from me.

I have been physician here eight years. Having no formal lectures to give, I have considered my business to be expressly in the wards of the hospital; and I have thought myself expressly placed there to be a *demonstrator* of medical facts. I use the term *demonstrator*, because it will at once carry my meaning to your minds; which is, that I have looked upon myself as engaged to direct the student where to look for, and how to detect, the object which he ought to know; and, the object being known, to point out the value of it in itself and in all its relations.

In prosecuting this my duty, I have risen early summer and winter, and have betaken myself to the hospital the first of my brethren; and I have had a purpose in so doing. I have desired to meet the students before their minds were pre-occupied with other things; that, among the interfering demands of other objects which arise in the course of the day, they should not have to catch a moment for that which (I consider) is the greatest of all—to steal a brief interval between lecture and lecture, and give it to that to which all lectures, and all the knowledge conveyed in all lectures, is but subsidiary and subordinate. I would not thank them for such an irksome wearied attention; I want them when their minds are fresh; and therefore I have always given myself to them when mine is fresh.

My visit to the hospital has occupied generally two hours; sometimes a little less, sometimes a great deal more. Half an hour of that time would be sufficient for me to prescribe for my patients, as well as I could, and satisfy my conscience that I had done them justice. The remaining hour and half I have given to the duties of my office as a teacher of clinical medicine.

But in this business of clinical instruction, I have not been the only instructor, nor have the means of information been limited to what I say or I point out. Surely this would be a poor kind of schooling—a giving and taking of scraps of knowledge, where one mind receives just so much as another mind may have to bestow. No; it has been my chief care to put every thing about the sick in the point of view most favourable for being well observed—that circumstances might become didactic—that they might give their own intimations, and speak to you themselves in their own tongues—and that thus you might accept knowledge neither from me nor from any one, but gather it fresh from the reality. Such, I consider, is the true method of clinical instruction. In short, whenever I have entered my wards, I have been accustomed to regard myself in no other light than that of one who presides over a great solemnity, and is engaged so to manage all its circumstances that they should produce their appropriate impression upon the mind of the spectators. You are those spectators; and the solemnity you witness has many scenes and several actors, and one main subject runs through the whole. The scenes are the diversified incidents of many diseases—the actors are the sick themselves, and those who minister to them—the nurse, the physician, and the physician's attendants; and the great subject of the whole is the life of human beings consigned to our hands for a time, and used and treated according to our good pleasure, and always for purposes of good. This life is by all means to be saved; its diseases by all means to be alleviated or cured; and the arts and methods of saving and curing, and alleviating, are to be so displayed that the benefit and blessings of individuals may be multiplied infinitely.

But how multiplied infinitely? Even through you. Recollect you are the spectators; I am but the actor. For this is a case in which the spectator's place is a thousand times more important than that of the prime agent, if the measure of things be calculated by the result. My business is with the few individual patients before me; and whatever good or whatever evil I do, would be strictly limited to them, but for your presence. Yes, you are there to take note of the errors into which I may fall, that you may avoid them, and so restrict the mischief within its present sphere; and you are there to take note also of the good which I may do, and learn the method of doing it, and make it your own, and carry it abroad with you, that it may bear fruit an hundredfold, and be multiplied among all mankind.

You will perceive, then, that with me clinical instruction is, as little as possible, a matter of formal lecture. I will tell you the manner of my proceeding.

Upon the admission of a patient, my first object is to learn the exact nature of the disease I have to deal with; and this is done by my own observation, and by inquiries to which the patient himself or his friends make answer. This is taking the case.

Now, in taking the case, I desire always to proceed after a certain method; and when I am able to pursue that method, all the circumstances which I seek to know

unfold themselves naturally and easily, and then it is a simple, agreeable, and interesting employment.

But often, very often, I am driven from all pretence of method in taking the case. The poor patient is embarrassed by the novelty of his situation, or he is deaf, or his disease incapacitates him; and he hardly understands your questions, and gives you strange answers. Thus things drop out confusedly one after another, and you must be content to accept them as they come, and join them together as you can. But upon these terms, taking a case becomes a very irksome, disagreeable business.

In taking the case, however, if I am able, I always proceed thus:—

The patient being placed before me, I ask him no question until I have learnt every thing worthy of remark which my own eyes can inform me of. His physiognomy—his complexion, whether florid, pale, or dusky—the general bulk of his body, whether large and full, or spare and wasted—the condition of particular regions, whether swelled or attenuated; and of the surface, whether there be any eruptions or sores upon it, and what is their character—and, lastly, the power of locomotion, whether he have free use of his limbs or no.

All these are most important particulars, and we ought to make much of them. There can be no doubt concerning them; they are objects of our own observation, and come to us authenticated by the testimony of our own senses. One step securely ascertained leads to another; and from what we see upon the exterior, we obtain a clue for directing our inquiry to the seat and centre of the disease within. If locomotion be hindered, we look well to the brain and spinal marrow; if there be the livid lip and dusky skin, we scrutinize particularly the condition of the heart and lungs; if the whole body, or some of its parts, be attenuated, we examine well the organs of nutrition.

Having thus learnt all I can with my own eyes, and felt the pulse and seen the tongue, I next proceed, in taking the case, to that further inquiry in which the patient takes a part: and first, I ask him concerning his general sensations, especially whether he is hot or cold, and I endeavour to learn whether his heat and cold occur under conditions which constitute fever.

Next, I inquire into the state of particular organs; and beginning with the head, I ask after pain, vertigo, and a sense of weight—the sight and the hearing, and sleep and wakefulness. Many of these things are only glanced at, or perhaps passed over altogether, if there be no reason to suspect disease of the brain.

Then, passing to the chest and respiratory organs, I ask concerning pain and cough and expectoration, and the state of the breathing under various conditions of exertion and in different postures of the body; and I learn the force and extent of the heart's pulsation.

These things are hardly dwelt upon, or soon dispatched, if there be no suspicion of disease in the chest; but if there be, not all we can learn by simple inquiry is enough to ascertain its nature. The patient must, moreover, be submitted to the process of auscultation. This process, however, in order to avoid interruption, I postpone until other inquiries are finished.

Lastly, proceeding to the abdomen, I ask here also concerning pain and uncomfortable sensations—the appetite—the digestion—the evacuations, their frequency, the quantity and appearance; and then I ascertain with my hand its form and fulness, the possible enlargement of particular viscera, the effusion of fluid, or the existence of pain upon pressure.

Here the examination of the patient ceases, as to his present condition; but the history of his complaint remains to be learnt—its origin and its progress hitherto, and its probable exciting cause.

Perhaps it would seem more in the order of nature, and therefore the best method, to take the history first of all. Formerly I used to do so, but I found it practically inconvenient. If you first learn the existing complaint, you know how much of its previous history you will require to illustrate it; but if you first inquire the history, since you do not yet know what it is to illustrate, you cannot tell how much of it you shall want, and must allow the patient to tell what he thinks fit; and, since every person's complaint is interesting to himself, he is apt to discourse about it rather too much at large, and too little to edification. Therefore it is, that I now always inquire the history last, inverting (if you please) the order of nature; and I take care to make the patient answer express questions rather than leave him to expatiate at his own discretion.

And now the case is taken and recorded in a book by the clinical clerk—not that I deliver over to be recorded all the circumstances that come out in the progress of the examination, but only such a selection of them as may serve to declare the disease, and furnish guidance and direction in the treatment of it.

The case, I say, is now taken, provided there be no suspicion of disease in the chest. But if there be, the patient must be submitted to the proce s of auscultation.

What auscultation is, and the philosophical principles which recommend it as an instrument of diagnosis, it belongs to the lecturer on the principles and practice

of medicine to teach you. But as, in the course of my clinical instruction, I shall lay great stress upon it, and at every visit shall present you with instances of the necessity of using it, and shall invite you to give much time (for much will certainly be required) in order to learn to exercise it skilfully, you have a right to expect from me, who have employed auscultation in this large hospital between seven and eight years, some observations concerning it, and some estimate of its value.

The more accurate physicians of our own times have not disdained the guidance of another sense in the investigation of disease. They make use of the hearing as well as the touch and the sight, and in those things which are more fitly and naturally subjected to it, they have found it not an unfaithful interpreter of the truth.

Auscultation, as it is called, professes to furnish important aid in the diagnosis of diseases appertaining to all the organs within the chest. Its use, however, has not yet become popular in this country, nor is its value ascertained.

There are those who condemn it as absolutely worthless, and there are those who commend it as infallible.

Its vehement and unqualified condemners, judging from what they write and say, are absolutely ignorant of, and unpractised in, its use; and its unqualified commenders are probably of that happy temperament which is naturally averse from admitting the real difficulties of any subject, and therefore find none in medical diagnosis, which is of all things the most difficult, whatever be the means employed for its illustration.

But there are many sober, well-informed men, who, having the opportunity, have thought it their duty not to spare the necessary pains of practically acquainting themselves with a method of inquiry which comes recommended to the world by one of the soundest pathologists that ever lived: and among these there will not be found one who does not attach some (and that a very considerable) value to its use.

A priori it would not have been believed that the pulse could ever teach us what it does. Sir John Hawkins, when he visited Dr. Johnson one day during his last illness, says, "before my departure, Dr. Brocklesby came in; and, taking him by the wrist, Johnson gave him a look of great contempt, and ridiculed the judging of his disorder by the pulse."

If we had heard, for the first time in our own day, of some physician going about this town and putting his fore-finger upon the wrists of his patients, and professing to know, from something he found there, that this man had an inflammation of his lungs, and that man of his bowels, and presuming to prescribe bleeding and other gigantic remedies, simply from faith in his own infallible fore-finger, grave men would denounce him as a dangerous quack, and pleasant men would hold him up as a fair subject for ridicule.

Yet use has so educated the fore-finger of us all, that this is the very thing we are now doing every day of our lives. When, therefore, so much is confessedly learnt by one sense, it is rather hasty to conclude that nothing whatever can be learnt by another. When, by touching an artery, be the disease what it may, and seated in whatever part, we seldom fail to gain some knowledge concerning it, and some suggestion how to treat it, why should it appear incredible that two particular organs only—the lungs and the heart—should submit some of their diseases to the cognizance of the ear?

Concerning the sense of hearing, in relation to its proper objects, and in relation especially to diseases of the heart and lungs, no man can learn from another the kind of information which it is able to convey; every one must teach himself. In this respect it is with hearing as it is with touch. You may talk of a hard and a soft pulse, of a full and a small, of a quick and an irritable pulse; but be assured you thus convey no intelligible idea, except to those who are by practice as conversant with the pulse as yourself. So, too, with respect to the heart; you may talk of its sound being clear or dull, near or distant, limited or diffused; and, with respect to the lungs, you may talk of the bronchial and vesicular respiration, of the bronchial voice, and pectoriloquy, of rhonchus and sibilus, and large and small crepitation; yet none can understand you but those who have given much time and pains to the exercise of auscultation.

Let us recollect that the pulse submits none of its qualities, but those which respect its number, to actual measurement; all the rest are determined according to the perceptions of the person who feels it. Yet, concerning these, there is a tolerable agreement among medical men. It is the same with the heart. The number of its contractions may be counted, and therefore never can be doubtful; but the modes and qualities of its contractions, which are many, are determined according to the perceptions of the person who hears them. These, however, like the kindred qualities of the pulse, are accustomed to strike all who habitually attend to them in the same way.

Summarily, then, concerning auscultation, my experience (I think) warrants me in saying thus much:—1. That there are some diseases of the chest which in their *kind* entirely elude it; 2. that there

are some which elude it not in their kind but in their *situation*;—3. that there are some in which auscultation is only a help to diagnosis, but still a very great help;—4. that there are some (and perhaps the larger number) in which the conclusions of auscultation are as unerring as those of sight itself.

Certainty is a big and portentous word, applied to any the smallest portion of our art. But still there is a small district of the whole field of diagnosis, but a large district as it respects particular organs, which auscultation has rendered absolutely certain.

With auscultation I almost always use percussion, and the results of the one perpetually correct or confirm the results of the other, and strengthen the diagnosis.

But does all clinical instruction consist in directing the mind how to ascertain mere particulars, whether by auscultation or percussion, or by whatever other method is adopted for their discovery in different organs? No. Clinical instruction is not merely occupied in directing observation to facts, but it assists the mind in estimating their value. Thus when the record of the case which is taken has been read aloud, I admit you to share in all the little process of deliberation that is going on in my mind, as it works upon the materials just submitted to it, and I admit you to witness my endeavour to bring the particulars together, and make them contribute all the light they are capable of throwing upon the nature and seat of the disease. Sometimes I can at once come to a confident diagnosis, and when I can, I at once announce what it is, and give my reasons for it.

Sometimes, after great pains of inquiry, I am still in the dark, and when I am, I say so, and desire to reserve the case for future examination.

Sometimes, perhaps most frequently, I feel that I have a tolerably right notion of the complaint, but require some circumstances to be more clearly made out, before I can be absolutely certain. And then I state what are the circumstances which give me the notion that I have, and what I still desiderate to bring me to a more confident conclusion.

The case still remains to be prescribed for. In prescribing, I endeavour to be as simple as possible—to make the indications of treatment as intelligible as possible—and the object I have in view clearly seen.

The case thus examined, and commented upon, and prescribed for, I then commit to your future observation as a medical study.

In the further progress of the case I am still present, not to give formal lectures, but to take care that none of the circumstances which continue to develop themselves may fall to the ground profitless; and that you may be tutored by *them*, and not by *me*.

Not one only, but many cases, I shall thus consign to your study with the like care; and in all I shall be continually at hand to render you my assistance. That assistance, however, I shall never interpose, so as to hinder the exercise of your own independent observation, and mar the very purpose of clinical instruction.

With respect, however, to formal lectures, as a part of clinical instruction, I will say this: that the teacher would do well occasionally to call his pupils together, and state to them his own views (for every man *has* his own views) of certain leading points of pathology; for these views, he must be conscious, give a bent and direction to every remark he makes upon the objects which he and his pupils are daily contemplating together; and it is desirable that they should have the best key to interpret him by, since they ought to understand each other. This would require a formal lecture.

Again, for the same reasons he would do well to acquaint his pupils with any general principles at which he may have arrived in the treatment of disease. This, too, would require a formal lecture; and such lectures I am almost tempted to promise you, if I was sure they would be acceptable. But it must not be yet; for I am not certain that we should at present quite understand each other upon these interesting subjects.

The progress of the human mind is evermore from particulars to generals; and he that would inform others must be careful, in the manner of his teaching, not to transgress the order of nature. Full of this important truth, I must first seek to rivet you to the contemplation of individuals, and only venture to unfold to you any general principles, which I may conceive myself to have reached, either of pathology or practice, in proportion as I judge you able to authenticate them by your own growing experience.

But it is *your* present duty to exercise your observation carefully and unremittingly; and it is *my* present duty to point out the fittest objects, and place them in the light in which they can be most profitably seen.

If ever the desire to view the beauties and sublimities of nature has led your footsteps to some lofty eminence, you have probably taken with you one more familiar with the scene than yourselves, as a guide; but you have still trusted to your own eyes and your own feelings, to fill you with the delight of the prospect, and tell

you what to admire and wonder at; and you have required no more from the guide than to point with his finger, and say, "see here, and see there."

So in entering this place—even this vast hospital—where there is many a significant, many a wonderful thing—you shall take me along with you, and I will be your guide. But it is by your own eyes, and your own minds, and (may I add) by your own hearts, that you must observe, and learn, and profit: I can only point to the objects, and have little more to say, than "see here, and see there."

ON THE ANALOGY

BETWEEN

THE GRIPES IN HORSES AND THE EPIDEMIC CHOLERA.

By Eracy Clark, F.L.S.
Member of the Royal Institute of France.

In the midst of the numerous, opposite, and very conflicting opinions, which prevail at this time respecting the direful epidemic called cholera, and which still exerts its fatal ravages in spite of all that has been done, and which opinions respecting its nature and its treatment seem almost as various and unsettled as they were at the first commencement of it, if we may judge, at least, from the recommendations every day proposed in the medical periodicals.

Under these circumstances you will, perhaps, pardon the suggestions of one who, though formerly educated for it, is not now strictly one of your honourable profession, and permit him to advance an opinion which he has long entertained, and which, if it be not founded on truth, has one merit at least—that of novelty. These opinions have, however, been shewn to a few of his medical acquaintance, who do not see any thing in them to forbid the reasonings and conclusions here drawn; which has induced him—with great deference, however—to make them more publicly known. If they should be at all admitted, they will certainly lead to a more decisive, and perhaps more successful mode of treating this disease.

Many physicians have, I believe, been of opinion that this epidemic, though designated cholera morbus, was not properly that disease, at least according to the definitions given of it by the best nosologists: but what it was, they have left undetermined, or by what name in their system it should be called. Indeed, that it could not very well be cholera morbus, being for the most part deficient in the grand character of that complaint, as its name, indeed, implies, of purgings with increased biliary secretions; for this secretion seems often morbidly suppressed and almost entirely wanting in well marked cases of this disorder; and the diarrhœa which sometimes precedes it we believe to be no part of the disorder, but as sometimes leading to it, by its weakening influence upon the general system, and especially upon the parts immediately concerned; but in very many cases it is not present at all, and therefore is no necessary concomitant or character of the disease.

Perusing the various descriptions of this disorder, I have been a long time firmly persuaded that its prevailing character bore a nearer analogy to a complaint that I had had often to contend with among animals, than to any enumerated in the books on human nosology; and that, in fact, it was a more or less complete suppression of the process of digestion or chylification, as we shall presently illustrate by actual cases, and that it bore a nearer analogy to, and was proceeding very much from, the same fatal causes as the stroppos, or the gripes, in horses; in which, in the early part of my practice in this great metropolis, I had had a large and not unsuccessful experience, having discovered its true cause and a successful mode of combating it.

Attacks of this complaint, like the cholera, often carried off the animal in a few hours; and in the commencement of my practice, though employing and using all the then known and recommended remedies (and such are sure to be numerous and discordant enough, where the character of the disease and its treatment are not understood), I frequently lost my patients. Fearful of losing my credit also, I took unusual pains, by watching, dissection, and otherwise, in satisfying myself of the nature of the disease, and of what should be its proper treatment, and at length so far succeeded that for years I never lost a patient, often contending with protracted and cruel cases. The success that attended

my treatment induced me, for a considerable period, to keep it a secret, and it was extensively sold privately; but, at length, becoming more generally known, and abused also, and not given with the laws prescribed with it, I determined on publishing an account of it, and (what was of fully as much or more consequence) my views respecting the nature and causes of the complaint, and how it should be treated by properly sustained measures in aid of the medicine.—(See "Essay on Gripes of Horses," London, 1816.)—I believe, in the different large breweries in this metropolis that I at that time attended, some thousand pounds worth of horses were saved by what I called a duly sustained treatment of the complaint, of which testimonies were given me, which appear at the end of the above treatise.

In respect to the cause of the disease, I traced it satisfactorily, at its commencement, to an insufficient power in the alimentary organs to carry on and perfect the digestive process, either from the accession of some debilitating cause, which rendered these organs unequal to the task, or from the unfavourable nature of the contents of the viscera as to quality or quantity, or from both or all these causes combined. The lowering agency of a sudden chill to the abdomen would alone produce it under ordinary circumstances, and still more easily if a refractory quality or unusual quantity was superadded. Derangement or suppression of the chylifacient process would take place in the intestines, and the disease be carried on there to its termination in death; or it might be communicated by sympathy or by connexion to the stomach, or *vice versâ*, beginning in the stomach and carried to the bowels. In either case, the suppression or arrestation of the digestive process would quickly produce *tormina*; which, if not relieved by the restoration of digestion, would quickly terminate in death, either by inflaming the mucous membrane of the bowels or stomach, or by its operation upon the brain through the agency of the nerves of the stomach. In horses, who could withstand a severer shock of this sort than the more sensitive human being, inflammation would have time to establish itself pretty fully in the membranes of the bowels, and produce appearances not very unlike what Dr. Annesley has given in his work on Indian Cholera; for extreme violence in the attack from several causes, combined with great strength of constitution to resist it, would have much the same effect in the animal as often happened in the cases related in India.

We may, perhaps, illustrate the cause of the sudden termination of the complaint in the following way:—that many substances assume a poisonous quality if they are not digested, but if digested they are perfectly inert.

If you give to a horse four ounces of the leaves of the yew tree, on an empty stomach, it will destroy him in a few hours, and but a very slight appearance of inflammation will the stomach exhibit, in petechiæ or spots of the size of the little-finger nail. But if to this quantity of the acrid vegetable you add eight ounces of oats, and mix them together, he will eat the whole, will digest them well, and will not even be incommoded: so that, in the former case, it must have been destroyed by the influence of the undigested matter upon the brain, acting on the nerves of the stomach before the other symptoms attending the suppressed act could have had time to display themselves.

It may be asked what should be the cause of this epidemic at this particular time, and why it should be almost wholly, if not quite, a human one? This I would not undertake to account for, any more than the plagues in Egypt or Jerusalem, or the causes of any other scourges with which the Almighty at times has assuredly visited mankind. I can, however, in reply to it, only just observe, that if the atmosphere was, by any changes in it, rendered less stimulant to the ordinary act of human digestion, it would readily produce such an effect; nor could we, perhaps, by any analysis detect it, though it is possible that we might, if truly, anxiously, and industriously employed upon it. That the atmosphere, for a long time past, has been more thick, turbid, and hazy, than I ever remember it before, I can from frequent observation testify; but whether this appearance did or did not belong to the production of the disease, I do not undertake to determine, though I fully believe so: admitting, however, but for a moment the position, we should then see that the weak, the debilitated, the intemperate, the drunkard,

the imprudent, and the exposed, would be the especial objects of its visitation; as, in fact, they have been amongst its most frequent victims. General Diebitz was a remarkable instance of it, being a wholesale devourer of punch.

No better account has ever yet been given of the immediate cause of many a pestilence, many a fever and plague, and for which we can only present as a cause the inapplicable general term malaria, or the Almighty will, and no further yet have the profoundest researchers into primary causes been able to get.

One of the best related cases I have seen of the cholera, and most minutely detailed, was that of a gentleman at or near Glasgow, I think, who had eaten an unually hearty meal of pickled salmon, being fond of it. The mass was too considerable, either from the quantity itself or the debilitating influences of the malaria, or both, for it to pass through the usual stages of chylification; he was seized with what were called the genuine symptoms of cholera, which no one ever disputed they were, and he died. Now all the circumstances here could be readily explained upon those principles which I have laid down in explaining the gripes of horses; but there, in some of the most violent and rapid cases in their termination, we had a direct and visible cause in a chilling atmosphere, with or without rain, and the animal also sweating from labour at the time of its application, and thus doubling the chill. The magnitude of the intestines of the horse, —the prodigious mass they would contain of vegetable food, least liable of any to digestion—the thin membranes composing them, rendered them quite unequal to the task of carrying on the digestive process under such untoward circumstances; and digestion ceasing, and the disorder once begun, lead to others producing active inflammation in the mucous membrane, brain affections, &c.

Now what have been said most to produce this cholera was the eating of cucumbers and melons, and unripe fruits, and hard meats;—and why? because these are amongst the most difficult of the vegetable tribes of digestion, and, refusing digestion, they become poisonous, and so do they act in producing *tormina*, wreathing and knotting of the abdomen; and from whence the ancients called it *strophos*—from the verb *strepho*, to turn, twist, or writhe about. And may we not also readily account for the extraordinary coldness of the tongue, so often noticed, on these principles—from the chilled and rigid state of the stomach and the total absence of digestive power, the blood then retiring to other parts of the body?

In respect to the cure, which all will be desirous to know, it consists only in well-known remedies; but their operation is rendered more effectual by understanding the nature of the disease and the point to be obtained—viz. *the restoration of the digestive functions at all events*; for before I found this, I rested when the remedy had been given, nor knew what to do if it did not succeed or take effect, the practice being almost purely empirical; but if the train of operations in the stomach and bowels were not restored at one dose, I aided it by a repetition, regardless of the terrors about inflammation, a bugbear which former idle apprehensions had filled me with, by other measures also nearly as potent, and pursued it without delay with a second, a third, or a fourth or fifth, till I saw the healthy actions return, or a recommencement of the digestive process; which being sustained by prudent measures, the case did well. If inflammation had begun, some slight after-treatment might be necessary.

With the horses, I led them to a warm place, shut all the doors and windows, covered them with rugs, threw down straw for them to roll upon, and gave them successive doses of the tincture of pimento—about a quarter of a pint at a dose, waiting half or three-quarters of an hour between every dose. Getting my hands under the rugs, I rubbed the abdomen with flannel; and sometimes, with all this it took seven hours, in very bad cases, to restore the digestive process, but many a one supposed to be dead recovered; for the relief is so great and soothing to them after the excruciating agony they had suffered, that they doze often on losing their pain.

I will now relate a human case, and its treatment. A very respectable middle-aged woman, in service, not far from my house, had eaten a free, but not very copious, dinner of liver and bacon, and, I believe, had taken porter instead of water with it. She dressed and went out in the afternoon, with a friend, to

the Bazaar in St. James's-Street, and loitering about to look at the various articles, and a wind blowing through the avenues of the place at the time, she suddenly became uneasy, and soon in violent pain. She returned home as fast as she could, and complained very much of sickness and a deep, oppressed, painful feeling about the præcordia. She vomited violently, but this did not relieve her pain, which became excruciating. I then ordered her to shut the door of the apartment she was in, and to put the kettle on, with a pint of water—this small quantity only, that it might the sooner be heated; and of this, when nearly boiling, I made her drink, as hot as she could in any way get it down, three parts of a pint; her vomiting continued, however, and her pain. I next, therefore, ordered half a pint of hot ginger-tea, which she also took, but without relief. About an hour had passed over in this way, still in severe pain. I now ordered her to bed, sending with her a good pan of hot coals to warm it well first; and to this I added a glass of hot gin and water, a little sweetened, which she sipped as hot as she could take it. In less than five minutes after she felt a sudden remission of the pain; she slept well after, and the next morning was at her work as usual. She seemed, however, headachy towards the afternoon, and I recommended a dose of Glauber and Epsom salts mixed, which restored her usual health.

A few days ago, a gentleman of my acquaintance, whose son was not unacquainted with my opinions respecting this complaint, was suddenly seized one evening with excruciating pains about the præcordia, and unlike any thing, in point of severity, he had ever experienced before: he compared it to being screwed through with a screw. A fire was made in his room, and brandy and water pretty strong, with laudanum, (which I do not recommend,) was given him by his son; and, at the end of two hours, by these remedies, and with rubbing the abdomen with flannel, he was relieved, and was out the next day on his morning walk, when I saw him and heard his description of what he had gone through; and his son related to me what he had done for him. I consider myself as having been twice attacked with an arrested digestive process, and which, if permitted only a short time to have gone on, would have ended in what is called a true cholera (for names, though simple, are frightful things often in misleading our views.) I immediately closed the apartment, took to drinking hot water (as hot as I could in any way get it down); I sat by the fire and rubbed, with a flannel bag over the hand, the abdomen, and in a quarter of an hour had dispelled the symptoms. This is the simplest form, perhaps, of the complaint, or rather the point of commencement of it, when it can be more easily subdued—especially if there be no great opposition from the mass of food or its quality being very refractory, and the animal powers in tolerable force. The knotted state of the abdomen appears to arise from the recti and other abdominal muscles being contracted in sympathy with the suffering parts beneath. For some remarkable cases, where the restoration in the horse was opposed by a combination of untoward circumstances, I must refer the reader to the treatise above described; and for a great deal of reasoning and observation which would be out of place in this small sketch.

As to anodynes or opiates, it must be obvious, relieving pain by mere soothing and lulling the nerves must be nugatory while the cause of that pain remains uncontrolled: I, therefore, early quitted the use of them, and found, by doing without them, their total uselessness; and as bleeding may exhaust the very powers we want to rouse, that I never resorted to till the next day, if any inflammatory symptoms appeared to remain from the lateness of the remedy or the extensive application of it, when a gentle purgative or a venesection was decisive.

There may be cases, though I believe but rarely, when the cardiac system may be oppressed by an overcharge of blood, as in some plethoric people, where *breathing a vein* would set the springs more at liberty for motion, and be of service; otherwise blood-letting I believe not to be necessary, unless to suppress, as we have stated, any inflammation consequent upon the remedy, as that may have arisen from its late application.

After this manner may be successfully treated, we believe, a very great number of these strophic attacks, if for once we may be allowed to drop the erroneous term cholera, for there is cer-

tainly no χολη or bile to characterize the complaint, or concerned in it; but rather, perhaps, a want or suppression of this secretion; and which want of the daily purgative of life adds to the facility of access and severity, perhaps, of the complaint: and may not the diarrhœa complained of in many cases which precedes the complaint, derive its origin from the want of the stimulation of this natural fluid; the intestines inflaming for the want of its usual operation upon them—thus inducing a capillary flow into them and purging—for the same causes that suppress the digestion act, will also diminish biliary secretion.

Though by no means generally, yet in several instances we have seen of late that the remedies proposed were of the description here pointed out Horseradish tea has been given in Lincolnshire, and a cholera tincture is now sold in the shops; but, in the manner of using them, there does not seem to be a full understanding of the true nature of the disease, which they continue to call cholera; nor do they appear to be aware of the necessity of making their treatment efficient by a combined plan of operations in the attacking it: so that their treatment is almost an empirical one, and would not, in this case, be attended with so extensive a success.

If this small communication is deemed worthy your notice, it is at your service, to apply it to whatever purpose you please.

Regent's Park, Oct. 12th, 1832.

ANALYSES OF SEVENTEEN REPORTS ON CHOLERA.

Transmitted to us by the Central Board of Health.

Dr. Maclure, of Harley-Street (Oct. 15.) This, the recent epidemic, not new to this country; had more severe cases of the same kind in the summer and autumn of 1831; has had no patient in the stage of collapse.

Mr. French, St. James's Cholera Hospital (Sept. 18.) From March 25 to above date, admitted 50; dead 21—recovered 22—remaining 5.

1. Bilious diarrhœa. This form of disease I have treated—

a, With mercurial alteratives and mild aperients.

b, With neutral salts (sulphate of magnesia and nitrate of potass), in doses calculated to excite the action of the kidneys and skin, combined with small doses of the tincture of opium.

c, With astringents.

According to the circumstances of the cases.

2. Diarrhœa, with rice-water evacuations. In this form of complaint I have given—

a, Emetics, when the evacuations shewed no decided tendency to amelioration in quantity and frequency.

b, Cold water, supplied *ad libitum*, to quench the patient's thirst.

3. In the stage of collapse.

a, My object has been to endeavour to replenish the system with fluids, by assiduously quenching the patient's thirst with cold water.

b, I have carefully watched the patient, and employed local stimulants externally in case of sudden syncope.

c, I have encouraged nausea and vomiting, as conducive to re-action.

The cases were for the most part of great severity. All those who recovered took cold water *ad libitum*, to quench the thirst; nor were stimulants of any kind taken internally in these cases, till re-action was fully established. Children generally recovered without any consecutive mischief; robust adults generally require bleeding—in some instances several times, and to considerable extent; this, of course, during re-action.

In all cases where ischuria continued beyond the third day, there appeared some disposition to coma; this state was invariably relieved by bleeding—the blood not always, under these circumstances, exhibiting the buffy coat. In general, however, the blood exhibited decided marks of inflammatory character; even on the day following the attack this was sometimes more or less the case.

Dr. Hingston, of Plymouth (Sept. 13.) In the first stage, has seen "numberless" instances cured by a draught containing magnesia, a few drops of laudanum, and half a drachm of compound spirits of ammonia, repeated two or three times, and followed by a full dose (gr. x. to ℈j.) of calomel. In the second stage has great confidence in

mercurials (calomel gr. ij. with opium gr. $\frac{1}{6}$th, or $\frac{1}{8}$th, and mercurial frictions); sinapisms, small quantities of fluid, avoiding stimulants, which have proved "exceedingly prejudicial." In children has seen starch injections, with opium, of use. In the collapse stage has confidence in nothing; where recoveries have occurred, they seem to depend on the *vis medicatrix naturæ*.

Mr. Foote, of St. Hilier's, Jersey (Oct. 15.) Approves of stimulants, and condemns the free use of cold water; speaks in general terms, but adduces no cases nor numbers.

Mr. Baillie, of Poplar, Middlesex, (Oct. 15). In stage of diarrhœa has used, and with success, calomel, followed by chalk mixture, with catechu. In the second stage always fluids freely, and gives four grains of calomel every half hour, for five or six hours, with saline effervescing powders in cold water. None so treated have had collapse. In the stage of collapse, "my first care has been to procure warmth on the surface of the body, and particularly in the extremities, as soon as possible, by means of blankets, bottles of hot water, or the heated air-bath; and next to apply a large sinapism over the abdomen, and one to each calf of the leg; use frictions to the parts affected with cramp, which is generally relieved by the warmth, and give calomel in large doses, with three or four grains of the extract of henbane, every half hour, for three or four hours. Continue the saline effervescing powders, to alleviate retching, and give cold water as often as the patient desires it. Watch incessantly for the least re-action, which in most cases does take place sooner or later (although frequently of short duration), and bleed. At first, with great trouble, I have succeeded in getting three or four ounces only, but have generally had the satisfaction to find the pulse improve, and, in an hour or two after, I have again used the lancet with somewhat better success, when, if the vomiting has ceased, I give two grains of calomel, with one-fourth of a grain of tartar emetic, every two hours, till the mouth is affected and the secretions restored. In this way the last case I had under my care, which was considered hopeless by myself and the other medical men who had seen it, was treated, and perfectly recovered, after having been almost pulseless and in a state of collapse, without passing any urine for 125 hours, during which period he was bled at least once in every 24 hours, and lost, either by the lancet or by leeches applied to the temples, upwards of forty ounces of blood." Has for sometime abandoned the use of opium and stimulants; recommended bleeding and cold water in the fifth number of Cholera Gazette, March 1st. Has had thirty-seven cases in the second and third stages, of whom twenty-two have recovered. Several of the most severe cases, on recovering from collapse, had melœna and hæmorrhage from the bowels.

Mr. Eldridge, of Southwark Bridge Road, treats the disease, in all its stages, with stimulants, opium, and mercurials, in various proportions; external stimuli. Gives no cases or numbers. Has sometimes thought the free use of opium injurious.

Mr. Trotter, of Stockton-on-Tees (Sept. 18th), says, "I was led to the use of frequently-repeated small doses of irritating purgatives, as the most likely means of restraining the discharges. With this intention I have given a combination (in the form of pill) of croton oil (Short's) with calomel and extract of hyoscyamus—one-eighth of a drop of the former, and a grain and a half of each of the latter; and have invariably found it restrain the evacuations. I repeat the pill every hour, until that effect is produced; generally from six to a dozen pills will be required, when the evacuations (if any) will be of feculent matter, or frequently like chopped spinage. I have not found the vegetable astringents of the least use in restraining diarrhœa when it is of the rice-water-like fluid, and have seen it continue for days under their use, when half a dozen of the above pills put a stop to it. At first I gave the croton oil in quarter of drop doses, every two hours; but so frequently found it produce much pain and uneasiness in the stomach, with frequent vomiting, that I reduced the quantity, and found it answer much better. The incessant vomiting was a very troublesome symptom, until I began the use of the Prussic acid, in doses of one and a half to two minims, every two or three

hours, until it abates; which I have invariably found to be the case after three or four doses. I had tried nitrous acid, and various other medicines, with blisters, &c. &c. without the least effect."

Dr. Gillespie, of Lisson Grove, North, also speaks in favour of croton oil:—"I beg to corroborate what has been stated by Mr. Ward, of Wolverhampton, as to the efficacy of croton oil in the treatment of malignant cholera. Since the 9th of last month, when I used it first, I have given it in a number of cases, and of all, some of them the most malignant, have but lost one, an old man of 68. I have also seen its beneficial effects in the practice of Mr. Cunningham, Hereford-Street, to whom I recommended its use, and have received favourable notices of it from two other medical men to whom I had spoken of it. The dark-green evacuations spoken of by Mr. Ward, are very characteristic of the effect of croton oil, and afford hope of favourable issue. When taken, it produces a glow in the stomach and fauces; it certainly acts powerfully on the mucous surfaces, and perhaps on the nervous system; its action sometimes has appeared as sudden as the disease attacks; it has in a few cases removed the pain from the stomach, and arrested the cramps, within ten minutes."

Mr. Judson, of Ware (Sept. 26.) In first stage, a full dose of calomel, succeeded by a mild purgative, and this followed up, if necessary, with absorbents and laudanum. In second stage, calomel and opium, with effervescing draughts; copious clysters of broth, with opium and salt. In third stage, heat, enemata as above, venous injections, &c. &c.; has nothing to say in their favour.

Drs. Miller and Venables (Wick, Oct. 11), from 7th August to 16th October, at Wick, treated 317 cases, of which died 59. This is independent to bilious diarrhœa, of which there occurred 879 cases. Deducting those very far advanced in life, calculates the rate of mortality at about 1:6. In hospital treated 95; deaths 28. With deductions similar to above, rate about $1:4\frac{7}{20}$. Remedies: Salt emetic, warm pediluvium, calomel, Dover's powder, warm drinks. Crisis was evinced by free diaphoresis and bilious evacuations.

Mr. French, City Road. In bilious diarrhœa—calomel and Dover's powder, chalk mixture and rhubarb, &c. &c. In rice-water evacuations—calomel, followed by a mixture containing magnesia, rhubarb, carb. of ammonia, antimonial wine, and tincture of hyoscyamus. In collapse, calomel gr. j., and opium gr. $\frac{1}{3}$, every half hour, with the preceding mixture. No results stated.

Mr. R. Y. Ackerley, Liverpool (Sept. 20), states his practice to have been "eminently successful," but gives no numerical returns. In bilious diarrhœa—a table spoonful of castor oil, with ten or fifteen drops of laudanum, is succeeded by chalk mixture, with tincture of catechu and opium. If bilious vomiting present—saline effervescing mixture. In rice-water evacuations, with incessant vomiting and cramps—first object to check vomiting, and this best done by the powders of Dr. Stevens, containing oxymuriate of potass; has seldom found it necessary to give more than two of these. The vomiting having ceased, gives two table spoonfuls every quarter of an hour, of a mixture containing tincture of opium, spirit. ammoniæ comp., syrup of ginger and water; to which is added, a little tincture of catechu, if purging be present. Two grains of calomel, with gr. $\frac{1}{2}$ of opium, and a few grains of capsicum, every hour till the mouth be affected. In collapse—same remedies, rubbing the abdomen till the cuticle be raised with equal parts of turpentine and liq. ammoniæ, with a little laudanum; warm bags of sand to various parts.

Mr. W. S. Cumming, Limehouse (Sept. 18), treats bilious diarrhœa successfully with common means; calls nothing cholera where there are not rice-water evacuations; in this, prefers twelve grains of calomel at once, with five of ginger; a blister to epigastrium; warmth to extremities; two table spoonfuls every hour of a mixture containing carbonate of soda, muriate of do., and oxymuriate of potass, with a little laudanum and aromatic confection in peppermint water. In collapse—has nothing particular to recommend; thinks we are still "at our wit's end as respects the treatment."

Mr. Wm. Broackes, Regent Place, City Road, Surgeon to the parish of St.

Luke's. In bilious diarrhœa, the ordinary means, such as calomel and chalk mixture, always successful. In second stage, has generally seen the case run on to collapse; uses blankets immersed in hot salt and water wrapt round the body, and a drachm every ten minutes, or quarter of an hour, of the following mixture:—

℞ Træ. Capsici ℥ss.; Opii ℥j.; Spir. Ammoniæ Tart. ℥iij. M.

"Few patients have died since this treatment has been employed." Has abandoned the saline treatment, after having given it a fair trial.

Dr. Lucas, Exeter (Sept. 18.) In bilious diarrhœa—mist. cretæ, with spirit. ammoniæ c., and træ. opii, with a mild mercurial, if stools were dark and fœtid. In rice-water evacuations—a salt, or mustard and salt, emetic; afterwards a table spoonful of castor oil, with a tea spoonful of tincture of rhubarb. If cramp, &c. &c., mustard cataplasms and external heat, and where pulse permitted, V.S. ad ℥x. vel ℥xx.; if face flushed, leeches to temples; calomel, grs. x. to xx. every hour till mouth became sore; if much pain or spasm, a grain of opium with first dose. If vomiting continued obstinate, found "the greatest benefit" from a starch clyster, with a drachm of laudanum; soda water, with or without a tea spoonful of brandy; two parts lime water to one of milk—by spoonfuls at a time. In collapse—spirit. ammoniæ comp. every ten minutes, in hot water; mustard cataplasms, &c. If re-action was procured, large doses of calomel, *small* bleeding, &c.

Mr. Wade, Surgeon, Milbank Penitentiary, (Oct. 11.)—In bilious diarrhœa, calomel and rhubarb in small quantities every two hours, till six doses have been taken; then followed by pulv. cretæ comp. and aromat. confect. in cinnamon water. Allows beef-tea, &c. and sometimes half a glass of hot brandy and water. In rice-water evacuations, three grains of calomel and half a grain of opium every two hours, till six doses: starch enemata, with kino and laudanum. If stomach irritable, effervescing draughts, with a little brandy. Calomel continued, without opium. 235 cases of "cholera diarrhœa" between March 6th and Oct. 11: all cured as above. In third stage, "stimulants are our sheet-anchor;" but adds, "those who recover from a collapse, do so full as soon in the hands of the judicious nurse, and with less dangerous sequelæ, without the doctor." Of 51 cases of collapse, 33 recovered: all different methods tried in these, and the writer "will not say that they were any thing beholden to medical aid."

The report which follows was accompanied by a request that it might be sent to the Medical Gazette: it was sent, however, (of course by mistake,) to the Lancet, and has, in consequence, reached us so late that we have only space left to give the analysis which follows. We think the gentlemen whose practice is described, will feel satisfied that we have omitted nothing essential.

Dr. Symonds, of Bristol.—Report of disease at Cholera Hospital, under the immediate care of Mr. Golney, and daily visited by Dr. Symonds, Dr. Carruck, and Dr. Kentish. Cases admitted have been of the severest kind: little experience within the hospital of "bilious diarrhœa." Such cases as did occur, easily controlled by opiates and astringents, conjoined in one or two instances with a moderate bleeding.

The above treatment utterly inefficient when evacuations had lost bilious character. The bold exhibition of calomel is the measure on which the chief reliance is to be placed,—other remedies being scarcely more than subsidiary. Patient placed in a warm bed; ℥ss. of calomel exhibited in powder; a mustard cataplasm to the epigastrium, by which the vomiting is mitigated; calomel repeated every two or three hours;—where treatment is begun before collapse, rarely more than three or four doses required. As soon as temperature of surface rises steadily and circulation increases, the medicine is suspended. In a few hours, bile appears in dejections, and afterwards is discharged in profusion: urine returns, but always subsequently to the bile. Accessory means not neglected; extremities assiduously rubbed: if vomiting urgent, effervescing draughts; if extremely obstinate, one or two drops of hydrocyanic acid, in aromatic water, has an "excellent effect." Occasionally, when sufferings are great, 40 or 50 drops of laudanum are given. If much thirst, abundance of cold water, except immediately after the calomel. In collapse, same general treatment

pushed to a greater extent; the 3ss. doses of calomel often given to the amount of five or six, at intervals of two hours; occasionally enemata, containing brandy and spirit of turpentine—but some doubt is entertained of these being very useful. "A great number" have been restored from collapse; some from "the most appalling and hopeless degree of this condition."

Preferred the exhibition of calomel in large doses at intervals, as above, both as avoiding unnecessarily often disturbing the patient, and as producing a soothing effect: first dose has often acted "like a charm." Ptyalism too essential to salutary action; many cases of recovery without any sensible effect on the gums or salivary glands.

Various experimental trials have been made of other means—none have been attended with satisfactory results. Neither salines nor cold water capable of overcoming the blue and collapsed stage of the disease. Emetics scarcely attended with better results. The solution of tartarized antimony does not appear to increase the previously existing nausea. Stimulants generally inefficient or injurious. Artificial heat has much less influence than might have been supposed. Opium avoided, except as a palliative for spasm, from a conviction that it is often highly mischievous. Venesection has led to disappointment. Venous injection not tried—experience being now against it.

Consecutive fever treated on general principles; the difficulty being to push depletion far enough for the reduction of local inflammation, but not too far for the strength of the system. Those which have shewn disease of mucous membrane of the bowels, and insidious bronchitis, most fatal; three were convalescent, up, dressed, conversing "jocularly," when all at once they fell into collapse, and died soon after. One of these shewed sanguineous congestion and extravasation in the brain. Have verified almost all the remarks made by Dr. Laurie, in his paper published in the Medical Gazette*. Quina used in the latter stages of the fever, on the same principles as occasionally adopted in typhus.

The admissions, 256—Deaths, 123; many of these moribund, when admitted.

* Dr. Symonds will perhaps be amused by the perversion of his reference at this place in our *honest* contemporary: our very name is "wormwood" to him.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Medicinische Zeitung. Herausgegeben von dem Verein für Heilkunde in Preussen. Berlin, Sept. 1832.

A SOCIETY of Physicians has been lately formed at Berlin, under the title of "The Prussian Union, for the improvement of the Medical Sciences," the object of which is, to lay before the world an account of what Prussia shall do for the advancement of medicine, and the sciences connected with it.

To accomplish this purpose, and to awaken a common feeling for the scientific improvement of the profession amongst its members, the Union has commenced a *Medical Gazette*, to be carried on weekly by the united efforts of all its members. The subjects which it embraces will be arranged under the following heads:—

1. Notices of the medical treatment adopted in the different clinical schools, and other institutions for the cure of the sick, in the kingdom of Prussia.

2. The scientific results of the practice of all Prussian physicians.

3. Notices on Anatomy, Physiology, Pathology, and Natural History in general.

4. Accounts of prevailing diseases, affecting men or animals.

5. Accounts of new remedies, and modes of treatment.

6. Cases in Medical Jurisprudence.

7. Materials for the medical topography and statistics of the Prussian states.

8. Descriptions of mineral springs and baths.

9. Meteorological registers; and the influence of the state of the weather on the general health.

10. Government regulations, as far as they are of general interest to the profession.

11. Medical obituary, appointments, &c.

12. Bibliographical notices of the most recent medical publications, foreign and domestic.

Without stopping to praise a plan so well calculated to improve the character of the profession, and to promote the advancement of science, we proceed to notice a few of the most interesting

communications in the four first Nos. of the Gazette, now lying before us.

Auscultation during Pregnancy.—In the first No., published Sept. 5, 1832, we have some observations by Kluge, Professor of Clinical Medicine and Midwifery, on the use of auscultation during pregnancy, which lead to the following conclusions:—

1. At the part of the uterus to which the placenta is attached, a rustling noise, isochronous with the pulse of the mother, is heard.

2. At the part of the uterus, which corresponds to the back of the child, a double beating is heard, varying from 120 to 180 strokes in a minute; this is louder in strong children—heard at different points when there are twins, and is wanting when the child is dead.

3. The placental noise is not heard distinctly till the fifth, and the double beating not till the sixth month.

4. Towards the end of the pregnancy the placental sound loses in intensity, that of the double beating increases, but the frequency is diminished from 180 to 120 in a minute

5. Before each pain, the double beating becomes more frequent and irregular, so that its approach can be predicted by this phenomenon.

Action of Acids on the Blood.—The next paper in this No. which we shall notice, is an account by *Hertwig* of the action of acids on the blood of living animals.

The author found, by repeated experiments with sulphuric, nitric, muriatic, carbonic, acetic, and tartaric acids, performed on domestic animals and birds at the Royal Veterinary School, that all these acids, with the exception of the nitric, produce a dark colour of the blood, both in the arteries and veins. The carbonic acid, and also the vegetable acids, produced a greater effect than the mineral ones. When the acids were introduced into the blood immediately, by injection, the whole mass of blood became darker in a few seconds; even in cases where death did not follow.

Prussic acid, in moderate doses, had no effect on the blood; but when given to an extent which produced difficulty of breathing and dizziness, the blood became at once black, and sometimes even of a tarry appearance. The instant that this acid began to act, the mucous membrane of the nose, tongue, gums, and lips, assumed a dark red colour.

Remarks on the Secale Cornutum.—In No. 3. several experiments made by Professor Kluge to determine the real effects of the secale cornutum, and discover the origin of the discordant opinions regarding its powers, gave the following results:—

1. The spurred rye, collected by the hand a few weeks before harvest, was alone possessed of activity; that separated from the winnowed corn being totally inert.

2. The use of the rye in women of a phlegmatic temperament, and in whom the pains had never been violent, or in cases of cramp of the uterus, often rendered the application of the forceps unnecessary.

3. In plethoric and irritable women, where the pains had been at first too violent, and had then ended in exhaustion; though the remedy did not produce contractions of the uterus so as to supersede the use of the forceps, yet it still proved a powerful means of preventing the flooding, which generally follows in such cases.

4. Given to the extent of 30 to 60 grains (10 grains to the dose, every 10 minutes) it never produced uneasiness in either mother or child.

It should never be given till the os uteri is fairly dilated.

Ossification of certain Muscles.—In the same No. we have a curious account, by Hasse, of ossifications, occurring in the substance of the pectoralis major, and tendon of the deltoid muscle of the left side, in the Prussian infantry recruits, amongst whom it is very common, and generally goes by the name of the "*Exercise Bone.*" Of 600 recruits, one half of whom had been one year, and the other half six months in the service, Hasse found 18 with the disease, more or less developed. He does not find the weak and cachectic more disposed to it than those of opposite conditions.

A few days after the commencement of the system of exercise, those pre-disposed to this disease, perceive a small red painful swelling on the part of the left shoulder, against which the musket leans. If this is neglected, a number of hard, moveable, gland-like tumors are formed in the muscle; these soon change into large masses of a solid cartilaginous consistence; and, lastly, in a period of from four to seven weeks, after the first feeling of uneasiness, the whole tumor is changed into a solid mass of

bone, which, according to its extent, impedes more or less the motion of the arm, and often renders the excision of the bony tumor absolutely necessary.

The pieces of bone extracted have been from three to five inches long, and from one to two broad, weighing from ʒiiss. to ʒi. Their surface is irregular, presenting small processes of bony matter. Occasionally the process was not finished; and the various changes of the red muscular fibre, in one part, into a tendinous shining mass, and in others into cartilage, which presented points or masses of bone of a regular cellular structure in different parts of its substance, could be observed.

Properties of the Cainca Root.—We shall close our notice of this Gazette for the present with a paper, by Albers, in the fourth number, on the medicinal virtues of the Cainca Root.

The favourable account given of this substance, as a diuretic, by François, (Journ. Général de Médicine, Mai 1830,) induced the author to try it on a great number of dropsical patients in the Charité, at Berlin.

The rad. caincæ, called by the Brazilians "black root," (*raiz preta,*) is, according to Martius, the product not only of the *Chiococca racemosa*, but also of the *Ch. anguifuga* and *densifolia*. Its taste is bitter and sharp; its smell nauseous. Administered internally, it produces nausea, and even vomiting, purging, and an increased secretion of the urine and menses. François asserts that it diminishes the frequency and violence of the heart's action, in hypertrophy of that organ. Spitta, on the contrary, found that it raised the pulse, and caused congestions. Langendorf and Martius speak principally of its purgative and emetic qualities. François, Kapeler, Bully, &c. though they admit these qualities, lay the greatest stress on its diuretic powers, and maintain, that if it act on the bowels, it is always mildly, and without griping. The doses are ʒij. to the 6 or 8 ounces of infusion or decoction; from 4 to 20 grains of the extract; ʒj. to ʒij. of the tincture; and 20 to 60 grains of the powdered bark.

Of 19 cases of dropsy treated by this root, 5 only had increased secretion of urine, followed in 4 cases by complete cure; but in these the collection of water was confined to the abdomen and legs: there was no organic disease or symptomatic fever. In the other cases, the medicine had no effect on the kidneys or on the dropsy; but, in 12 instances, produced such a diarrhœa as forbade its further employment. Most patients complained of nausea, and a few of vomiting and griping. It was also given in considerable doses to a patient labouring under disease of the heart; but, as it rather increased than allayed the palpitation, its use was given up, after 260 grains had been taken. It was also given to two healthy men, in very large doses, when it caused two or three stools daily, but produced no change in the quantity of urine. From these experiments, Albers joins his countrymen, Langedorf and Martius, in denying its diuretic powers, and placing it amongst the drastic purges, by the side of the Helleborus niger.

The names of Burdach, Kluge, Wolf, Becker, and other men of celebrity, which already appear amongst the contributors, are a sufficient guarantee for the accuracy of the communications, and for the talent with which this work will be conducted.

MEDICAL GAZETTE.

Saturday, October 27, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

MEDICAL REFORM—EDUCATION.

One advantage that would arise from the sound general preliminary education upon which we last week insisted, would be the superseding of the apprenticeship system. The advocates of that system are fond of contemplating it in the light of a discipline similar to what the students of our universities are subjected to, or of the subordination which exists among the several ranks in the army and navy; and they flatter themselves that this analogy which they fancy they have discovered, gives them the best of the argument. To us, however, it seems to be nothing more than a fallacy. With regard to the army and navy, men enter them expressly to

serve; and discipline is practised there, not for discipline's sake, but that those subject to it may serve the better: in other words, the service is not ordered with a view to perfecting those who serve, for another condition of life, when they shall have quitted their present state of discipline: the analogy, in short, so far as we can pursue it, if there really be any, is as obscure as it can well be. Nor is it much otherwise with the other fancied resemblance. There is surely no more analogy between medical apprentices and the students of colleges, than there is between the latter and any other apprentices whatever. The students in our colleges do not happen to be bound by indenture; they can disengage themselves when they will; they pay only voluntary obedience to their superiors; they have no menial services to perform; masters (in the unpleasant sense of the word) they have none; and the object of their discipline is to perfect them in that general system of education which they had begun before they entered. With apprentices it is just the reverse: obedience is "in the bond;" and the indentured individual, if his master be in general practice, is, in too many instances, obliged to spend a large portion of his time in the performance of drudgeries which any uneducated person could perform as well, and which, most assuredly, ought not to be imposed upon him. Is it fitting, for example, that youths who are supposed to be gentlemen should open the door to their masters' visitors, and this even when *the other servants* are in the way? Yet many an apprentice can bear us out in asserting that this is no imaginary case.

It is scarcely possible to form an adequate idea of the nature of apprenticeships from what we see of them immediately about London; but we know that a large proportion of them are passed at a distance from any school where either preparatory or professional knowledge can be acquired. "Such apprenticeships," says an able writer, "cannot but be considered as an arrangement in which the interests of those who are training to the medical profession, are sacrificed to the interests of those who are already engaged in its practice." Now if this be the state of things in which some can discover an analogy with the discipline of an university, we can only say that it must be of an extremely delicate kind; for it totally escapes our apprehension. At the same time, we are ready to do justice to the liberality and paternal interest displayed by many towards the young men entrusted to their care; but then we insist that they do this, not in consequence of the indenture system, but in spite of it.

It is far from being a pleasing office to us, to make so many remarks unfriendly to the system of apprenticeships—especially as they are unfortunately imposed by law upon the Society of Apothecaries—a body which has done so much for the improvement of medical education, and which objected so strongly, in the first instance, to the introduction of the said system into the Act, however boldly some of its members may at present stand up in its defence. Our object is merely to shew, that supposing apprenticeships *could* be abolished, any little advantages which they possess could be amply replaced, while their abuses would be happily got rid of. The grand substitute and remedy, in our opinion, for this, as well as for several other ills attending the present mode, are to be found in the thorough general education to be insisted upon before admission to the schools, and in the superior discipline to be observed within them.

To the preliminary education we have already pretty fully adverted, and, we trust, with all the emphasis that may be requisite for producing a conviction of

its necessity; but with respect to the improved internal discipline, we have still a few remarks to make. And in the first place we know of nothing more strenuously to be recommended than the practice of repeated *examinations* at different stages during the progress of the course. There is no method of teaching by which the attention of students is more effectually insured: those who from idleness shall neglect the opportunities presented to them, are thus made to perceive the necessity of increasing their exertions; and those whose inability to undergo these tests may prove to arise rather from want of capacity than of application, are by this means warned in good time of their deficiency, and may thus avoid the pain and disgrace of rejection. The grinding and cramming systems, in which the pupil is taught to answer a certain set of questions mechanically, like a parrot, would thus also be put down, and the result of the final ordeal be rendered tenfold more satisfactory.

Until the period allowed for the prosecution of medical studies in the schools be better arranged, it would seem idle to propose the introduction of new subjects—additional burdens, as they would be called—for the already *overloaded* student. But there is much wilful deception abroad in this respect. Formerly it was thought a wonderful thing to add chemistry to anatomy and surgery; but it was done, and there was still found time to spare. Other branches of medical science were subsequently added; and we have seen of late what extent and variety of discipline the Society of Apothecaries has been able to include within a two years' course. How long, after this, will the other corporations slumber and sleep? What excuse can they possibly make for letting themselves be so far outstripped—not only in zeal, but in positive action? The introduction of the intricate but important branch of forensic medicine by the Court of Examiners, was a bold but most praiseworthy step. How now will the alumni of the elder corporations feel when they henceforth come in contact with practitioners called in along with them, or over them, as medical jurists—men who have devoted time and money to the pursuit of medico-legal science, and who, from the consciousness of that fact, will be for assuming that superiority to which they shall deem themselves entitled? The consequence is quite palpable. The study of medical jurisprudence must be *generally* cultivated in the schools: where before it was optional, it must henceforth become imperative. And so, no doubt, it will be with all the other branches of science, which to the said Court of Examiners it shall appear good to adopt; and so long as they keep in mind that the means of the middling and poorer classes cannot afford a remuneration which warrants above a certain expenditure in qualifying for the office of their attendant, we shall not be found among the first to cry, "hold, enough." But before any addition be made, let the numerous articles which have been of late crammed into the medical casquet be first arranged and set in order; let the space be economized, and the time required for examining the contents not be unreasonably wasted. The truth is, that much mismanagement has occurred in the mode of disposing the several courses laid down for our medical students: the business of two years is crowded into the occupation of some twelve or fourteen months; and those who are idle almost half their time are the loudest in the cry that they are over-worked. But the Society of Apothecaries is not to be blamed for this; they could not at once revolutionize the whole system of teaching previously adopted in England.

In a valuable paper which Mr. Wat-

son, the Secretary to the Court of Examiners, contributed to this journal (see vol. ix. p. 430), it is proved satisfactorily with how much ease the work allotted by the Court can be performed in many months less than the time allowed, provided a judicious arrangement be observed. The writer shews that, during the first session, the labours of the student may be comprised in the employment of between three and three and a half hours daily—and, during the second session, of somewhat less than three hours—leaving the whole of the summer season in each year to be spent in little better than recreation and amusement! There cannot be a doubt but that much valuable time is thus squandered with a wilful waste: and here assuredly there is a special opening for a beneficial interference.

But not merely with reference to the fulfilment of the Society's regulations, but with a view to the profitable pursuit of medical study generally, is a better arrangement of the time spent in the schools rendered absolutely indispensable. It fully merits the best attention of all our corporations, to consider how the different branches of professional education should be entered upon with most economy and advantage: and in this regard, perhaps nothing would seem to be more desirable than that they should decide whether a *natural* order, in the succession of the courses, might not be profitably adopted. Dr. Thomson, of Edinburgh, has offered some valuable suggestions on this head, which, however, we would adduce as applying more particularly to the education of physicians. He thinks that in order to avoid extending the course of medical study to a period of six or seven years—yet without abridging the number of topics necessary to be embraced—" it would require the adoption, in this country, of the practice pursued in many of the continental universities, of having two sessions of five months' duration in the course of the year. The two intervening months would afford ample time to the students for relaxation: and, if necessary for the accommodation of the professors, the order of the classes might probably be arranged in such a way that no professor would be obliged, unless he were so inclined, to lecture during more than one session in the year."

There can be no reasonable objection made—that we can see—to the adopting of such a course; at least, it is well worth considering: and for this purpose we lay before the reader the details of Dr. Thomson's plan.

" During the *first* session, the student might be instructed in the elements of Chemistry and in descriptive Anatomy; during the *second*, in the Physiology of Human Economy, and in the Natural History of the three kingdoms—Zoology, Botany, and Mineralogy; during the *third*, in General Pathology, in Practical Anatomy and Chemistry; during the *fourth*, in Therapeutics or Materia Medica, and in Surgery, with a second course of descriptive Anatomy; during the *fifth*, in the Practice of Physic and in Clinical Surgery; during the *sixth*, in Midwifery and Clinical Medicine; and during the *seventh*, and *last*, in Medical Jurisprudence, with a repetition of the Practice of Physic and Clinical Medicine." " This arrangement," adds Dr. Thomson, " would leave *ample room* for attendance, at the proper periods, on courses of lectures on Logic, Natural Philosophy, and Moral Philosophy, where these lectures had not been previously followed, as well as for a repetition of attendance on any of the medical classes, according as inclination or occasion for it might suggest*."

We can very well conceive that the perusal of the preceding extract is calculated to astound some of our medico-political economists: but we would en-

* Life of Cullen, vol. i. p. 666.

treat them to familiarize themselves betimes to the subject; for if physicians and surgeons would retain by right the ground which is assigned to them by courtesy, to some such measures must they come at last. The business of medical reform, in matters especially relating to education, being once begun, there is no knowing to what useful and excellent lengths it may be pursued. That there is "ample room and verge enough" for the work of improvement, none but the most sceptical can doubt: that it is full time for those in authority to bestir themselves, all the world is aware, and expecting what they shall do: that, when once at the work, those functionaries will not exert themselves with sincerity and zeal, none but the factious will venture to assert: but that they will act to the full extent that their powers of efficiency afford, and, as it appears to us, their duty requires, remains to be proved. We await the event in anxious expectation; but not without the hope, that, when they once commence the improvement of the present system, they will "reform it altogether."

SCIENTIFIC BISCUITS.

THERE is no end to the applications of science made by our Gallic neighbours. We mentioned last week that one of them, by his own showing at least, had discovered how to manufacture the finest wines from potatoes; and to-day we find that the members of the Academy of Sciences have devoted their labours and their knowledge to a subject of no less importance than that of making pastry.. It appears that a certain M. Gondolo, henceforward the most celebrated of pastry-cooks, has invented a new kind of biscuit, which has excited a very lively sensation in the French capital, especially among connoisseurs in the gastronomic art: they are called by the euphonious appellation of Griccini biscuits, and are of extreme lightness—lighter than an *omelet soufflé*,—in fact, as light as the heads of those who have recorded their excellence in the archives of the Royal Institute of France! Will it be credited that this momentous subject was disposed of, after only two reports, by a committee of the members, and but three discussions devoted to receiving the collective wisdom of the whole Academy! This gigantic labour of "the first scientific body in the world," however, was not without a correspondent progeny. It was moved by no less a person than M. Desgenettes, and at the end of the third deliberation agreed, "That the Academy declare the biscuits of Griccini to be very good biscuits, and fit to compete with any others of the same sort." If the Academy ever attach a motto to the reports of their proceedings, we would respectfully remind them, with reference to the present occasion, of the significant line—"*parturient montes*," &c. The saying is rather musty, but so, we suspect, must the biscuits have been—at the end of three weeks.

SINGULAR FORM OF CONVULSION.

AMONG the manuscripts of M. Dance was found one containing the following curious case:—A young man, aged 22, of respectable connexions and regular habits, came to Paris in 1825, to consult the faculty about his health. He had the appearance of being quite well, but was subject every day to a convulsive paroxysm, which consisted in the right hand striking the thigh of the same side, and then crossing the chest to the left shoulder; at the same moment the left hand played the counterpart of its fellow. This double set of movements was performed with such amazing rapidity, that at first they could scarcely be followed by the eye; gradually, however, they relaxed a little, and at length ceased for a moment, when the patient would sigh deeply, and begin again. Three such paroxysms generally took place in each attack, and lasted about five minutes each. Sometimes he was seized in the street, and then those passing supposed he was desirous of attracting notice. There seemed, however, no reason to doubt that the movements were altogether involuntary—probably analogous to those of St. Vitus's dance.

HOTEL DIEU, PARIS.

CLINICAL REMARKS ON THE QUESTION—CAN THE CHILD PASS THROUGH A CENTRAL LACERATION OF THE PERINEUM?

By M. Dupuytren.

Not long ago rather a stormy discussion took place at the Academy of Medicine on the results of a central laceration of the perineum. M. Moreau gave numerous cases of the accident, and a history of its consequences; while M. Capuron, the celebrated accoucheur, took occasion to deny *in toto* the possibility of the occurrence. It was probably this circumstance which induced M. Dupuytren to choose this for the subject of a clinical lecture-extraordinary which he delivered on the 16th instant. He began by reading the following case of

Natural Presentation—Laceration of the centre of the Perineum—Passage of the Child and Placenta through the aperture.

Madame Bourgillon, a cook, aged 38, of middle stature and symmetrical formation, but rather dry fibre, married about a year, and pregnant for the first time, was taken in labour on the morning of Sept. 8, 1832. At first the pains were slight, but became more intense towards mid-day, the head of the infant presenting in the "first position." The labour proceeded briskly, and was not retarded until the occiput arrived at the external fissure, which was extremely narrow. There then took place several sharp pains, during which, according to the account of the midwife, the vulva was dilated to the extent of about an ordinary drinking-glass, (*verre à boire*) when the forcing effort ceased, and the head receded. The midwife now lubricated the parts with oil, keeping her hand on the perineum, in order to support it. At a quarter to 4 o'clock, there came on, quickly after each other, two very violent pains: she felt the perineum tearing under her fingers, and the head, followed by the body of the infant, was straightway expelled through the laceration. The cord was tied and cut, and the child handed over to an attendant: the cord was now hanging from the artificial aperture, and the placenta speedily passed by the same route. No hæmorrhage took place. The infant was of the medium size, and is thriving well.

In her first alarm the midwife sent for M. Baudelocque, but seeing that Madame B. was not suffering, and that there was little remains of the rent to be perceived, she merely told him that the labour was over, without alluding to the accident, and resolved to let the first nine days pass over before she informed her patient.

Every thing went on well for two days; but a clyster which was then administered having immediately returned, without the patient having any power of retaining it, led to the apprehension of the sphincter ani being ruptured: it was even supposed that a portion of the clyster had returned by the wound. It was now necessary to acknowledge what had happened: however, some further time was allowed to pass without surgical aid. Castor oil was given, to keep the bowels open freely, and get rid of the milk. The babe was sent to a wet nurse, and the mother had little fever, or other symptom, except copious perspiration.

On the tenth day M. Guersent, jun. was consulted. He first tried very dilute lotions of chlorine, then touched the parts with caustic, and finally brought the edges of the wound together with sutures, the ligatures being supported by two buttons of gum-elastic. At the end of four days union seemed to have taken place, except at one small fistulous point next the rectum. The sutures were removed, and the adhesions seem to have continued two days, but were then destroyed, during some effort made by the patient. On the 6th of October she came to the Hôtel Dieu. The most scrupulous examination was then instituted into the causes and consequences of the occurrence. The patient, as already stated, was found to be well formed; the upper brim of the pelvis had the ordinary dimensions: the sciatic tuberosities had the usual distance; and the other parts presented nothing which appeared calculated to produce such an accident. As to the soft parts, the vulva remained entire, without any laceration at the fourchette, and was still narrow—the patient stating that the approach of her husband still produced pain. It is proper to remark, however, that the uvula is turned forward, being situated very close to the arch of the pubes, so that there is about an inch and a half between the posterior commissure and the anus. At this time four weeks had elapsed since the accident, and the tumefaction had subsided, leaving the parts in their natural state. The wound began four lines from the vaginal commissure, running backwards on the raphe to the extent of nine lines, and then falling at right angles into a transverse rent of six or seven lines, giving to the whole somewhat the form of the letter T. The measurements were taken when the parts were left undisturbed, but if the wound be stretched the dimensions become much greater: M. Dupuytren introduced three fingers without the slightest difficulty. The opening was continued perpendicularly upwards and between the rectum and vagina. No injudicious expedients

had been had recourse to during the labour, and M. Dupuytren had always considered the midwife a skilful one: she had practised four-and-twenty years. The patient had been placed nearly in a sitting posture during labour.

After this minute description of the circumstances, observed M. Dupuytren, there are two objections to be considered. The first relates to the doubt expressed by M. Capuron of the possibility of such an event. This gentleman says, that before yielding his belief he would require to know the size of the child's head: but if it be admitted that a small head might pass, the question is answered, for who will say that in parts so distensible a larger head may not pass when a smaller one has gone before?

The second argument consists in explaining the facts brought in proof of the event, by giving to them a different signification. Thus Mad. Lachapelle, before M. Capuron, had held that in every case of central rupture of the perineum the infant does nevertheless pass by the vulva, and she was wont to cite numerous instances in support of this doctrine. But this only shews, what every one must admit, that the perineum may be torn, though the child is born in the natural manner. That this may often happen, is granted; that it happens always, is inadmissible. Here is a case in point, with every circumstance to render it conclusive; and yet when M. Coutouly—a name honoured in science, related a case of this description, it was said he had lost his senses—he had been agitated—he had not seen. But if such a man did become agitated, assuredly it must have been after, not before the accident which affected him. But is it really so marvellous? To my mind the wonder is, not that it should occur sometimes, but that it should happen so seldom. Whoever has witnessed first labours, in which the vulva has so much difficulty in dilating, and the perineum so much disposition to become stretched, must have felt some apprehension lest the head should burst through it. It may be asked how—the supposed passage having been formed—the laceration does not extend into the vagina and rectum. But the *how* matters little; the fact speaks for itself. We might as well inquire how in this case, for example, the head passing by this so narrow vagina, respected the thin commissure which separates it from the wound? I am convinced that this passing of the head by the perineum is not so rare as experience would seem to shew, merely because the commissura vaginalis being ruptured, the accident receives the name of laceration of the fourchette. This leads us to inquire into the circumstances which favour an occurrence which is acknowledged to be uncommon; and the first point we remark is, that it takes place exclusively, or nearly so, in first labours. This patient, as has been seen, had the vulva turned forward. This arrangement is very remarkable, and too little known, in persons otherwise well formed, and who have not borne children. The vulva is sometimes situated forwards, and very near the pubes; sometimes very near the rectum, and looking downwards. It may easily be imagined how much, in the former case, the difficulty of labour will be increased, the vulva being only capable of extending itself backwards, and the head of the child having a longer traject to make; besides which, it is constantly pressing upon a perineum which extends more and more before it. At the very first examination this distention of the parts struck me in our patient; and accordingly the wound was found to be in the centre of the perineum, in the situation and with the direction which the natural passage has in other women. The position given to the patient appears also to have had great influence; she was so much supported by pillows as to be nearly sitting. This is in accordance with other analogous facts; in one such, for example, it is stated that the child was expelled through the perineum while the mother was sitting on the close-stool. Now it is clear that in such a posture the combined efforts of the uterus and abdominal muscles bear down with the greatest energy upon the perineum, and consequently that the patient ought to be placed horizontally.

Is blame to be attributed to the accoucheur for neglecting to afford due support to the perineum in such cases? In fact, the effort by which the child is expelled appears too energetic to be controlled without danger by external pressure. M. Contouly supported the perineum very powerfully in such a case, but without success. M. Evrat makes the same statement; as does Mad. Lachapelle.

On the second day, as above stated, a lavement could not be retained. As, however, it is ascertained that there is no communication between the rectum and vagina, this was probably owing to paralysis of the sphincter, which frequently lasts several days after delivery. Why did not M. Guersent succeed in curing the wound, as union had begun? Assuredly because he removed the ligatures too soon. In recent wounds reunion may be accomplished in four or five days, but in those which have gone on to suppuration—unless the granulating process be established, and favourably, a much longer time is required. Still more does the remark apply to a wound of this nature, where the adhesion is further retarded by lochial discharge. I have many times (said M. Dupuytren)

had occasion to unite by suture suppurating wounds, and I have found that the process required twice as long as in recent wounds, and more than this under circumstances like the present. I was called by M. Gardien to a young girl put to bed clandestinely: the labour had terminated in a complete rupture of the perineum, which reached as far as the anus. Many days had already elapsed, and I introduced sutures at separate points; but now I should prefer the uninterrupted form. At the end of a month the girl was obliged to return to her father's, and the union was not then complete, obstinate suppuration having been the only obstacle—for I had not cut the threads, and they had not worn through the flesh. I recommended that the sutures should be left, thinking union would yet take place: this was done, and I heard nothing more of the case at that time.

Three or four years after, I saw a man and woman enter my consulting-room, the latter keeping behind, and making me a sign, to be prudent. The man—he was her husband—informed me that he had not been able to consummate the marriage, and he wanted to know whether the fault lay with him or his wife. I examined her, and found the opening of the vagina very narrow, and turned forwards: the perineum displayed a long and firm cicatrix. I advised the husband to renew his efforts, which were at length crowned with success: the woman became pregnant, and was delivered without any fresh laceration —rather a remarkable circumstance. This was the patient on whom I had operated several years before, and she informed me that the medical man who afterwards saw her left the ligatures undisturbed, till perfect union had occurred.

In most cases union will occur spontaneously, under the assistance of rest and cleanliness: in the present instance, however, that cannot be expected, for the edges are partly cicatrized. Now here lies the doubt: ought reunion to be attempted, or the septum between the wound and the vulva be divided? By this last proceeding a large orifice would be formed for the vagina, which would be attended with no inconvenience, while it would greatly simplify the matter. To effect reunion fresh edges must be made, the uninterrupted suture applied, and suffered to remain as long as it produces no mischief. By this means would be produced a very narrow aperture to the vagina, and that turned forward, so that on a second accouchement the same difficulties would occur as before, increased by the less extensibility of the perineum. The subject must be duly weighed before we come to a decision.

WEEKLY ACCOUNT OF BURIALS,

From the BILLS OF MORTALITY, *Oct.* 23, 1832.

Abscess	1	Heart, Diseases of	1
Age and Debility	35	Hooping-Cough	9
Apoplexy	4	Inflammation	12
Asthma	8	Inflammation of the Bowels & Stomach	7
Childbirth	2	Brain	5
Cholera	13	Lungs and Pleura	4
Consumption	58	Insanity	1
Constipation of the Bowels	1	Liver, Diseases of the	3
Convulsions	26	Measles	6
Croup	3	Mortification	2
Dentition or Teething	8	Paralysis	3
Diarrhœa	2	Rheumatism	1
Dropsy	7	Scrofula	1
Dropsy on the Brain	21	Small-Pox	11
Dropsy of the Chest	1	Spasms	4
Fever	6	Thrush	1
Fever, Scarlet	7	Tumour	1
Fever, Typhus	1	Unknown causes	2
Gout	1		
Hæmorrhage	1	Stillborn	12

Decrease of Burials, as compared with the preceding Week . . . 271

METEOROLOGICAL JOURNAL.

October 1832.	THERMOMETER.	BAROMETER.
Thursday . 11	from 49 to 68	30 16 to 30 22
Friday. . . 12	52 62	29·98 29 68
Saturday . 13	39 61	29·89 30 07
Sunday . . 14	41 61	30·20 30 23
Monday . . 15	40 63	30·19 30·11
Tuesday . 16	43 61	30·11 30·17
Wednesday 17	31 57	30·22 30·24

Wind S.W. and N.W. the former prevailing.

Except the 12th and 17th, generally clear; rain in the afternoon of the 12th.

Rain fallen, ·025 of an inch.

Thursday . 18	from 41 to 59	30·22 to 30·15
Friday. . . 19	43 57	30·14 30·20
Saturday . 20	28 58	30·21 30·25
Sunday . . 21	31 57	30·26 30·24
Monday . . 22	34 57	30.19 Stat.
Tuesday . 23	35 56	30·22 30·27
Wednesday 24	40 53	30·26 Stat.

Prevailing wind N.E.

Except the 20th and 22d, generally cloudy; rain in the evening of the 18th and morning of the 19th.

Rain fallen, ·025 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

Communications have been received from the following gentlemen, to whom we have to apologize for postponing their papers till next week, in consequence of some of the articles in the present No. having proved longer than was anticipated; but having been advertised as forthcoming they necessarily received the preference:—Dr. George Burrows, Dr. Osborne (Dublin), Mr. Estlin, Mr. Beddome, Mr. Dade, Mr. Braithwaite, G. H. (Margate,) "W." "Cantus." The circumstance alluded to has also rendered the omission of the analysis of Mr. Lindley's Botany unavoidable, though mentioned in the advertisement.

MR. BARBER.—The "Inspector" addressed a note to us stating that students were not required to take out a license for dissecting at a licensed school.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 3, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

EXANTHEMATA.

Scarlatina.

I MENTIONED, gentlemen, that there were three varieties in scarlatina: one in which the general symptoms are mild, and the throat scarcely at all affected, called *S. simplex;* one in which the throat becomes much affected, not being altogether inflammatory, though perhaps violent, and called *S. anginosa;* and one in which the surface, and the whole of the system, are violently affected, the disease having a typhoid character, and the state of the throat being of a gangrenous description, and called *S. maligna.*

S. maligna.—We sometimes see this latter form of the disease occurring generally throughout a neighbourhood, at least generally during an epidemic; sometimes we see one person affected with it in a neighbourhood, while other persons, or children, are affected with other forms of the disease. Sometimes, even in the same house, you will see all these various forms of the disease. It appears, therefore, that the causes of the disease putting on this malignant character, are sometimes something general in the state of the season or place, and sometimes something altogether dependent upon the condition of the individual: it does not appear to be any thing peculiar in the contagion. We shall find, in the case of small-pox, that matter taken from a person labouring under a mild variety, will sometimes give a malignant, confluent, violent form of the disease, in another. So in scarlet fever, the mild form of the disease is sometimes caught from a person labouring under a malignant form, and *vice versâ;* and although one while we see numerous cases of malignant scarlatina during one particular epidemic, and especially in a particular neighbourhood, yet at other times we shall see the malignant form occur sporadically. It may occur only in one individual or two in a neighbourhood, while the rest have the mild, or merely the inflammatory form; and we even sometimes see this peculiarity cease in one place, and another become filled with the inflammatory or mild form. I believe that the malignant form is more common in winter than at any other period. The circumstances that give rise to it are not well known.

There is, however, another form of the disease, in which the throat is affected, and not the surface. Some, indeed, have denied this, just as some have denied that measles is occasionally seen without catarrh. As, however, this disease affects both the surface and the throat, and as some have asserted that it frequently affects the surface while there is little or no affection of the throat, so there is no reason whatever why the throat sometimes should not be affected, while the surface is scarcely or not at all affected—while there is nothing upon the surface worthy of the name of an eruption. Dr. Willan mentions, that in epidemic scarlatina, there are always many cases where the throat only is affected, and that these cases will communicate all forms of the disease just as if the skin were affected. This, I think, is not at all surprising. In that form in which the throat particularly suffers, if we were to look over the skin from head to foot two or three successive days, we might discover in those cases an eruption; however, it would be so little, that we should be almost justified in saying there was none; and I

have seen several in a family affected with the sore throat only, and that mildly.

Those who formerly had scarlet fever, and even those that are recovering from it —those who are convaleseent, only just getting strong—if they be exposed to the contagion again, will sometimes have a little soreness of the throat, and even patches, induced by the contagion.

Treatment.—The treatment of this disease is for the most part very simple. If you take eare to do the patient no harm, he in general will do very well. In this disease cleanliness and fresh air should be particularly attended to. If the season will allow it, the windows and doors should be opened, and the slightest covering placed upon the patient. Cold drinks, and water, or something nearly as simple as water, are the most eligible. No food beyond this, except it be milk and water, should be allowed. The bowels of course should be kept open. It is said that you alleviate the disease if an emetic be given early in it; some are of a different opinion, but many contend that at the beginning of the disease it is very good. The disease certainly has been cut short by taking a patient out of bed and pouring cold water upon him. The heat of the body is so great in this disease that no danger is to be apprehended from cold affusion. It is true, there are cases in which the patient is more or less chilly; but if, in this affection, the general rules be followed which I laid down in the case of common fever—that is to say, if you observe the temperature is steadily above 98 degrees, if there be no profuse general sweats, and no sense of chilliness, however hot the patient may be, and if there be no decided inflammation of the chest or abdomen—there is no danger whatever, but the greatest advantage, in taking him out of bed and pouring cold water upon him. I presume this would be done oftener than it is, were it not for it appearing a violent measure, to take a person, with fever, out of bed, put him into a washing-tub, and souce him well with cold water. But at any rate no friends will object to your washing a patient with cold water, and it is a great comfort to the individual, and as long as it is comfortable it should be had recourse to. Sponging the hands, arms, face, and trunk, with cold water, is grateful to the patient, and is an excellent practice in the disease.

If the inflammatory symptoms run high, of course it will be necessary to bleed in the arm; but in general it is only requisite to give the patient fresh air, to give him little better than water to drink, nothing to eat, keep him clean, let him have but few clothes upon him, and keep his bowels open.

But if the symptoms should be violent, that is to say, if the head be affected, (you will recollect I mentioned, that occasionally in this disease very violent phrenitis will come on,) if any local inflammation come on in the head, chest, or abdomen, it may be necessary to take blood from the arm. You are not to neglect local inflammation, because the affection under which the patient labours is scarlet fever. For the most part this inflammation may be subdued by local bleeding, and it is best to remove it by local bleeding, if you can, because you produce less debility than if you take it from the arm with a sudden shock. The case, however, it is to be remembered, may be so severe as to render general bleeding imperative.

The chief parts that suffer in the disease are the throat and head: the throat, of course, because it is one of the seats of the disease, and the application of leeches around it is exceedingly useful; far better than a blister, as I shall mention when I come to speak of common sore throat. In that affection blisters are frequently very severe, but leeches afford immediate relief, and plenty of leeches about the throat or about the head are often valuable in scarlet fever. You may see the tongue particularly foul in this disease, and that might make you imagine that there was a great disturbance of the digestive organs, and therefore that emetics, calomel, and things of that description, were particularly necessary. But this, I think, is a wrong inference, because the tongue is one of the seats of the disease. It is not foul because there is intense feverishness of the system, but foul because it is in a state of inflammation. It is, as I have said, one of the parts which the disease affects; you see the papillæ exceedingly red, the tip is red, and the secretion on the back of the tongue is diseased in quantity and quality, and you may have, in fact, besides the redness of the papillæ, just such a tongue, with respect to the dorsum, that you have when a person is fully under the influence of mercury—a tongue covered with a yellow white thick mucus. The tongue itself is swollen.

You will find the state of the mouth much alleviated by allowing the patient cold drinks, or, if it be agreeable, he may have them iced: for the heat of the throat and mouth is very great.

However, you will see sloughs continually formed upon the throat. I believe I mentioned that it is not every thing which looks like a slough that is one, because the disease produces the effusion of shreds of lymph, and they lie there as though it were a little ulcer; but occasionally you have ash and dark coloured specks, which you find cannot be easily removed, and

which are neither more nor less than so many sloughs; and in the malignant form you have very considerable sloughs. These, whether they be mere shreds of lymph, or sloughs, are always best treated by gargles of the chloride of soda or lime. The more intense the gangrenous tendency, the stronger must be the gargle. In ordinary cases of scarlatina, a gargle, composed of two ounces of the common solution to half a pint of water, is found enough. This will produce a pricking sensation, and is even sometimes too strong; but, in other cases, where the sloughs are very considerable, you may employ it much stronger than this. In the merest specks of the throat, you find this one of the best applications that can be employed. However, you frequently find a difficulty in the application of gargles, and it is better to use a syringe, and squirt the gargle at the throat, and if any of it be swallowed it is a good internal medicine, and will do no harm. I know no gargle to be compared with a diluted solution of chloride of soda or lime, both in cases of scarlet fever and in cases of thrush.

If the disease shew a very considerable gangrenous tendency in the throat, if the pulse be very soft and feeble, you have only to treat it, generally, as you would treat any case of typhus fever. Among the internal stimulating medicines, which it is found necessary to give at the last, carbonate of ammonia is one of the best, with the exception, perhaps, of wine, which generally answers better than any thing else. Patients will sometimes take a great quantity of wine in this disease. Dr. Withering, who wrote on this disease, says, that in an epidemic which prevailed among a number of children, about twelve years before he wrote, each must have taken a bottle of the best port wine in 24 hours, for several successive days; wine is borne, on these occasions, which would intoxicate and destroy at other periods: but the treatment would be the same as for typhus fever, where there was great debility, or a tendency to putrescency or mortification, independently of violent inflammation.

Some persons think that ammonia has a peculiar power on the disease, and they say they have given it in every case of every description, whether inflammatory or not, and that they never lost a case in their lives. I presume that the cases which these gentlemen treated were very few of a malignant character; and if they had given all the children a piece of sugar once in the twenty-four hours, still the greater number would have done almost as well. This is a disease for the most part which terminates favourably, if the practitioner does no harm, and a little ammonia can do no harm; but, by rational treatment, you make it run its course mildly, and prevent the patient a great deal of suffering.

If the eruption recede, then the best treatment is, to put the patient into a hot bath several times a day; rub the body with stimulants; and give stimuli internally. But here it is necessary, as in other similar cases, to observe whether an internal inflammation has come on: it may be that which prevents the patches from coming out, and in such a case you must be careful not to give internal stimuli. You would then apply leeches, to remove the internal congestion and inflammation. You may stimulate the surface at the same time; but the great point is to alleviate the internal affection, which prevents the external.

Prophylactica.—As this is a disease which children do not necessarily take as they do measles and small-pox, it is but fair to endeavour to prevent them from catching it; and, besides free ventilation and cleanliness in the house, the use of the chlorides may be proper, with a view of destroying the contagion. I do not know whether they do destroy contagion, because I have recourse to fresh air, plenty of water, and cleanliness; and as I feel it my duty to use the chlorides at the same time, it is impossible to say what is done by the one and what by the other, and I have no means, therefore, of drawing a conclusion. But it would be well to throw the dirty linen taken off a patient into water in which the chlorides have been introduced—to put the chlorides into various utensils which are used, and to sprinkle them about the room. In this way you may possibly prevent other persons in the house from catching the disease.

There is, however, a medicine recommended by a German physician for the purpose of preventing the disease, which, to me, appears of a very fanciful character. Dr. Hahnemann, of Leipsic, says that belladonna will prevent the disease. He says, that if you take two grains of the extract of belladonna, and dissolve them in one ounce of cinnamon water, or pure water, which is the same thing, and give two minims of this solution to a child a year old, or another minim or more according to the age of the child, you may prevent the disease. I never thought it worth while to try it, because I hardly think the observations which are published conclusive. I know that foreign physicians have since published accounts of the disease being so prevented, but it ought to be from hundreds of observations that any one says the disease has been prevented, because it is an affection that will not attack every one in a house; and every now and then, when the disease has been spreading for some weeks, all at once it

will disappear, and no other persons have it. Inferences, therefore, ought not to be drawn without very, very numerous facts—numerous coincidences, well ascertained.

In regard to the anasarca which follows this disease, I have no doubt that it frequently arises from cold, because it begins in the face, or the face is particularly affected as soon as any other part. It may be attributable to exposure to cold when the disease is over, or declining, because it is an affection that does not take place during the disease, but subsequently to it. Rayer condemns the application of cold in the disease, because it is likely to produce anasarca. Now I have used cold ablution, not affusion, generally in this disease, and I never had a case of anasarca in my own practice which occurred when I myself had treated the disease. I do not believe that, if low temperature be properly applied—that is to say, when the heat of the body is too great—that there is any danger of the patient catching cold; but if it be used when the patient is not hotter than he should be, or after the disease has declined, then I have no doubt that it would lead to anasarca. However, this anasarca appears to be inflammatory; and for this reason it resembles the anasarca which is the effect of exposure to cold, especially cold and wet united. It begins in the face, or it particularly affects the face, or it is seen in the face as soon as any where; and, in the next place, the urine is often albuminous, and it will not merely contain albumen, however, but sometimes blood. In most cases of anasarca which I have seen, (perhaps I have seen them only because they were intense,) there has been more or less internal inflammation, in some degree or other, usually in the head, chest, or abdomen, just as in acute anasarca from cold, but in almost every case in the chest; sometimes peripneumonia or pleuritis.

The treatment of the anasarca is best conducted by antiphlogistic means; purging the patient well, which is an antiphlogistic method; and some say by giving digitalis; but I know that it recedes best by purging, and by attending to any internal inflammation that may exist. It would be in vain to purge in severe inflammation of the chest, unless you made use of leeches at the same time; and the same remark applies to the head. It is important in all these cases of anasarca supervening on scarlatina, to examine whether there be inflammation, for if you neglect that, the anacarca will generally be tiresome; but if you treat that, it will go away. Occasionally the anasarca goes away of itself, but you may always expedite it by purging, or by applying antiphlogistic measures pretty briskly directed towards some internal part.

I do not know whether it is mentioned by any author, but, besides phrenitis or arachnitis, rheumatism is not an uncommon sequela of scarlatina.

Erysipelas.

The next disease of which I will speak, is one that I hardly know where to place—I mean erysipelas. Rayer places it with the rashes, because there is a continuous redness of the skin; but Willan places it among those which have a large collection of water, bullæ. The truth is, this disease may exist without the formation of any secretion—without any collection of water, or even vesicles of water; yet I think that, in a great number of cases, it does produce an elevation of the cuticle, of smaller or larger size, containing water. Upon the whole, it may be right to place it with the rashes, as the redness is diffused, and it always exists, whereas vesicles or bullæ do not, but it is a matter of no very great importance.

Erysipelas is a very intense affection, of the same description that roseola and erythema are in a mild form. What roseola and erythema are mildly, this is severely. If you have a case of diffused redness of the skin, with heat and more or less smarting, and without disturbance of the constitution at all,—without any swelling of any consequence—you may call it erythema; or if there be no more, and the rash is rose-coloured, you may call it roseola; but if the part be much swollen—if the inflammation be very intense—if there be burning pain, and the heat be very great, or the constitution be disturbed—then you call it erysipelas.

Diagnosis of Erysipelas.—It differs from erythema in this (the inflammation of erythema may be chronic, as in E. nodosum or E. tuberculatum)—erysipelas is always an acute febrile disease, attended with heat and swelling, and pain (which erythema and roseola may not), by redness of some part or parts of the skin in patches, and it is often united with vesication. The swelling is irregularly circumscribed, and is generally soft. Generally the redness disappears on pressure, and instantly returns when the pressure is removed, as in erythema and roseola.

Symptoms.—Very often, before this inflammation comes out, there is a previous excitement of the constitution, as is the case in measles and scarlet fever. Before tenderness of the skin is felt the patient may be feverish, or he may have headache, nausea, vomiting, drowsiness, vertigo, tenderness of the epigastrium, or he may have rigors. After these symptoms have existed for some time, more or fewer of them, and in greater or less intensity, about the second or third day some part of the skin will feel

sore, and on being looked at it will be found a little swelled, a little red and hot; and then all this increases. The skin becomes more swelled, very red and very hot, and the patient experiences pricking or smarting pains, and the general feverishness, the pyrexia, the excitement, is increased. Occasionally the local symptoms appear first, the feverishness taking place exactly in the same degree that they do; but sometimes you have the feverishness first, and then the redness appears.

Very frequently, after a little time, minute vesicles are seen here and there, in the inflamed part. Frequently you have no vesicles at all; and when you have vesicles they frequently occur only in some particular parts of the red patches. Sometimes they are not very large—they are really vesicles—but sometimes they are as large as walnuts, and are called *bullæ* in Latin, and *blebs* in English. These contain at first a clear fluid; but sometimes, after a day or so, it becomes turbid, and is more or less yellow. These burst, and the fluid oozes, so that a yellow crust forms—a crust which is made of this dried secretion and the exfoliated cuticle. If the disease decline without forming any of these vesicles, or bullæ, then the cuticle is sure to come off, and you have a scurf; but if there be vesicles, or bullæ, then you have crusts. Sometimes the surface under the elevated cuticle, after the bursting of the bladder, secretes pus, more or less suppuration will take place, and sometimes the secretion, be it pus or mere lymph, is very acrimonious, so that it produces great irritation of those parts on which it goes.

Metastasis—Varieties.—This is a disease which has a great tendency to spread; it will sometimes spread over half the body. I have seen it spread from the occiput down to the toes. As it spreads, sometimes the part first affected recovers; at other times it does not, so that you have one immense sheet of red colour. It is very curious sometimes to see, as it spreads along, how the parts first affected become well. Now and then it will suddenly cease, and some internal part suffer. This change of situation is called *metastasis*; and if it solely disappears in one part of the surface, to re-appear in another, then the French call the circumstance *delitescence*; but if an internal part be affected, it deserves the name of *metastasis*. When it extends slowly from one part to another, whether the part affected recovers or not, it is called *E. erraticum*—wandering about. In another form you will observe sometimes very great swelling, and a great effusion of serum into the cellular membrane, and it is then called *E. œdematodes*, being œdematous. Now and then the irritation of the cellular membrane under the skin is much more severe than to secrete mere serum; it is so severe as to secrete pus, and then it is called *E. phlegmonodes*, it being the character of phlegmon to secrete pus.

When this occurs—when the cellular membrane underneath the skin becomes affected, as well as the skin itself, to a great degree—there is extreme pain, extreme tension, extreme hardness; the limb feels as though it would burst, the patient is skin bound, and the general symptoms throughout the body are excessively severe. Suppuration sometimes occurs only here and there, but sometimes it is very extensive. It is by no means uncommon, in partial phlegmonous erysipelas of the face, to see the affection suppurate in particular spots, as, for instance, at the orbit. The cellular membranes under the eye-lids is disposed to run into suppuration, when there is no suppuration in any other part of the face. But, besides this local E. phlegmonodes, you will sometimes see a whole extremity fall into this particular state.

Erysipelas is a disease which is by no means confined to the surface of the body: you will see the throat continually affected. If the inner part of the throat and mouth are the seat of disease, you will see the throat red, the tongue red, the mouth complained of by the patient as exceedingly hot, perhaps a short cough, and a difficulty of swallowing: in fact, there is a sore throat. Very frequently, too, it will run down the membrane lining the tubes, so that you have a very great cough and a difficulty of breathing. You have more or less bronchitis, and sometimes there is really severe bronchitis, but for the most part it is only a superficial sort of inflammation—erysipelas of the mucous membrane—which will go away without the adoption of any strong measures. Very frequently, besides the sympathetic effect occurring at the beginning of the disease, you find great tenderness of the epigastrium, the patient complaining of intense heat there, and sometimes the same is felt all over the abdomen, as if the inner surface of the intestines were in a state of erysipelas, and then you have diarrhœa. I have seen the disease spread down the air passages, and then down the alimentary canal. But, besides this spreading from the skin through the ramifications of the trachea and bronchiæ, and through the pharynx and œsophagus to the stomach and down to the intestines, you see the membranes of the brain continually affected, when the head and scalp are the seat of the disease. When the disease affects the inside of the head, which it is much disposed to do after it has attacked the face, neck, and scalp, the danger arises from inflammation of the membranes of the brain, so that you have, as the disease advances, extreme drowsiness; the patient complains

of internal pain of the head, delirium comes on, and at last there is more or less of an apopleetie s'ate. When the face is affected, from the general swelling and the effusion into the cellular membrane, the eyes are closed and the features are lost, so that you could not recognize the individual at all. The person becomes as ill-looking a blackguard, in his appearance, as can be conceived. His nose is bottled, and is buried in his cheeks; in fact, he looks as if he had been drinking hard, and had had a good drubbing. The features are set, the eyes closed, and there he lies not to be recognized by any one. I know this by my own ease, having myself laboured under the disease. My friends brought a looking-glass, and, on raising the upper eye-lid, I peeped at myself, but the sight was so abominable that I begged the glass might be removed.

Morbid appearances.—When the patient dies with symptoms of inflammation within the head, drowsiness and delirium, &c. shewing inflammation there, I have always found, certainly not inflammation within, but the effects of inflammation, effusion. I have always seen an effusion of serum in the brain—in the ventricles of the brain, or upon the brain, or in both situations; and sometimes great turgescence of the vessels.

The disease is very much disposed, in many cases, to produce mortification; parts of the skin will continually slough, the vesicles will become dark, and the fluid which is within them is bloody. But, besides that, the disease will frequently produce sloughing deeper in, and death will take place to all appearance from the gangrene. When this is the case it is called *E. gangræosum*. Infants are very liable to this gangrenous erysipelas: new born infants will frequently have it about the umbilicus and the genitals. I have seen this occur without any vesication at all. Round the umbilicus, or the pudendum, in young children and infants, the parts will become very red, very hot, and hard, the red will become dingy, and then gangrene take place, and the parts become perfectly black. This occurs very frequently in the extremities, but in the case of children it is about the genitals and the umbilicus that it usually takes place.

You see, therefore, that this is a disease exactly like continued fever, or any common inflammation, or exactly like scarlatina, the last disease which I mentioned: I mean it runs from mere active inflammation with strength on the one hand, down to the most perfect prostration of strength on the other, and the most violent tendency to mortification. It is, therefore, pretty evident that no one mode of treatment can be adopted; before, however, I speak on that subject, it will be right to mention what are the causes.

Causes.—The common causes of the disease are, vicissitudes of temperature, exposure to cold, especially when the person is heated; but it very commonly arises from some local cause—mechanical injury, or any thing that irritates. It is much predisposed to by certain situations. There are certain situations in which erysipelas is very common. There are hospitals, it is said, where erysipelas is more common than in others. It certainly appears to be dependent, in some measure, upon the season. At particular periods, in several hospitals in the same town, where all is healthy, all at once, where they have had no erysipelas, the affection will become very common. Besides the common exciting causes, such as refrigeration or local injury, it depends, in a great measure, upon local circumstances, and also on something in the air at the time. These circumstances may be so strong that, without any local irritation, patients will be seized with erysipelas, and the slightest local injury will sometimes do it. Erysipelas in these particular seasons, or in these neighbourhoods, may be followed by the most violent inflammation. Persons of bad constitution are also very liable to it. Those who have been in the habit of drinking spirits, or have ruined their constitution in any way, are very likely, from the least injury, even from leech bites, to fall into this disease.

Contagious (?)—It is said by some that erysipelas is occasionally contagious. Dr. Wells published, I believe I mentioned formerly, a number of cases to prove it contagious. It does appear in the cases he mentioned that it was contagious. The instances were numerous, and they were cases of persons who went to visit others who had erysipelas, and then went back and gave it to those in their own houses. I cannot exactly say that I have seen it contagious. I have seen, as I suppose every body has, in hospitals, patient after patient become affected in a ward; but whether it arose from local circumstances, or from emanations spreading from one individual to another, I cannot tell. I recollect once having had it, five days after stooping down over a patient who had the disease in so violent a form that he died of it. I was looking into the state of his skin, and his breath came into my face. I turned away disgusted, and said, "I hope I have not caught it;" but five days afterwards, having forgotten the circumstances, I was seized with it. I felt chilly, and my head was sore, and I had the disease violently; this was in the winter, when one is liable to catch cold, and therefore I am not sure that I caught the disease from contagion: only I never take

cold that I know of. I have seen instances where the affection might have been contagious, but I am not sure that such was the case. You will find Dr. Wells's cases in two volumes of the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge.

Treatment.—The treatment of the disease is self-evident. It must be totally different in different cases. In the country, and in young, strong, healthy subjects even in town, there can be no doubt of the propriety of taking away blood from the arm. I have often bled patients, and was repeatedly bled myself, and with the best effects. On the other hand, if a patient have a shattered constitution, either in consequence of being half-starved, or of intemperance, or any thing else, then you must employ bleeding with great caution; but still, in the greater number of cases, antiphlogistics are the proper remedies, though perhaps not carried to a great extent. Purging, and the other parts of the antiphlogistic plan, are necessary. I have always found cold useful (I employed it in my own case), and I never saw the disease recede in consequence of it. I never saw internal disease in consequence. The direct application of cold water, or by means of rags, is very uncomfortable to the patient after a time; and as soon as he says this effect is produced, it is but common sense to leave the cold off. If fresh air can be obtained, it should be had recourse to in this, as in most other diseases. You will frequently find local bleeding answer every purpose; but I should never shrink from general bleeding if it appeared desirable; there is nothing to fear from it. In regard to local bleeding, you may employ it by means of leeches around the part, or you may put them on the part itself. There is no harm in adopting the latter plan. I was not aware of this at one period, but I have tried it, and now I know it by experience. Some think it is more eligible to take away the blood by means of needles, or the point of the lancet, because there is not that irritation which is occasioned by the bite of a leech. I have never seen harm result from leech-bites, when they were applied to the inflamed part, or to the part itself; but it is said there *never is* any danger if you withdraw the blood by means of acupuncture. There is a vast collection of blood in the erysipelatous part; and if you puncture you may frequently unload it to a great amount. You will find that you may put a stop to the progress of the disease (I have done it times without end), by the application of the nitrate of silver. If you rub the nitrate of silver on the healthy part around the disease, or if you make a strong solution and paint all around with a brush, you will generally prevent its farther progress. Some persons recommend blisters, but the nitrate of silver answers perfectly well, and much better. I have stopped the disease over and over again by this means, and I should feel it right to have recourse to it in every severe case. We are indebted for a knowledge of its use to Mr. Higginbotham, of Nottingham. He has written a work to shew the good effects of this remedy, not only around the part in this way, but applied to the inflamed part itself. You will have fuller information on this subject in the Lectures on Surgery, than it is my business to give; but I know that you may stop the erysipelas in the way I have mentioned.

It is necessary, however, that the application should be continuous; for if you allow a small space at which the disease can creep out, depend upon it it will. I have seen cases where a portion was left, and I have seen the affection creep through there, and spread along the part.

It is very important to stop the progress of the disease if it be near the head, because if it should spread over the head, or even half over it, it is ten chances to one that you have delirium and inflammation of the membranes of the brain, and the patient will die in an apoplectic state.

If there be much tension in the part, there is no impropriety in doing more than emptying it by leeches; indeed, it is very important to make an incision in it by means of a lancet, and the tension will then sometimes cease immediately. It is in E. phlegmonodes that this is particularly required. Generally, if you take away blood, purge, starve, and apply cold, the disease will give way; but if there be this extreme tension, and you make an incision, the part immediately stretches, just as it would if you had made a slice in a shoulder of mutton. The practice is now, I suppose, well established. Some surgeons make the incision a foot long, but others make half a dozen incisions, each an inch in length—some doing it all at once, and others, as Mr. Lawrence once waggishly said, by instalments; that, however, is a matter of surgical choice. But of the use of making incisions for the purpose of letting out blood or pus, or before pus is formed, merely to take off the tension, by allowing the blood to ooze from the part, there can, I think, be no question.

In case mortification threatens or occurs, you have to consider whether it depends upon the violence of the inflammation. If the inflammation be violent, you must not, because there is mortification, give wine, bark, and opium, but strive to subdue the inflammation by antiphlogistic means. Again, if you see or fear a sinking of the

constitution, and even there be no mortification, then wine, porter, opium, and bark and good food, must be given, just as you would treat any common case of inflammation.

In doubtful cases, when you hesitate whether to bleed and put the antiphlogistic plan into force, or to stimulate and support, the best plan is to apply cold effectually, unload the part by leeches or punctures, and give beef-tea and milk and quinine. I have never seen quinine do harm, even in active tonic erysipelas; and in doubtful cases I believe it always a safe and eligible medicine.

LECTURES
ON
DISEASES OF THE EYE;

Delivered at the Birmingham Eye Infirmary,

By Richard Middlemore, Esq.

Introductory Observations.

I have only studied diseases of the eye as a part of, and in connexion with, my profession generally, yet having been for many years one of the medical officers of this institution, and having in consequence of such appointment annually witnessed nearly 1500 cases of ophthalmic disease in its various forms, I have felt that it is my duty to communicate any information my unusually ample opportunities may have enabled me to acquire.

In former times, the treatment of diseases of the eye was confined to persons assuming the name of "oculist," who very frequently acquired, with great notoriety, considerable wealth and importance. You will observe, that these persons were generally characterized by extreme assurance and extraordinary ignorance, and that their treatment consisted almost entirely in the rude and unscientific application of local remedies. If, however, by the term "oculist," is meant a person competent to treat the various maladies of the human eye, without any, or only a very slight, acquaintance with general anatomy, pathology, and therapeutics, we may confidently assert that there is no such individual in existence; for he only can be adequate to the treatment of disease, in whatever part it may be situated, who is conversant with the natural structure of parts, with the laws which regulate the healthy functions, and with the alterations produced by the encroachments of disease—with the sympathies, the influences, and the connexions, subsisting between every part of the animated machine.

You know that the treatment of an inflamed mucous membrane is essentially the same—the same in principle—in whatever part it may be situated, and that it would be altogether absurd to restrict the treatment of disease, in accordance with the situation of such disease, to certain individuals who professed to have especial qualifications for its treatment whenever it had fixed upon some particular district. You would at once assure that person who told you that he had confined his attention to the management of maladies of the eye, and was wholly unacquainted with those of other parts, that disease could not be judiciously or scientifically treated by one possessing merely his partial acquirements.

The eye has its sympathies with, its relations to, and its dependencies on the system, in common with every other single organ of the human body; it is also composed for the most part of the same materials, worked, in some instances, into *precisely* the same textures, which possess the same functional properties, as many other parts of the animal machine. So that it is altogether ridiculous and unnatural to attempt to separate this department of our profession from those other branches of it, with which it is so intimately connected.

Many of the greatest ornaments of our profession have written very ably on ophthalmology, as, for instance, Cheselden and Pott, the late Mr. Hey of Leeds, and Mr. Gibson of Manchester; and among the surgeons of the present day who have distinguished themselves by their writings in this department of knowledge, I may mention the names of Scarpa, Wardrop, Guthrie, Travers, and Lawrence. You will perceive, therefore, that a most intimate knowledge of ophthalmic disease is not only compatible with the ordinary pursuits of our profession, but is also materially assisted by the attainment of that information which none but the thorough surgeon can be presumed to possess.

The study of diseases of the eye is peculiarly interesting, for, in consequence of the superficial situation of some of its textures, and the transparency of others, you have frequently an opportunity of observing its respective maladies, and of actually witnessing the morbid process. When the pleura is inflamed you may infer from existing symptoms that serum is effused, that lymph is deposited, or that pus is secreted, as a consequence of such inflammation; but, if the conjunctiva or any of the superficial textures of the eye are diseased, you have an opportunity of discriminating the nature and seat of such disease, and of determining the qualities of its effects, by actually witnessing, not

only its precise pathological state, but of observing the product of such morbid condition. I repeat, therefore, that this circumstance gives an interest to the study of diseases of the eye, which is not generally associated with an equal attention to disease when situated in other parts.

In the treatment of acute ophthalmic inflammation it must never be forgotten that it is highly important to arrest its progress at an early stage of its existence, on account of its tendency to terminate in opaque deposition, and destroy the transparency of its pellucid textures. The same occurrence may follow inflammation of the pleura; the opposing serous surfaces of that part may be agglutinated by adhesive deposition, and may be rendered opaque, without *necessarily* occasioning any extreme injury or producing much inconvenience; but it must be remembered, that if inflammation proceed to the same extent in the eye, so that opaque deposition take place in its textures, it may render that organ useless, or, by causing it to interfere with the vision of the opposite eye, it may render it even worse than useless, although you may succeed in preventing suppuration of the globe, or any alteration of its figure; —in other words, that termination of inflammation, which in other parts is scarcely productive of the slightest inconvenience, is very generally succeeded by the total loss of vision, when it takes place in the eye. As far then as regards the preservation of the function of an organ, when the seat of disease, it is more necessary to be acquainted with the means of early distinguishing, and correctly treating, an inflamed state of the eye, than the inflammatory condition of other parts, the due performance of the function of which parts may however be absolutely essential to the preservation of life.

I need not insist upon the importance of anatomical knowledge; you are familiar with the arguments ordinarily employed to demonstrate the necessity of an intimate acquaintance with that structure, the disorder or disease of which you may be called upon to relieve or remove. However, although I have thus drawn your attention to the great importance of a due acquaintance with the anatomy of the eye, before you attempt to obtain a familiar knowledge of the pathology of that organ, I shall not occupy your time by any extended remarks respecting its anatomy; feeling assured that you are already well acquainted with this indispensible department of professional knowledge. If you are desirous of extending your knowledge of the minute anatomy of the eye, you may advantageously refer to the following works:— "Samuelis Thomæ Sœmmerring;" "Icones Oculi Humani;" "Descriptio Anatomica Oculi Humani Iconibus Illustrata," auctore Gottfrid Zinn;" "Scriptores Ophthalmalogici Minores," edidit Justus Radius.

Having, in this very cursory manner, stated my conviction that a knowledge of anatomy is a necessary preliminary acquirement to a due acquaintance with disease, and that a familiarity with the principles which regulate the treatment of disease in general is essential to a successful and scientific treatment of ophthalmic maladies, I proceed to point out the causes of that number and variety of morbid affections to which the eye is subject, and the consequent necessity for a minute and attentive investigation of the symptoms and appearances they respectively present. Many of the diseases of the eye, and generally speaking, those of chiefest importance, are very obscure in their symptoms on cursory examination, and at the same time rapidly destructive in their progress; and unless they are very promptly detected, they may arrive at that degree of establishment which no remedies will then affect. To detect, therefore, the *degree* of inflammation, as well as the *particular texture* inflamed, at our first examination, affords, in many instances, the only chance of preventing the loss of vision.

The textures of the eye are, for the most part, so totally dissimilar, that it cannot be presumed that the same morbific cause would be likely to produce an equal effect upon every part of it at one time, nor that the inflammation would assume the same appearance, produce exactly the same symptoms, and be influenced by precisely the same treatment, when it arises in different situations. We find that an agent capable of inflaming one texture of the eye has no injurious effect upon another, and we also frequently find inflammation taking place, and passing through its various stages, without at all implicating any texture in addition to that primitively affected; and if we for a moment reflect on the great variety in the situations, textures, and functions, composing the eye, we cannot be surprised that its diseases are, (I of course admit the existence of many exceptions to this general rule), as respects each other, so separate in their history, distinct in their appearance, variable in their progress, different in their termination, and peculiar in their mode of cure, and their disposition to limit their action. For these reasons I have deemed it right to describe the diseases of each texture separately, intending, however, in the course of my observations, to notice that complication of morbid affection, induced by the progression of malignant action, and also that combination of disease occu-

sioned by the extension of inflammation from contiguity, and its modification by constitutional agency.

If, after it had been explained to you that two of the humours of the eye were mere secretions, and that the third possessed so feeble a degree of vitality that its organization has been frequently questioned, and that the various textures of the eye respectively possessed in their predominant characters, the qualities of mucous, serous, fibrous, nervous, and vascular membranes in general, and also that one of them—the cornea—was so dissimilar to any other tissue of the body as to be properly designated *sui generis*,—you would feel very much surprised if I were to treat of any one or more of these dissimilar parts, under the general term of ophthalmia, limiting my description of the disease to the peculiarities of its *outward* appearance, and founding my opinion of its nature on the same circumstance; and you would no doubt feel convinced that such a mode of procedure was ill calculated to elucidate and explain the phenomena presented to our notice, by the peculiarities connected with each disease—peculiarities which it will be seen are, for the most part, consistently accounted for by a reference to the anatomical qualities of its respective parts, and the nature of their functions.

Now, in studying the pathology of the eye, in that mode in which, in my opinion, it ought to be studied, that is, by constant reference to the anatomical qualities of the part diseased, and the phenomena which attend similar morbid affections of the same texture, in other parts of the body,—you will bear in mind that whether the mucous, the serous, or the fibrous membrane of the eye, or whatever texture of that organ may be affected, there are phenomena connected with the inflammation of such texture which may be said to be common to them all; and these phenomena may be termed the general or common symptoms belonging to the particular morbid state of such texture. In this mode of studying diseases of the eye, you will free this department of our profession from much absurd and needless mystery, and effectually thwart the object of those interested individuals, who have endeavoured to give to this part of pathology a character of isolation which it does not really possess.

When, therefore, I speak of catarrhal ophthalmia, you will at once conclude that I am adverting to inflammation of the mucous membrane covering the anterior aspect of the eye-ball, and connecting it to its lids; and, when I allude to rheumatic ophthalmia, you will be aware that the strong fibrous investment of the transparent humours and delicate membranes, is the seat of the malady. In the same manner, you would infer an affection of the retina in an individual who, without any visible defect in the appearance of the eye, complained of a dimness of vision, coeval and coequal with a general diminution or impairment of the nervous power of the system. You will, in short, find the diseases of the eye at their onset limited, in many instances, to a particular texture, and exhibiting in the main the same phenomena, and passing through the same changes, as are noticed when inflammation takes place in structures of a similar nature in other situations. It is indeed important to bear these facts in mind, for otherwise you will neither be able to discriminate correctly the diseases of this delicate organ, nor adapt your treatment, with a full confidence in its propriety, to the requirements and exigencies of any case, the management of which you may be called upon to undertake.

Some of the textures of the eye intimately sympathize with the state and diseases of the constitution: for instance, the power of the retina is frequently impaired, and sometimes even totally destroyed, during lactation, and the same effect (great impairment of vision) has been known to take place as the consequence of amenorrhœa. The iris frequently becomes inflamed after the healing of a chancre, forming one of the secondary symptoms of syphilis. It is not, however, the serous covering of the iris—that portion of the membrane of the aqueous humour which is reflected upon its anterior and posterior surface—which is the primitive seat of the inflammation, but its intermediate or proper iritic structure.

Again, the sclerotica is very apt to be affected with an inflammation of a peculiar kind in rheumatic persons; it is a membrane of a dense, fibrous structure, much resembling the ligaments of joints, and those fibrous parts chiefly obnoxious to rheumatic disease; and the inflammation which we designate rheumatic opthalmia, is in fact an inflammation of the fibrous tunic of the eye, the sclerotica. It has, as will be hereafter explained, peculiar appearances and symptoms, and requires for its removal the administration of remedies adapted to the constitutional disease or tendency by which it is produced or modified; this, then, is another instance of disease of the eye, influenced or caused by the condition of the constitution, and affecting, generally, only that part of it (the eye) the structure of which corresponds with that which, in other situations, is the seat of the same malady. You will find too that it is attended with a considerable degree of pain,—a much greater degree of pain than accompanies inflammation of the conjunctiva; and this

circumstance will direct you in your inquiries after the seat of various inflammatory affections to which the eye is subject. This has been explained in various ways; but I believe it is chiefly owing, in the sclerotica at least, to the firmness of its texture, by which it is prevented from yielding to the increased and increasing size of its blood vessels, and also to their incapacity to relieve themselves, by effusion, to the same extent as distended vessels in other situations. This circumstance is well exemplified in certain morbid states of the conjunctiva; whenever that membrane becomes acutely inflamed, the softness of its texture readily permits it to yield to the distention of its vessels, whilst their plenitude is relieved, either by an increase in its natural secretion, or by purulent effusions from its surface, or by those effusions and depositions which constitute chemosis, or by the formation of pustules. Its immediate texture also admits of some deposition. The inflamed iris frequently occasions intense suffering, because it is a highly organized part, and possesses large nervous supplies, and because its natural stimulus cannot be altogether excluded;—it will be excited to a certain extent by that stimulus, which, in its healthy state, maintains the due performance of its functions. And the same reasoning will apply to the inflammation of the retina and the choroid; the one from its nervous composition, its close connexion with the brain, and its irritability to a stimulus which cannot be completely withdrawn; and the other from its high state of organization; and both from their incapacity to relieve materially the fulness of their blood-vessels by those depositions and effusions which tend to lessen their plenitude in other parts, when similarly circumstanced,—that is, when they are enlarged by the existence of inflammation. I have stated that the structure of the cornea is peculiar; it is dissimilar to any other texture, and is therefore termed *sui generis;* but there is a certain identity in its pathological conditions to those of other parts, in some of its component tissues; for instance, its external or conjunctival covering, and the cellular membrane which connects its lamellæ to each other, are liable to morbid changes, which preserve the characters of the diseased alterations those tissues undergo, when situated in other parts. You will distinguish, therefore, the *general* from the *particular* pathology of this part, and remember that the lamellar texture of the cornea alone presents those anatomical and pathological peculiarities which have caused the structure of this tunic to be termed *sui generis.*

As it is one part of my object in these preliminary remarks, to illustrate the anatomical differences in the textures of the eye, by a reference to the distinctness and the peculiarity of the diseases (considered in reference to their cause, their appearance, their progress, their termination, and their mode of cure,) with which its various parts are affected, and also their occasional limitation to that part in which the morbid process began, I may, perhaps, be allowed to refer more particularly to what was only cursorily mentioned at the commencement of these observations; namely, an affection of the retina, as a consequence of some disordered state of the constitution, and its sympathy with the condition of the uterine system.

When considering the diseases of the retina, it is important to bear in mind the predominance of its nervous over its vascular structure; it is a highly nervous part, and is, therefore, extremely liable to be influenced by those states of the system which implicate the nervous system generally.

You will sometimes find that after a patient has been much reduced by mercury, and particularly if he be under its full influence, that he will be suddenly deprived of his sight, which will probably not return until the system be cleared of that mineral, and the strength restored by tonic and invigorating treatment; you are aware also that an undigested meal will sometimes induce blindness, which may continue until the stomach be emptied of its offending contents; during lactation, dimness of vision, sometimes amounting to its total loss, will now and then occur, particularly if the individual has had several children in quick succession, and continued to suckle them for a long period. We are frequently consulted by women whose vision is nearly destroyed from this cause; they tell us they have had many children, and continued to suckle each of them until they were fourteen or fifteen months old, or even for a longer period, and that their power of vision has been gradually declining after each confinement; they will also complain of extreme debility, and great lassitude on attempting the slightest exertion. I particularly allude to this state of things, because, as will be afterwards explained, it is one of very frequent occurrence, and unfortunately one, which, in many instances, cannot be remedied; hence you will observe the necessity of paying great and immediate attention to such of your patients as may be likely to be sufferers from a cause of this nature. You cannot too urgently advise them to wean their children much earlier than is usual, and very much earlier than they will be disposed to do, unless you clearly represent to them the importance, indeed the absolute necessity, of their compliance. You cannot always control the disease at an advanced stage or season of its existence, although you may

generally arrest its progress by timely advice and judicious treatment.—"Obsta principiis" is here, therefore, as in many other cases, a maxim of the highest importance.

I purpose to treat first of the diseases of the individual textures of the eye; secondly, to speak of the various affections of the humours of the eye; thirdly, to consider the malignant diseases and other affections of the eye-ball; and lastly, to investigate the many morbid or defective states of what are usually termed the appendages of the eye.

The various operations you may be called upon to perform, will be described when treating of the diseases of those parts of the eye which render the performance of a surgical operation necessary.

ON THE LAW OF THE DIFFUSION OF GASES.

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It is the object of this paper to establish with numerical exactness the following law of the diffusion of gases:

"The diffusion or spontaneous intermixture of two gases in contact, is effected by an interchange in position of indefinitely minute volumes of the gases, which volumes are not necessarily of equal magnitude, being, in the case of each gas, inversely proportional to the square root of the density of that gas."

These replacing volumes of the gases may be named *equivalent volumes of diffusion*, and are as follows: air, 1; hydrogen, 3.7947; carbureted hydrogen, 1.3414; water-vapour, 1.2649; nitrogen, 1.0140; oxygen, 0.9487; carbonic acid, 0.8091; chlorine, 0.6325, &c.; numbers which are inversely proportional to the square roots of the densities of these gases, being the reciprocals of the square roots of the densities, the density of air being assumed as unity.

If the two gases are separated at the outset by a screen having apertures of insensible magnitude, the interchange of "equivalent volumes of diffusion" takes place through these apertures, being effected by a force of the highest intensity; and if the gases are of unequal density, there is a consequent accumulation on the side of the heavy gas, and loss on the side of the light gas. In the case of air, for instance, on the one side of the screen, and hydrogen gas on the other, a process of exchanging 1 measure of air for 3.7947 measures of hydrogen, through the apertures, is commenced, and continues till the gases on both sides of the screen are in a state of uniform mixture. Experiments on this principle can be made with ease and precision, as will appear in the sequel, and afford an elegant demonstration of the law.

There is a singular observation of Doebereiner, which chemists seem to have neglected as wholly inexplicable, on the escape of hydrogen gas by a fissure or crack in glass-receivers, which belongs to this subject, and from which I set out in the inquiry. Having occasion, while engaged in his researches on spongy platinum, to collect large quantities of hydrogen gas, he accidentally made use of a jar which had a slight crack or fissure in it. He was surprised to find that the water of the pneumatic trough rose into this jar one and a half inches in twelve hours, and that after twenty-four hours, the height of the water was two inches two-thirds above the level of the water-trough. During the experiment neither the height of the barometer, nor the temperature of the place, had sensibly altered.

In other experiments, he substituted glass vessels of very different forms, tubes, bell-jars, flasks, all of which had fissures. In every one of these vessels, filled with hydrogen, the water rose, after some hours, to a certain height. On covering one of these vessels, containing hydrogen, by a receiver—or on filling the vessel with atmospheric air, oxygen or azote, instead of hydrogen—he never observed a change in the original volume of the gas. He thinks it probable that the phenomena is due to the capillary action of the fissure, and that the hydrogen only is attracted by the fissures, and escapes through them, on account of the extreme smallness of its atoms*.

This explanation is rendered improbable by the circumstance that hydrogen, of all the gases, was condensed and absorbed with the greatest difficulty, and in smallest quantity, by charcoal and the other porous substances, tried by Saussure. And we have no reason to

* Condensed and modified by the Author, for the Medical Gazette, from a Paper presented to the Royal Society of Edinburgh.

* Sur l'Action capillaire des fissures, &c. Annales de Chimie et de Physique, t. 24, pp. 332 334. 1823.

suppose that the particles of hydrogen are smaller than those of the other gases.

On repeating Doebereiner's experiment, and varying the circumstances, it appeared that hydrogen never escapes outwards by the fissure without a certain proportion of air returning inwards. In the experiment, however, as originally performed, it is evident, that, as soon as the water rises in the jar above its outer level, air will begin to be forced into the jar mechanically through the fissure, by the pressure of the atmosphere, independently of what we shall suppose enters by diffusion. But if we press down the jar of hydrogen to a certain depth in the water-trough, so that the level of the water without is kept constantly higher than the level of the water within the jar, then, on the contrary, a portion of the hydrogen will be forced out mechanically by the pressure to which the gas is subject. In the last circumstances, however, no air can enter by the fissure, and mix with the hydrogen, except by diffusion, or in exchange for hydrogen. Now, in a great number of experiments of this kind, the air which entered by diffusion amounted to between one-fifth and one-fourth of the hydrogen, which left the receiver at the same time. But when the circumstances were reversed, and the column of water allowed to rise in the jar above the level of the water-trough, the quantity of air which entered by diffusion was increased by a portion which entered mechanically; and varied from a third to a fourth part of the hydrogen, which escaped at the same time. The results, therefore, oscillate, as they should do, about our theoretical number. One volume air should replace 3.7947 volumes hydrogen; or the whole hydrogen, on escaping from the jar, should be replaced by little more than one-fourth of its bulk of air, and a very great contraction ensue.

But it is unnecessary to detail experiments made with the jar with the fissure, as with every precaution they were not precise, although at all times compatible with, and indeed illustrative of, the law. Thus a sensible contraction always took place in the bulk of the gaseous contents of the jar when filled with carbureted hydrogen of marshes, or with coal gas, which, like hydrogen, are lighter than air, and ought therefore to be replaced by less than equal volumes of air. With olefiant gas and carbonic oxide, which approach closely to the density of air, no contraction was perceptible, not attributable to other causes, although the gases as usual wholly escaped. In the case of carbonic acid, which is heavier than air, a slight, but positive, expansion appeared to take place, the experiment being performed over mercury.

But the same fissure or opening never allows the process of diffusion to go on with the same degree of rapidity in two successive experiments, principally, I believe, from its size changing with variations in its condition in regard to humidity. The fissures appear to be extremely minute, for we cannot cause either air or the gas employed to flow through them mechanically, at the same rate as it passes by the agency of diffusion, without the application of considerable pressure. Artificial chinks, such as that obtained by pressing together ground glass plates, or in phials fitted with accurately ground glass stoppers, allow gas to pass through under the slightest pressure, and do not answer for the experiment.

The effects were made much more striking, in some respects, by the discovery that Wedgewood stoneware tubes, such as are used in furnace experiments, admit, from their porous structure, of being substituted, instead of jars with fissures. When shut at one end, as they are sometimes made, they may be managed like other cylindrical gas receivers. Those which are unglazed are most suitable; but do not answer the purpose if either very dry or too damp, being permeable by a gas under the slightest pressure in the one case, and perfectly air-tight in the other. The following experiment illustrates the force and rapidity with which diffusion proceeds. A stoneware cylinder was entirely filled with hydrogen gas over water, and transferred to the mercurial trough; in forty minutes the mercury rose to a height of $2\frac{1}{2}$ inches in the receiver above the level of the mercury in the trough; half of the hydrogen had escaped, and had been replaced by about a third of its volume of air.

But these modes were superseded by the use of Paris plaister as the porous intermedium.

A simple instrument, which I shall call a *diffusion tube*, was constructed as follows:—A glass tube, open at both ends, was selected, half an inch in dia-

meter, and from six to fourteen inches in length. A cylinder of wood, somewhat less in diameter, was introduced into the tube, so as to occupy the whole of it, with the exception of about one-fifth of an inch at one extremity, which space was filled with a paste of Paris plaster of the usual consistence for castes. In the course of a few minutes the plaster set, and, withdrawing the wooden cylinder, the tube formed a receiver closed with an immoveable plug of stucco. The less water employed in slaking the Paris plaster, the more dense is the plug, and the more suitable for the purpose. In the wet state the plug is air tight: it was therefore dried, either by exposure to the air for a day, or by placing the instrument in a temperature of 200° F. for a few hours; and thereafter was permeable by gases, even in the most humid atmosphere, if not positively wetted. The tube was finally graduated by means of mercury, into hundredths of a cubic inch, and the notation, as is usual with gas receivers, counted from the top.

When such a diffusion tube, six inches in length, was filled with hydrogen over mercury, the diffusion, or exchange of air for hydrogen, instantly commenced through the minute pores of the stucco, and proceeded with so much force and rapidity, that within three minutes the mercury attained a height in the receiver of upwards of two inches above its level in the trough. Within twenty minutes the whole of the hydrogen had escaped.

In conducting such experiments over water, it was necessary to avoid wetting the plug. With this view, before filling the diffusion tube with hydrogen, the air was withdrawn by placing the tube upon the short limb of an empty syphon, which did not reach, but came within half an inch of the plug, and then sinking the instrument in the water trough, so that the air escaped by the syphon, with the exception of a small measure, which was noted. The diffusion tube was then filled up, either entirely, or to a certain extent, with the gas to be diffused.

The ascent of the water in the tube, when hydrogen is diffused, forms a striking experiment. In a diffusion tube fourteen inches long, the water rises six or eight inches in as many minutes. The column of water attains in a short time its maximum height, at which, however, it is never long sustained; for as in Doebereiner's experiment, air is all along entering mechanically through the porous plug in such circumstances, from the pressure of the atmosphere; and after the diffusion is over, the water subsides, in the course of several hours, to the general level. In experiments made with the purpose of determining the proportion between the gas diffused and the return air, it was therefore necessary to guard against any inequality of pressure, which was managed much more easily when the tube was standing over water than over mercury.

The capacity of a mass of stucco to absorb and condense in its pores the various gases, was made the subject of experiment, as this property might interfere with the results of diffusion. The mass was previously dried at 200° F. It absorbed at the temperature of the atmosphere, which at the time was 78°.

6·5	volumes	ammoniacal gas,
0·75	....	sulphurous acid gas,
0·5	....	cyanogen,
0·45	....	sulphureted hydrogen,
0·25	....	carbonic acid.

Oxygen, hydrogen, nitrogen, carbonic oxide, olefiant gas, coal gas, were not absorbed in a sensible proportion, even when the temperature was 58°. It is evident, therefore, that the absorbent power which stucco enjoys, as a porous substance, is inconsiderable. Placed in humid air, the same mass of stucco absorbed 1½ per cent. of hygrometric moisture. In setting, 100 parts of the stucco had retained 26 parts water uncombined, which escaped on drying at a moderate temperature, so as to avoid decomposing the hydrated sulphate of lime. It can be shewn from this, that the vacuities must have amounted to one-third of the volume of the mass.

I shall treat in succession of the escape of the different gases from a diffusion instrument into air. As the contained gas bears no proportion in quantity to the external air, the gas escapes entirely, and is wholly replaced by air. It is of the utmost importance to determine the proportion between the volume of gas diffused, and the replacing volume of air eventually found in the instrument. We thus obtain the *equivalent diffusion volume* of the gas, which it will be convenient to state in numbers, with reference to the replacing volume of air as unity. I shall begin with hydrogen

gas, although attended with peculiar difficulties, as it introduces in a distinct manner to our notice several circumstances which may slightly modify the results of diffusion.

[To be continued.]

OBSERVATIONS ON CHOLERA,

As it appeared at Castlebar, County of Mayo.

By Jonathan Osborne, M.D.

Fellow of the King and Queen's College of Physicians in Ireland, and Physician in Ordinary to Sir Patrick Dun's Hospital.

Towards the beginning of last July, in consequence of an application made on behalf of the Board of Health of Castlebar, the Central Board appointed Dr. Goodisson and myself to co-operate with them in the prevention and cure of cholera in that place, and we lost no time in proceeding thither. On our arrival, we had the pleasure of receiving a visit from the late lamented Dr. Hamilton; also from Dr. House, surgeon to the Infirmary, and from the other medical gentlemen of the town, to whose combined exertions the inhabitants are indebted far more than they can ever repay, and whose assistance received on many occasions I am happy in having this opportunity of acknowledging.

An old building, formerly a charter-school, but for many years used as a Bridewell and Lunatic Asylum, was allotted to us as a cholera hospital. On the evening after our arrival the lunatics were placed on cars and conveyed, under a guard of police, to the court-house, which was given up for their accommodation. Many of those unfortunate creatures had been in confinement for years, and, on passing through the streets, which were covered with lime, and which, with the white-washed walls, appeared as if after a shower of snow, shewed, by their words and gestures, their surprise occasioned by the extraordinary scene around them. Indeed the appearance of the town was appalling; deserted by at least three-fourths of its inhabitants, almost all the shops shut, and scarcely any but a few of the poorest classes of the inhabitants to be seen in the streets, with the glare of the hot sun and the suffocating smell of lime, or of the chloride of lime, it recalled to the recollection the descriptions of the city of the dead. The panic was universal: none remained who had the means of flying, except Messrs. St. Clair, O'Maley, and the few meritorious individuals who with him constituted the Board of Health; to whom must be added the clergy, both Protestant and Roman Catholic, who discharged their functions amidst the dead and dying with an intrepidity and zeal beyond all praise.

As it may be useful to practitioners placed in similar difficulties, I shall mention the circumstances under which we were obliged to form the arrangements of our hospital, and the means by which we rendered them effective. The building was situated near a lake, at the distance of a quarter of a mile from the town. Having been used as a Bridewell, it was surrounded with high walls, which were of great advantage to us in maintaining the discipline of the establishment. As few, if any, persons could be procured willing to risk their lives in the business, the Board of Health was compelled to send in, as nurses and other functionaries, such individuals as were forced, by the urgent necessity of obtaining a livelihood, to accept the office. Consequently, among our nurses were to be seen women of the town, and others who had been inmates of the house under its former destination; and on the first day of our opening the hospital, two of them having quarrelled, a general riot ensued, which was near being attended with serious consequences. Dr. Goodisson fortunately determined on a plan, by strictly adhering to which we not only reduced these discordant elements into order, but established the economy of the hospital on such a footing as I dare affirm has not been attained in hospitals of the longest established credit, and with servants of the highest reputation selected to attend them. The plan was this:—A table was drawn up, clearly stating the duties to be performed by each person. This was posted up in the hall. A man who had been an hospital serjeant in the East-Indies was procured, who, alternately with another, was constantly engaged in the office of superintendance. To him and his coadjutor was committed the responsibility of maintaining peace and good order, and of seeing that the directions given

with respect to medical treatment were faithfully executed. Both for these, and for all the subordinate officers, a table of fines was drawn up, which marked the penalty affixed to each offence, and the fines were entered in a book kept for that purpose, and the amount deducted from their wages. At first, some resisted, and others relied on our leniency, and believed that we would not punish them; but when they found the punishment invariably following the offence, and saw some who had been expelled for misconduct wandering about in the utmost distress, as none would suffer them to enter into their houses, they very soon submitted; and although, in some instances, during the first week the amount of fines equalled that of their wages, yet we soon had the satisfaction of seeing good order and subordination established, and the business of the hospital executed with chearfulness and regularity.

Two rooms were appropriated to the immediate reception of patients, and in each of those there were beds placed opposite the fire, with all the requisites for the application of heat, several nurses being always in attendance. A large iron vessel, filled with salt, was constantly kept on the kitchen fire, and a person was appointed to watch it, and send up the salt, at the proper temperature, in bags, according as they were called for. When a message arrived stating the occurrence of a new case, the horse was immediately put to the carriage, and in this latter were placed a mattress and a large bag of hot salt enveloped in blankets; by means of which the patient was to some extent warmed on his way to the hospital. It is worthy of remark, that one of the men employed as carriers used, of his own accord, to sit inside this closed carriage, and when the door was opened he was generally discovered in a recumbent attitude, with the patient reclining on his breast and encircled in his arms, and yet this individual never caught the disease.

As soon as the patient arrived at the hospital, he was placed in one of the beds above-mentioned, and was immediately subjected to whatever treatment was most appropriate to the exigencies of his case. As soon as the immediate danger was over and re-action established, he was removed into one of the other wards, to make room for fresh comers. In the latter wards the proportion of nurses was not much more than such as is required in a fever hospital; while, in the reception ward, the fatigue of rubbing and attending the patients was excessive, and could be endured only by frequent relays of nurses. When the disease broke out among the lunatics confined in the court-house, although they were sent into the hospital as soon as the existence of symptoms of cholera could be ascertained, yet a number of them arrived in the last stage, and others of them obstinately resisted the application of remedies, so as to increase the trouble of the nurses very much. One lunatic in the latter predicament, who fell a victim to his obstinacy, was a medical graduate of the University of Edinburgh, of the middle age, who became insane about four years ago, and was an inmate of the asylum during the greater portion of this period. We thought it due to our professional brother to attend his remains to the grave, and proceeded towards midnight, with the carriers, to the burying-ground allotted to those who died of cholera, which was most romantically situated on the side of a hill overhanging a large lake. The moon shone with uncommon brightness, and displayed more vividly the desolate scene before us, of an individual educated for a liberal profession, and who had, no doubt, entered the world with the usual buoyancy and sanguine expectations of youth, transferred from a lunatic asylum to the cold grave, with no friend or relative near him, and none but strangers and mercenaries to sympathise in his fate.

As cases of cholera are now so well known, it is needless to give any descriptions of those which were placed under our care, and I prefer to make some observations upon the individual symptoms under these heads:—1. Countenance and general appearance; 2. Sensations; 3. State of the blood and secretions; 4. Action of the muscles; 5. Pulse; 6. Temperature; and lastly, to mention the treatment adopted.

1. *Countenance.*—In incipient cases it was not altered; nor was it expressive of pain except when spasms were present. When the cold stage was established, a blueness appeared around the eyes and mouth, in the latter proceeding from the jaw at each side of the chin. As death approached, the

features sank, the eye-balls receded into the orbits, and the lips gradually passed from a purplish shade into a livid blue. The other parts of the body were unaltered, except the nails and the areolæ of the nipples, in which the gradual changes from the purple to the livid hue were generally to be observed. The same changes occurred in the interior of the mouth.

Sensations of the patient.—In at least nine cases out of ten, the disease commenced with pain and uneasiness of the stomach and bowels: when vomiting came on, it was always attended by thirst, and during the intervals the patients continually demanded cold drink, especially water. This circumstance, so unusual in other diseases, shews that the sense of nausea, which generally creates an aversion to taking any thing whatever, is extinguished by the overpowering thirst and sense of heat in the stomach. The sensation of heat was not confined to the stomach; it pervaded the limbs even when they were coldest to the touch, and the application of heat, so far from being acceptable, was (in far advanced cases especially) highly disagreeable. The susceptibilities to external impressions of touch, as well as the senses of sight, taste, and hearing, continued unimpaired. I must mention a remarkable fact, that, in the collapsed stage, repeated pinches of snuff, which were given to stimulate, produced no effect on the Schneiderian membrane. Once cholera is completely established, the actual pain suffered by the patient is very slight, being almost confined to what may arise from the cramps or from the violence of the vomiting. Three cases, however, I am able to adduce of violent pain in the spinal region, which was followed by death. The first was of a girl who had convalesced from the collapsed stage, and appeared to be advancing towards recovery, when she was suddenly seized with excruciating pain in the epigastrium and corresponding portion of the spine. After screaming violently for above an hour, she died suddenly. The second was of a child who was brought to the hospital in a state of collapse: after some hours, during which the usual symptoms occurred and the common remedies were employed, she suddenly complained of a pain in her back, and died in a few minutes. The third was of a man in Ballinrobe, who died of four hours illness under the ordinary symptoms of collapsed cholera, and, during the entire of this time, complained of nothing but an agonizing sensation in his back.

The ordinary frame of mind of the patients was not much altered. Their despondency was not greater than might be expected from the well-known fatality of the disease, neither was the cheerfulness attending recovery unreasonable, considering the danger escaped. When the coldness of the body and the vomiting continued to resist all the means usually employed, then, and not till then, did they despair of recovery; and in this state generally became refractory, and resisted the administration of remedies.

3. *State of the Blood and of the Secretions.*—In proportion to the extent and duration of the collapse which had taken place, the blood, as it issued from a vein, appeared dark-coloured and of a thickened consistence. When this blood was exposed to the air in a cup, the upper surface did not become red, or arterialized, as blood usually does, but retained its original hue, although not immersed in serum, the latter fluid, in such cases, hardly exhibiting itself in a separate form. This *non-arterialization* of the blood is particularly deserving of notice, as it proves that it has undergone some decomposition which incapacitates it from being acted on by the air, even if it were capable of being circulated through the lungs, and the function of respiration were carried on.

4. *Secretions.*—The urine was totally suppressed in every serious case. The tongue was coated with a thin but continuous coat of moist white secretion; the fluid vomited, as well as the alvine dejections, were composed of the well-known transparent liquid, containing white flakes. This fluid, when boiled, did not coagulate, although it has been described as albuminous, and a theory of the disease framed on this supposition. It appears to be mucus, and to be poured forth from the mucous surface of the intestines at the same time, and as a consequence of the same relaxation, with the profuse perspiration from the cutaneous surface. In many cases, all of them fatal, those dejections were mixed with blood, and were of an insupportable cadaverous odour. The appearance of green colour in the

fluid ejected from the stomach, was a favourable omen, and was generally succeeded by a return of all the secretions. The perspiration in both stages was almost always copious, but in the favourable cases warm and in form of a vapour; while, as collapse increased, it became cold and clammy. No remarkable increase in the bronchial tubes took place, except in one or two cases, and death was hardly ever preceded by the mucous effusion which causes what is vulgarly termed the death-rattles. At an early period of the state of collapse, the voice changed, the tone becoming sharper and at the same time weaker. This was a very general occurrence, and in many instances took place at an earlier period. Whether it was produced by a narrowing of the air-passages, in consequence of a new secretion, or by a peculiar affection of the nerves of the voice, we had no opportunity of determining.

4. *The action of the muscles.*—The action of the muscles remained perfect in the first stage and became difficult in the second, only in proportion as death was evidently approaching. Thus some of the patients walked to the hospital although very seriously affected, and most of them were able to perform all requisite muscular functions, even when the cold perspiration and the sunk features announced the fatal progress of the disease. The spasms were most frequent in the calves of the legs and toes, after these in the fingers and arms, and more rarely in the abdominal muscles. The muscular tunic of the intestinal canal also shared in the spasmodic action; as was evinced by the vomiting. This was peculiar from the violence with which the contents of the stomach were projected, in some instances to a distance of three or four feet, and with an astonishing velocity. It was unattended by any remarkable effort of the diaphragm or abdominal muscles, and appeared to be the result of contractions of the stomach and œsophagus alone. The liquid contents of the rectum were also forcibly projected in a similar manner.

5. *The pulse.*—Of all the symptoms, that which afforded the truest indication of the amount of danger was the pulse. Its frequency was of little or no importance, inasmuch as in some of the worst cases the number of pulsations was not increased above the natural standard, while in most of the collapsed cases it was considerably below it, but its strength and volume are of the utmost value as indicators of the extent to which circulation is carried on. To feel the pulse it is necessary to place the finger over the artery with the utmost gentleness, and then gradually to increase the pressure till some pulsation can be felt; without this precaution a pulse, although in existence, may be described as extinct. In the collapsed cases it is only at one certain slight degree of pressure that the pulse can be felt at all, and when the pressure is more or less it vanishes. This remark is necessary on account of the cases in which it has been stated that there was no pulse, and which yet ended in recovery. Without denying that such events have occurred, my experience leads me to the conclusion that most of the histories of recoveries under such circumstances are to be received with great caution, on account of the want of the requisite care in examination of the pulse, in consequence of which it has been incorrectly described as extinct.

6. *Temperature.*—The cooling of the body takes place with an inconceivable rapidity, a rapidity inexplicable even if life were wholly extinct, and the ordinary laws of cooling bodies were alone in operation. Thus when the collapsed state suddenly comes on, the temperature of the mouth is within the space of two hours reduced to that of the surrounding atmosphere, which could not take place even if the individual were actually killed. An experiment was performed some years since by Dr. Macartney, of the University of Dublin, which throws light upon this subject. He killed a large dog, and having placed him in an apartment to cool, found that 12 hours elapsed before the temperature of the interior was reduced to that of the surrounding atmosphere. He then took the same dog and heated him in a sand-bath up to the temperature he had when alive. He placed him as before in the same apartment, and found that he cooled down to the temperature of the surrounding atmosphere in six hours: hence it was concluded, that heat derived from the functions of life made a resistance to the cooling process twice as great as that made by heat artificially communicated.

In those cases of cholera, then, it appears that the body cools more rapidly

than can be supposed under any circumstances unless a change in the latent caloric can be taken into account. That such a change does take place is rendered probable by the copious fluid discharges derived not only from the blood but also from the more solid portions of the body; from the fat, for example, which rapidly disappears, as is seen by the sinking of the eyeballs into their orbits, and by the sudden emaciation over the whole body, produced in an incredibly short space of time.

The treatment adopted changed according to the circumstances of each case, but it was generally conformable to that assigned in the following combinations of symptoms:

First Combination.—Uneasiness and vomiting.

Essence of peppermint in effervescing draughts, with a few drops of tincture of opium; turpentine enema; fomentations of the abdomen.

Second.—Vomiting and diarrhœa, with cramps; pulse natural.

Four grains of calomel and half a grain of watery extract of opium, repeated every ten minutes till relief is obtained; leeches over the stomach or venesection according to the quality of the pulse; essence of peppermint in saline draughts.

Third.—Vomiting and diarrhœa, with cramps; fluid ejected resembling rice-water; pulse natural.

Venesection; mustard cataplasm to the region of the stomach; six grains of calomel every five minutes till relief is obtained; frictions.

Fourth.—Vomiting and diarrhœa, with cramps; fluid ejected resembling rice-water; sinking of the pulse and coldness of the extremities.

Mustard cataplasm; frictions of the extremities; six grains of calomel every five minutes. If the vomiting and sinking continue, then the mustard emetic in addition. For drink, effervescing draught with essence of peppermint or brandy, diluted largely with water.

Note.—Connected with this combination it is to be observed that when the diarrhœa continued after the vomiting had ceased, then it was uniformly checked by five grains of pulv. ipecac. c. opio repeated every hour. When vomiting continued without diarrhœa, then turpentine enemas were often successful in arresting it. In general, however, the pertinacious vomiting is the greatest practical difficulty, and one which must be overcome before we can bring our most valuable remedies into action. The great increase of vomiting produced by brandy and other powerful stimulants, is alone a sufficient objection to the employment of them. The mustard cataplasm was the most universally applicable of the remedies used, as it not only checked the vomiting but roused the whole cutaneous surface to increased action. In this combination of symptoms opium appeared to exercise no effect whatever in appeasing the stomach, and when it was retained increased the tendency to coma, which so frequently comes on after reaction has commenced. The most convenient mode of applying heat was by bags of heated salt three or four of which were in almost every case placed under the bed clothes in contact with various parts of the patient's body.

Fifth.—Cadaverous coldness; cold perspiration; sunk features; pulse extinct; vomiting and purging of congee fluid.

Mustard emetic and cataplasm; frictions; solution of carbonate of ammonia and ether; brandy; enemas of the same, in addition to the calomel powders above mentioned.

ARM AND SCAPULA TORN OFF—RECOVERY.

To the Editor of the Medical Gazette.

Sir,

If you deem the accompanying case sufficiently interesting for publication, you will oblige me by inserting it in your journal.—I am, sir,

Your obedient servant,

Jno. Braithwaite.

Macclesfield, Oct 12, 1832.

July 12, 1832.—Peter Naidin, aged 12 years, subject to epilepsy, and of a scrofulous habit, whilst working at a carding machine, fell, it is supposed in a fit, and was caught by the right arm in a revolving strap, which carried him up to the ceiling, and tore off the arm

and scapula. When seen about half an hour after the accident, he was pale and faint, but there had not been a very profuse hæmorrhage. The axillary plexus of nerves had been pulled out, and hung loose from the detached limb, to the length of two or three inches. The artery was seen pulsating at the bottom of the wound, and was plugged up by a coagulum of blood. The vein was distended, and lay upon the torn muscles like a gorged leech. The integuments presented an appearance as if divided by a sharp cutting instrument, and formed a semilunar flap from above. In attempting to pass a ligature round the vessel it slipped from the grasp, and a violent gush of blood ensued; but it was immediately seized by a tenaculum, and the hæmorrhage restrained by the application of a single strong silk thread. A ligature was also applied to the vein, and a small artery was likewise tied. The flap was carefully adjusted, and secured by two ligatures, and plaister straps and pledgets of carded cotton were laid over the whole, and retained by a broad roller, which bound down the clavicle, and prevented it putting the skin upon the stretch. A little brandy and water was given, the boy was sent home to bed, and a draught, with gtt. xxv. Tinct. Opii, was administered. No unfavourable symptoms followed, the boy only complained of slight sickness, and of soreness, as if from bruises. It would be superfluous to state the progress of the symptoms and of the treatment: it will be sufficient to add, that the wound was first dressed on the 16th instant, and a healthy purulent discharge established on the 18th. The ligatures came away on the 3d August; but a large cavity over the site of the scapula continued to discharge very freely. A seton was passed through this to excite the growth of granulations, without effect, but adhesion of the entire flap was subsequently accomplished by injecting a solution of alum, of the strength of a drachm to the half pint. The boy is now perfectly well, and suffers no inconvenience from the scapular end of the clavicle, which does not project so much as to endanger the safety of the skin.

SCIRRHOUS STRICTURE OF THE JEJUNUM.

To the Editor of the Medical Gazette.

Romsey, Sept. 22, 1832.

Sir,

I have taken the liberty of giving you an account of what appeared to me a very interesting case, and if you think it worthy of insertion in your valuable journal, you will oblige one who has been a constant reader from the commencement of its publication. It excited much interest in this town, and was believed by many people to have been a case of *real* cholera, suppressed by me through fear of alarming the public mind, and was even once reported as such to our local Board of Health, in my absence. The proof I have been able to give of the real disease of which my patient died, has therefore much calmed the general feeling on the subject.—I am, sir,

Your obedient servant,

J. N. Beddome.

Miss S., ætat. 40, a lady of deformed structure and strumous habit, came under my care about the middle of last February, complaining of various anomalous feelings of indisposition, with bilious irritation, such as she has been subject to for years, and readily yielding to a mild soothing aperient plan of treatment. The case ran on for about a fortnight in the usual way, and the only peculiarity I noticed was, that it did not so quickly yield as before, and that, under the operation of any aperient medicine, she invariably had cramp in the fingers, with the thumb drawn in upon the palm, and which she attributed to the medicine not being active enough; and true it was, that mild aperients seemed to excite this spasmodic affection, while active doses generally removed it. In about the third or fourth week she was suddenly, and without any apparent cause, attacked with violent vomiting of a green bilious fluid, attended with severe cramp and spasm, and a peculiar sunk expression of countenance, so that her family remarked to me that she appeared twice as old as she really was. This yielded in twelve hours to large bleedings by leeches, and blisters to the epigastric region, and large doses of calomel and opium, with enemata of oleum

terebinthinæ and assafœtida in gruel. The attack went off, and she was tolerably well for a few days, or a week. The first threatening symptom which then presented itself was a numbness in the fingers; next came on vomiting and cramp, and all the above formidable train of symptoms, yielding as before to the same treatment. This went on for four weeks longer, her strength sinking under the increasing severity of the attacks. I gave her internally, by the mouth and as enemata, the most powerful antispasmodics and aperients I could suggest. Externally, stimulating applications were made to the limbs, the warm bath was used, and mercurial liniment rubbed all over the liver; and when the sickness prevented her taking food, she was supported by injections of strong beef tea, with flour, and old Madeira wine, given, in the quantity of a pint, just tepid, and with a few drops of laudanum—a plan I can confidently recommend in cases of great debility. She retained them from three to four hours, with evident advantage. But at last a more violent paroxysm took place, attended with general and most painfully distressing spasm, which terminated the sufferings of my patient.

Twelve hours after death, assisted by my partner, Mr. Winter, I examined the body, when the following appearances were manifested externally:—More emaciation than I have usually, or perhaps ever seen, with great distortion of the spine and contraction of the chest. I could just span across the chest. The left lobe of the lungs adhered very much to the pleura costalis, and the right lobe particularly so. Evident marks of inflammation on the surface of the liver, and the vessels of the viscera generally tinged with blood. The gall bladder contained about forty gall stones of various sizes, a singular circumstance, as she had never complained of those symptoms which are diagnostic of that disease; but upon tracing the intestinal canal the whole mystery was solved. Three or four inches of the jejunum were in a schirrous state, firm, and as hard as cartilage, and so contracted that the little finger could scarcely be passed in. The sides of the bowel were much thickened, the muscular coat divided into membranous septa, and the internal surface ulcerated like true cancer—every vestige of the natural structure lost, and the intestine changed into a gristly substance. I should observe, that my patient never complained of pain in that particular part of the bowels where the disease was seated. The ulceration in one part had the appearance of gangrene. The examination of this case was very satisfactory—has dissipated all fear of cholera from the family, and from the town; and the conviction of the positively incurable nature of the disease has produced the full satisfaction that no remedy could have reached it.

I have sent the preparation to my friend, Mr. Ashwell, one of the obstetrical professors at Guy's Hospital, in order that it may be deposited in the museum of that noble institution, where I believe it is now to be seen.

Under the almost periodical returns of vomiting, the quantity of fluid she ejected was four times as much as had been swallowed within several hours of each returning sickness; it must therefore have been detained in the bowels above the diseased part, and ejected by an inverted peristaltic motion. The morbid appearances coincided exactly with Dr. Baillie's admirable description of schirrus of the intestine; but it was the opinion of that distinguished anatomist, that the disease seldom appeared but in the great intestines.

ANALYSES OF NINETEEN REPORTS ON CHOLERA.

Transmitted to us by the Central Board of Health.

Mr. Wagner, Public Dispensary, Chancery-Lane, (Oct. 16.)—Has not found stimulants have a constant and beneficial effect in cholera. Thinks calomel, in grain doses, every three or five minutes, with or without a little opium, has a decidedly beneficial effect. Must be continued, sometimes, till a drachm or two of calomel taken. Cold affusion, in one case, with good effect. Has seen and treated about 30 cases of the disease.

Mr. Halse, Clifton Dispensary, (Oct. 20.)—Calomel and opium. With brandy and strong stimulating liniments in collapse. Has recovered 16 cases in collapsed stage. Salines worse than useless. Cold water of no service. Of 210 cases attacked, 200 were people of

intemperate habits, and wretchedly poor. 70 of them died.

Messrs. Thompson & Son, Prince's-Road, Kennington, (Oct. 25.)—Ordinary treatment. Calomel and opium, &c. Brandy and water. Effervescing draughts. Cold blue cases hopeless and irremediable.

Mr. Lewlas, Liverpool, (Oct. 26.)—Treated about 150 cases with more than the average success. In rice-water dejections with spasms, hot treatment. Drinks of warm tea. Teaspoonful of laudanum at the instant, followed up with smaller doses of same at intervals. In cases without spasms, calomel and opium till the mouth sore. Mustard cataplasm when the vomiting obstinate: soda and cold water for common drink. In third stage, cold water as good as anything. Thinks he has seen it do good.

Mr. Miskin, Horsleydown, (Sept. 12.)—Croton oil, two-minim pill in collapse. Calomel and opium. Stimulants. Salines tried with little or no benefit.

Dr. Seeds, Kensington, (Sept. 13.)—Proposer of following plan to the Board of Health. Prompt application of heat to body by ox-bladders filled one-third with hot water: starch and opium enemas: stimulating embrocation: eascarilla and ginger infusion with Epsom salts: also soda. Tried the plan on three patients: they all "went through" the disease.

Mr. Warden, Upper Limehouse, (Sept. 14.)—Mortality 20 per cent. Chalk, rhubarb, and opium, sometimes catechu or kino added, in the rice-water stage. Lime-water and neutral salts. "After the spasm and sickness have abated, the saline treatment has been efficacious in some cases, and in others failed." Collapsed stage very hopeless, but ought to persevere with stimulants. Has tried injection of saline solution into the veins in one case, and seen it tried in two more, without the desired effect.

Mr. Holman, Burr-Street (Sept. 12).—Calomel alone, in small doses, frequently repeated. In collapse, same with warmth and gentle friction. "Has been most successful." "I have had very nearly 150 applicants in various forms of the disease, 48 of whom have died. I attribute my unsuccessful practice in the commencement of this disease to bleeding, the administration of opium, and stimulants; all of which are incompatible with the recovery of the patient."

Mr. Tachwell, Oxford (Sept. 14).—Diarrhœa cured, in many scores of patients, by small doses of Epsom salts three times a-day. A case of rice-water evacuation with cramps and prostration, "did well under the *very* frequent use of effervescing salines and soda water, with a pill composed of two grains of blue pill and rhubarb at bed-time, and clear broth in small quantities for nourishment, without bleeding, brandy, or opium, in any stage of it."

Mr. Walford, Limehouse (Sept. 16).—In rice-water stage, chalk mixture and laudanum; laudanum and catechu injections. Pills of a little mercury and rhubarb. In collapse, ordinary methods.

Mr. Casson, Holbeck (Sept. 20).—Ordinary treatment, calomel and opium, &c. Transfusion tried in collapse, with no permanent effect.

Mr. Dunlop, Baker-Street, Portman-Square (Sept. 21).—Venesection with marked advantage; saline draughts; calomel and opium; afterwards cordial tonics.

Mr. Robinson, Surgeon to the Customhouse, Cooper's-Row (Oct. 19).—From January to October, 1831, had under his care 168 cases of diarrhœa, and one of cholera. During same period of this year, 227 diarrhœa, 8 English cholera, and 48 Asiatic: of the latter, 20 died. Various treatment. Concludes that "though the disease was capable of being taken by contagion, the atmosphere was the general source of infection."

Mr. Brown, East-Smithfield (Sept. 12).—Treated 50 cases. Calomel, opium, &c. Generally successful, with perseverance.

Mr. Reynolds, Wednesbury (Sept. 18).—In collapse, stimulants with partial success. Four cases in complete collapse recovered. Oxymuriate of potass ineffectually tried.

Dr. Hawkins Villers, Newman-Street, Oxford-Street (Sept. 21).—Stimulating purgatives, &c.

Dr. Robert Stevens, Ely (Sept. 19).—Places great confidence in infusion of horseradish; calomel and opium, purgatives, &c.

Mr. Harrison, for the Preston Board of Health (Sept. 20).—Although the treatment has not been successful at Preston, yet the preventive measures have been most beneficial. By adopting the proper precautions, no recurrence of the disease in the same dwelling took place.

Dr. Blackall, Exeter (Oct. 24).—Calls attention to a remedy which "bids fair to become an important curative agent." It is milk and lime-water. To adults, two table-spoonfuls of lime-water with one of milk, cold, every ten minutes. Doses diminished for children. Remains on stomach, and allays irritability after two or three doses. If diarrhœa prevail, it is checked with opiate injections. Disapproves of the practice of indiscriminate dosing with opium, which but two often overpowers the stomach and stupifies the feelings. Rather approves of mercurial frictions; but lime-water mixture the chief remedy. In the premonitory symptoms of the nervous kind, the spir. amm. arom. was found highly beneficial.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

An Introduction to Botany. By John Lindley, F.R.S. &c. &c. pp. 557.

This work, which has for some time been expected, is now in the hands of the botanical world; and while we are willing to give credit for a desire to judge fairly and impartially on the part of the two sects which at present divide it, we doubt not but that the book before us will be received with more approbation by the one party, and less by the other, than it actually deserves.

We live at the time when the restraints which hindered a free communication with the continent have been removed sufficiently long, to permit some knowledge of what was done in science, during the period of our exclusion from the neighbouring countries, to get diffused among us. Many, consequently, have become acquainted with and adopted the natural arrangement of plants, yielding to it a preference over the artificial systems formerly in use. The number of these cannot be said to be great, yet among them are some of the most eminent cultivators of botanical science now living; and the ability with which they have displayed and applied the principles of this method, has compensated for the smallness of their numbers. It may be safely affirmed, however, that the more the nature and objects of the arrangement of Jussieu are promulgated, the more numerous its disciples and advocates will become. As this is beginning to be perceived in our schools and universities, the adherents of the old systems, which they have accustomed themselves to consider as the utmost that botany could aim at accomplishing, have formed themselves into a sort of conservative party, to uphold the tottering fabric of their idolatry, and are not likely to welcome with the warmest greetings a work which, by communicating an immense quantity of knowledge respecting the structure and physiology of plants, will assist greatly in extending, as well as rendering more solid, the basis on which the natural arrangement rests.

The supporters of the natural method, on the other hand, will be apt to overrate the merits of a book, which is certain to prove so efficient an assistant to them in their endeavours to establish that system which they sincerely believe to be the best.

One cause which has greatly retarded the progress of the natural arrangement, has been the want of a good elementary work, in which its principles should be fully developed, and that accurate knowledge of the structure of plants communicated, which is essential before it can be perfectly comprehended or adopted.

Let us now see how far the present volume is fitted to supply the deficiency. It begins, as is proper, with the anatomy and physiology of plants, of which it treats separately—an arrangement of which we approve; for as the former

must always be in a more advanced state than the latter, it permits that which is certain to be easily distinguished from that which is doubtful.

Many points hitherto unsettled are here decided; but it were to be wished that the author had thrown many of the discussions upon the points remaining to be settled, either into the form of notes, or an appendix apart from the text, as their occurrence in the course of this will tend to perplex the tyro.

The physiology is treated in a very instructive way, and much that is interesting communicated. The author has certainly rendered a great service to such of his countrymen as are less acquainted with foreign languages, by introducing much of what can only be found in the most recent productions of the continental botanists.

The third book treats of the different classifications of plants; and the observations which it contains are valuable, and in most instances just. It will be admitted, that the author points out the defects of the Linnean artificial system with a very lenient touch, more so than might have been expected, or was necessary. Little is said of the present state of the natural system, as the reader is referred to another work of the same author, viz. his "Introduction to the Natural System of Botany." Many, doubtless, will think that the section on speculated modes of arrangement might have been omitted with advantage, or given as an appendix

The fourth book, which treats of glossology, or the adjective terms used in botany, needs little notice from us, farther than to observe, that not only is the arrangement good, but here, as in other parts of the book, the object is often figured on the page that contains the description—a plan which we are happy to see adopted in some of our other elementary works.

Closely connected with this is the subject of the fifth book, or phytography, and the instructions for forming herbaria, and every thing relating to collections of plants, are not only the fullest and best we know, but are followed by reflections, the truth of which we can confirm from experience.

What gives us most satisfaction, however, is the sixth book, being devoted to botanical geography, a department altogether neglected in every elementary work in the English language, yet one of great interest, both in itself, and as shewing how the distribution of plants over the earth is regulated by certain laws, deducible from the zones of latitude, the degree of altitude, and other circumstances, which, as matters capable of being calculated with precision, the inferences drawn from them will be found such as fully to entitle botany to rank as a science, its claims to which are daily becoming stronger.

The last book treats of morphology, a department likewise much overlooked in this country, but one of no small importance in relation to horticulture, and of great interest, from demonstrating the simplicity which pervades and guides all the operations of nature.

This brief survey of the contents of Mr. Lindley's work will enable us to judge how comprehensive it is; while it is but justice to say, that most of the subjects are ably treated, as well as brought fully up to the level of the science of the day, a merit possessed by no other English work on botany. Farther, the plates are well executed, and the numerous woodcuts clear and accurate.

After these statements, little commendation can be required from us. In a short time, we doubt not, it will have superseded the inferior books now in the hands of students; and it is to be wished, that medical practitioners in the country should be made aware of its existence and excellencies, and put *it* into the hands of their apprentices, that they may not have so much to unlearn, as is often the case at present.

To all desirous of becoming acquainted with botany as a science, or wishing to know what is the state of its fundamental principles, we would say—possess yourselves of this book, and you will not require any other for the elementary part of your studies. At the same time we feel called upon to remark, that it is not divested of abstract discussions quite so much as might be wished, seeing it is chiefly intended for beginners; this does not apply to the advanced student, who will find it a valuable guide to rational botany.

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MEDICAL GAZETTE.

Saturday, November 3, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE MEDICAL SCHOOLS.

THE subject of education, to which we have recently directed the attention of our readers, naturally leads us to speak of the medical schools, particularly those of the metropolis, because with them we happen to be best acquainted. Since the observations in our last No. were penned, we have had an opportunity of perusing the Introductory Address, which has been published, by the Professor of Medicine at the London University, in which we find opinions on certain points connected with the subject of education analogous to those we have already expressed, but connected with various assumptions and inferences from which we are compelled to dissent.

But first we would remark, that until the legislature had vested in the Society of Apothecaries the power of requiring a certain course of studies to be pursued by all those entering into general practice, the system of professional education was extremely defective, being nearly, if not entirely, limited to the metropolis, and even there seldom extending beyond lectures on anatomy and on surgery,—or perhaps a single course on the practice of physic, if the student was ambitious of excelling the majority of his compeers. Soon after the event alluded to, however, and chiefly in consequence of the progressive demands made on the aspirants for their diploma, first by the Apothecaries, and afterwards by the College of Surgeons, corresponding improvements took place in the means of instruction afforded to the medical student, not only in London but in several of the provincial towns. Indeed, not many years ago, a mania for lecturing became epidemic, and almost every one who could get himself "recognized," forthwith set up as a—professor. If he could collect together half a dozen hearers, between pupils and amateur friends impressed into the service, he thought himself a very fortunate man, but if his numbers fell short, he went on notwithstanding; the use of his own parlour cost him nothing, and some notoriety, at all events, if but little profit, was gained by his advertisements in the daily and weekly newspapers.—This absurd state of things, however, soon cured itself, for ere long it became rather a mark of distinction not to lecture; and as many never received fees enough to cover their limited expenses, the zeal for instructing the rising generation rapidly abated. One would suppose, from the perusal of the "address" before us, that the same superficial and imperfect system of teaching still continued at every school in London—except that in Gower-street. But it is not so: the stimulus which had been given by the circumstances above mentioned was beneficially felt in those situations where all the "appliances, and means to boot," existed of affording the requisite instruction; and accordingly schools were instituted at the great hospitals; and although a compliance with the existing regulations necessarily prevents any from being perfect, yet are several of them as complete in plan and efficient in execution as any which to this hour are to be found in London; whilst others, scarcely less efficient, have sprung up in various parts of the country; in fact, wherever that most necessary appendage of a medical school existed—a receptacle for the sick, of sufficient magnitude to afford the requisite illustrations of disease.

We have endeavoured in a former

No. to shew that the system of medical education may be in various ways improved; and this idea naturally became blended with a reference to the system pursued in the schools of the metropolis, which we were wont to contemplate as all conducted on the same general plan—with some minor differences in the details, but all more or less referring to the Regulations of the College of Surgeons and Society of Apothecaries—such, we say, was our impression, when we were startled by the following passage from the pen of the learned Professor of Medicine in the London University:—"In the medical department," says he, "the superiority of the plan of the University over that, not only of Oxford and Cambridge, *but of every other school in England, is very conspicuous.*" Our first impression on perusing this sentence was, that some important feature in the plan alluded to had escaped our notice; but a little farther on we found the claim to being foremost in the race of improvement thus vindicated:—"The superiority of the plan of our University over that of all other English medical schools, consists *in the copiousness and extent of the information afforded.*" It is then stated, that courses of six months' duration on the elementary branches of medicine, are "absolutely necessary, to afford any thing like due information;" and that "courses of only three or four months' duration, and consisting of only three lectures a week, must be very superficial, and leave the hearer but a smatterer." Here, then, are the points clearly enough set forth: first, the superiority of the plan is "very conspicuous;" secondly, this superiority consists in "the copiousness and extent of the information afforded." It is impossible for us to read these statements without perceiving that the learned author is not fully aware of the state of the other medical schools, else would he not have passed upon them this general charge of inferiority, without one qualifying expression, or one redeeming exception. There are, however, two objections which may be made to the Doctor's positions—viz. first, that the "plan" is really by no means so different in the other principal schools as his exclusive language would lead the public to suppose; and, secondly, where any difference exists, it is far from being so "very conspicuous" on which side the superiority lies.

And first, with regard to the plan:—we apprehend that any one, on reading the passages we have quoted, would suppose that extended courses of lectures were not given on any branch of medicine, or at any school, except at the London University. But how stands the fact? Why, that courses, beginning the first of October, and continued to the middle or end of May, were given in some of the most important departments of medical study, before even a stone of the London University was laid!—and this from a conviction that such subjects could not be efficiently taught in a shorter period. To take surgery as an illustration, we question whether there be at this moment a single course delivered in London which is not continued from October to May. The same is done also in some instances with respect to the theory and practice of physic; and in at least three schools with respect to anatomy. Neither does it seem that the learned professor is entirely free from inaccuracy as to the actual "plan" of his own school, which he represents as consisting in "a course of lectures of six months' duration, and of almost every day in the week, on the practice of medicine, *the practice of surgery*," &c. &c. Now it happens that the surgical lectures are delivered only *three times* a week—precisely in the same manner as in every other school in the metropolis.

If the observations had applied to the regulations which define a course

as consisting of, and therefore to be efficiently comprised in, forty-five lectures, without reference to the subject, we should have fully concurred in the sentiment; or if the learned lecturer had limited himself to stating that the plan was more ably carried into effect at the school which has the advantage of his services, than at any other, we should have left it unnoticed, as a mere matter of opinion, admitting of endless discussion, but leading to no satisfactory decision; though none (and we say so most sincerely,) would be more ready than ourselves to make any reasonable concession to the school of one so entirely devoted to the furtherance of its interests, as the learned professor, some of whose opinions we feel called upon to combat. But if it be asserted that the palm belongs to the London University, because in it *all* the courses are extended, while in other schools some only are so, then we must be permitted to doubt the superiority of a system which assigns to all subjects, however unlike in nature and importance, the same period for their discussion: it requires no argument to shew that the time must either be too long for some, or not long enough for others. The extent of a course ought always to bear a due proportion to the nature of the science to be taught, and to the number of its objects. Thus in the theory and practice, both of medicine and surgery, where fundamental principles are to be established, and where each successive part, as the course unfolds itself, becomes an illustration of some general doctrine—the lectures consisting of descriptions and reasonings addressed to the judgment, rather than the memory—in such cases, we say, no doubt can be entertained of the superiority of extended courses, and here we entirely agree with the preference for them now shewn by Dr. Elliotson,—as it had previously been by others. But with respect to certain other branches, as materia medica, a great part of which is addressed to the senses, and the object of which is to familiarize the student with the appearance, and doses, and properties of drugs, by an effort of the memory rather than the reasoning faculties; then, we say, that in such case we have no hesitation in expressing our conviction that the pupil will learn more by attending a course of the ordinary length twice, than from having the subject spun out, so as to spread over six months, by the introduction of every thing that has, and much that has not, any connexion, however remote, with it—to the utter annoyance and exhaustion of both teacher and student. Never shall we forget the martyrdom of the "extended course" on materia medica, which in our time used to be inflicted in Edinburgh!

There are other subjects, with respect to which it may admit of reasonable doubt which of the two to choose,—the long course once, or the shorter one repeated. Whether, for example, will the pupil, at the end of the season, be a better anatomist, if the teacher give but one series of lectures throughout the season, entering elaborately into all those minute discussions which are requisite to fill up the time; or if he make the second division of the session so far a repetition of the first, that the natural anatomy of the body is gone over twice? We say "so far," because we know that it is usual, for the sake of variety, to introduce physiology into the first, and pathology into the second course. We are aware that a difference of opinion exists in this respect, some metropolitan lecturers preferring the former, and others the latter plan: we are also aware that the subject has been discussed by several lecturers, and among others that Mr. Stanley, (who is probably the most experienced anatomical teacher now in London), as well as others whom we could name, after due deliberation, decided in favour of the

shorter courses, as more to the advantage of the pupils.

But to return. Two other points are alluded to as illustrating the superiority of the plan at the London University; namely, the illustration of the lectures by preparations, plates, models, experiments, &c.; and secondly, the instituting of examinations. We need scarcely inform our readers that neither of these are peculiar to any school: the museums at all the great hospitals sufficiently shew the attention that is paid to the materials of illustration, for obtaining which, indeed, their circumstances give them excellent opportunities. As to the other part of the plan—that, namely, of having occasional examinations—it is adopted at many, if not at all, the schools; while in some instances it has been carried to an excessive, and therefore injurious extent, constituting a mere system of *grinding*.

From what we have said it will be gathered, that, in our opinion, the learned lecturer, in advocating the cause which it is very natural and very proper that he should support, not only has lost sight of the rival institution, against which the closeness of its imitation was made matter of taunt in a previous introductory delivered from the same chair; but he also seems to have forgotten the many eminent men who are at this moment employed in teaching the various branches of medicine in the metropolis, on plans so similar to that adopted at the London University as to render it obvious that the atmosphere of Gower-street must be exceedingly favourable to the growth of intellect, if the pupil there be filled with knowledge even to overflowing, by the same method which elsewhere "leaves the hearer but a smatterer."

To some it is possible that the silence, under an implied charge of inferiority, of those whose cause we have endeavoured to advocate, may appear as a tacit admission that the imputation is deserved: but of course the learned author of the address before us cannot be among that number, — to him the diffidence which ever attaches to merit must be familiar; and no doubt he can well appreciate the reluctance with which those who are devoted to the pursuits of science obtrude themselves and their pretensions on the notice of the public.

P.S. Since the above was written, we have learnt that one of the lecturers (Mr. B. Cooper, at Guy's) who last year gave an "extended" course on anatomy, has this season gone back to the old plan — *at the request of his pupils.*

HIGH-EARED RACE OF MEN.

M. Dureau de Lamalle has made out the strongest evidence in proof of the existence of a distinct variety of the human race, characterized by the position of their ears. Not only, as they are represented in the Memnonium, and other Egyptian statues and coins, were the old Egypto-Caucasians remarkable for their high ears, but in more than forty mummies which were unrolled and examined by M. de Lamalle, at Turin, the auricular foramen, which, drawing a horizontal line, is placed in us on a level with the inferior part of the nose, was in these examples found to be on a level with the middle of the eye. The elevation, as measured, amounted to a full inch and a half. The facial angle was at the same time found equal to that of Europeans, but the temporal region much more depressed than in our variety.

Nor does it appear that the high-eared race is extinct: there are instances of it among the people of Upper Egypt at this day; and indeed there is in Paris at present a teacher of Arabic, a Copt of Upper Egypt, who is possessed of this conformation in a most decided degree.

MANCHESTER MEDICAL SCHOOL.

We have been much gratified by the report sent us of the public dinner given last week in Manchester, to commemorate the opening of the New Theatre in Pine-Street. The following particulars will, we think, be found generally interesting. Benj. Braidley, Esq. the Boroughreeve, filled the chair. On the health of Mr. Turner, the founder of the theatre, being drunk, that gentleman returned thanks. He claimed for Manchester the merit of having largely contributed to the diffusion of useful knowledge. That town had long held, and continued to hold, a high rank for its support of literary and scientific institutions. The Literary and Philosophical Society, the Natural History Society, the Royal Institution, and the Botanical and Horticultural Society, were so many proofs of the interest taken by the inhabitants in the cause of science. But it should not be supposed that the cultivators of medical and surgical knowledge had slumbered all this time, because they had worked on in comparative seclusion. He then pronounced an eulogium on the memory of Percival, White, Gibson, Simmons, and other eminent professional men of Manchester. He would not claim to himself any exclusive merit in establishing the school: when he entered on the duties of a lecturer in that place, it only required an organization of plans, and the bringing lecturers together; and he was most willing to share with others, particularly White, Gibson, Ransome, and Jordan, the palm for such a service. On the health of the other lecturers of the Pine-Street School being drunk, Dr. J. L. Bardsley acknowledged the toast in an elegant speech, in which he took occasion to pay due tribute to the other schools of Manchester, and concluded by proposing the health of the lecturers at those schools. Mr. Jordan, returned thanks, and observed, that fourteen other towns had followed the example of Manchester. Dr. Bardsley, in acknowledging the toast of the "Manchester Royal Infirmary," said, he was well aware that Manchester was justly proud of its eminence in manufactures and commerce; but he rejoiced that the inhabitants had still more reason to be proud from another source. The Royal Infirmary might be compared to a tree planted in a good soil; it had taken deep root, and by diligent and successful cultivation had risen to its present gigantic height, dispensing its healing balm in every year to 19,000 of our suffering fellow creatures.

Dr. Dalton returned thanks for the Literary and Philosophical Society; and several speeches were afterwards made, among others, by Dr. Holme, Mr. J. E. Taylor, Mr. Radford, Dr. Alexander, Mr. Wilson, and Mr. Gordon. Before the conclusion of the convivialities, Mr. Turner took occasion to announce, that the senior pupils in the old school who had obtained medals were Mr. Golland and Mr. Ker; and in the new school, Mr. John Kinder Wood.

COLLEGIUM WAKLEYANUM.

To the Editor of the Medical Gazette.

Sir,

I have been strongly solicited to offer myself a candidate to the London College of Medicine, but have declined doing so until I have obtained some information on the subject from those competent to give it. This College is said to have been instituted in 1831. Pray, by whom was it instituted, and what are its legal constitution and privileges? Has it really a power of granting the degree of doctor in medicine? and would the title of doctor of the London College of Medicine be recognised by the courts of law? Will a degree from this College enable a person to practise medicine without fear of interruption from the Colleges of Physicians and Surgeons, and the Apothecaries' Company? Or is the whole concern a mere humbug—an association of a few individuals *calling themselves* a College? because, in that case, I should still decline joining them, not choosing to undergo the ridicule of all my acquaintance, and to become the laughing-stock of the public at large.

Cautus.

October 20, 1832.

[Cautus is a prudent man; but he ought to know that we laid even the ghost of Wakley's College long since. Who are the jugglers that would pretend to raise it again?—Ed. Gaz.]

DUTY ON SKELETONS, MODELS, ETC.

THE following letter explains itself: we give it insertion for the benefit of those whom it may concern.

Treasury Chambers, Oct 30, 1882.

SIR,

Having laid before the Lords Commissioners of his Majesty's Treasury your letter of the 15th instant, addressed to Viscount Melbourne, on the subject of the inconveniences to which anatomists are subjected, by the operations of the bill for regulating the Schools of Anatomy, and requesting his Lordship's interference, in obtaining relief from the duties at present payable on the importation of articulated skeletons, wax models, and other preparations illustrative of the anatomy of the human body; I am commanded by their Lordships to acquaint you, that the practice which has been adopted with regard to the admission of anatomical preparations, models, &c. has been to remit the duties on such articles when imported expressly for the use of any particular school, or to be deposited in any public museum, or when brought to this country by foreigners, for the purpose of lecturing thereon, or the advancement of anatomical science: and my Lords will not object to extend these regulations to the admission of human skeletons; but they would not feel justified in sanctioning the remission of duty generally on such articles, when imported for sale. Individual applications must, therefore, be made to this Board, in such cases as may come within the above-mentioned regulations.

I am, sir,
Your obedient servant,
SPRING RICE.

Dr. Somerville, 5, Saville-Row.

HOTEL DIEU, PARIS.

THE MODERN ABELARD; WITH CLINICAL REMARKS ON MUTILATION OF THE GENITAL ORGANS.

By M. DUPUYTREN.

AFTER some remarks on mutilation of the genital organs caused by machinery, M. Dupuytren observed that it was not unusual in quarrels for the vanquished party to seize the victor by the genitals: he saw a case in which a large portion of the scrotum was torn off with the teeth; and he met with another case still more remarkable, in which both testicles were dragged away by the hand of a furious adversary. People in a state of delirium often mutilate themselves in this way; and weak-minded persons sometimes cut off their testicles for the strangest reasons. The professor knew one man who did it through vexation at the ill conduct of his daughter: another, who was displeased with his wife, proceeded to cut off his penis, but he was stopped before he had got farther than through the urethra and one of the corpora cavernosa—about half through the organ. He was brought to the hospital, a sound was introduced into the urethra, and reunion was effected: but the consequences were singular. In its flaccid state the penis did its duty very well, in allowing the urine to pass; but when erection took place, the cicatrice preventing it in one of the corpora, it was confined to the other: hence there was a most extraordinary drag and curvature in the penis, and a deformity, said the professor, truly hideous to behold.

These remarks of M. Dupuytren arose out of a case of a most shocking nature now under his care—a case, in fact, the counterpart of the horrible atrocity committed on Abelard. It is as follows:—

Removal of the right Testicle; Cure.—Removal of the left, eight weeks after, by violence—Horse-practice for the suppression of the Hæmorrhage.

Constantine M. 24 years of age, an operative in a foundry, applied at the Hotel Dieu, on the 14th of October, about two in the afternoon, for relief in the suppression of a scrotal hemorrhage. The left side of the scrotum was swelled to the size of two fists, and violet coloured. It bore a longitudinal incision, between the lips of which there was seen a large bloody clot, and across this clot a continual oozing of fluid red blood. M. Dupuytren removed with his finger about a pound weight of clotted blood, and perceived that the oozing came from the cellular tissue, which was like an overcharged sponge. He then, with a pair of scissars, removed the infiltrated part of the cellular tissue. Three little arteries made their appearance, and were tied: the hemorrhage then ceased.

In the course of this treatment it was found that the testicle was not present: but the extremity of the spermatic cord was seen engaged between two little pieces of wood, eighteen lines in length, each of them demicylindrical, but by their apposition forming a cylinder of a couple of lines in diameter, and confined in that shape by a strong ligature of packthread: in short, it was a regular *clamp*, such as sow-gelders use for splaying domestic animals. Extra-

ordinary as all this was, the wonder was increased when on examining the right side of the scrotum there was found a perfect cicatrix, but the testicle was wanting.

The patient gave the most contradictory accounts of himself; but from a careful investigation of circumstances, the following seems to be a true account of his misfortune:—

He had cohabited with a married woman, whose husband, having come upon him by surprise, deprived him of his right testicle as a fitting punishment. This was about six or eight weeks ago. But the unfortunate lover was no sooner well than he returned to his old habits: it was after having spent the night with his paramour that the husband caught him a second time, and, with the assistance of two stout men whom he brought with him, tied the patient's hands behind him, fettered his legs and fastened them to a bed-post, when one of the ruffians knelt on his chest and stopped his mouth, while the others were performing the emasculation.

Notwithstanding this horrible treatment, the patient persists in concealing the names of his butchers: some of the circumstances, however, attending the case, may lead to their discovery. The wound was evidently inflicted by a practised hand; the incision was neither too large nor too small; and the precautions taken against hæmorrhage by the veterinary expedient mentioned above, yet without the skill to provide against the bleeding of the small arteries, shew with much probability that the operator must have been some sow-gelder or veterinarian by profession.

The clamp (*tasseau*) was removed, and a ligature placed instead; which has since come away. The patient is going on very well; he is, indeed, in no danger; "but his doom is sealed—he is erased for ever from the list of men—he is incompetent for the duty of reproduction!" The Professor gave particular directions that the poor fellow should be kept quiet—that his *moral* should be tranquillized as much as possible after such an agitating calamity.

There is also another case of mutilation in the hospital at this moment, and perhaps one not less remarkable in its history than the preceding. The person is 45 years of age, with black beard and mustachios. He came in for fever; but his scrotum, testicles, penis—all his genital apparatus, are clean off. There is just one median cicatrice, deep enough to present the appearance of *labia externa*. A little nipple-like projection, with a perforation in it which would seemingly admit about the head of a pin, marks the place of the urethra. No consistent account could be got from this individual how his misfortune happened. At first he said it was from a kick of a cow; but he has since confessed that he did the deed himself, with a view to suicide, after having suffered a severe pecuniary loss. He had heard, he said, of a physician who put an end to himself by this sort of mutilation, and he wished to follow his example. The hæmorrhage he described as having been very great, but it was ultimately suppressed by the copious use of cold water.

GUY'S HOSPITAL.

Case of Congenital Malformation of the Heart.

[Communicated by Mr. Dade.]

William Hodgson, æt. 16, rather a robust youth, had, since his birth, been much troubled with palpitation of the heart and great dyspnœa upon the slightest exertion. He had also suffered much from frequent attacks of pain in the left side. He was admitted into Guy's Hospital on the 28th of March, 1832, under the care of Mr. Key, for an indolent ulcer on the left leg (depending upon feeble circulation), which, as well as the right, was rather œdematous. He was also, a short time after his admission, affected with purpura. There was nothing particular in the appearance of the countenance beyond the usual characteristics of heart disease—viz. anxiety of countenance and lividity of the lips; and it was only upon increased exertion that his face became decidedly blue. Pulse was regular, but slow and feeble. It appears he left the hospital of his own accord, April 22d. From this time up to October 3d no particular aggravation of the disease occurred, until he was attacked with fever, when he was re-admitted on the latter date, under the care of Dr. Addison. During this time (but never before) hæmoptysis supervened to a great extent frequently, and on the 13th he died. I have not thought it necessary to lengthen the case by detailing the remedies administered; from which nothing but a palliative effect could be expected. The stethoscopic indications were as follows:—

Action of the heart very tumultuous. Upon placing the hand upon the anterior part of the chest a peculiar vibration was communicated to it. Contraction of the right ventricle louder than usual, and accompanied by the "bruit de soufflet;" action of the left much embarrassed, feeble in its contraction, and emitted a peculiar flapping noise. Dr. Addison and Mr. Key considered it a case of imperfect septum ventriculosum. The correctness of their diagnosis was verified by the postmortem appearances. The inspection took place forty-eight hours after death; morbid alterations as follows:—

Thorax.—Old cellular adhesions between pulmonalis and costalis of the left side.

Right lung not adherent; the cavity contained a small quantity of bloody serum; substance of the lung rather œdematous, and interspersed with miliary tubercles.

Left lung enormously engorged with blood, and easily broke down under slight pressure. At the apex of the superior lobe there was a tubercolous excavation containing small particles of earthy matter. The rest of the lung presented the same morbid appearances as the right. Mucous membrane of the bronchiæ highly vascular and turgescent. Pericardium contained about ℥iij. of sanguinolent serum. Heart rather enlarged. Right auricle dilated. Foramen ovale perfectly closed. Right ventricle, from being hypertrophied and dilated, presented the same appearance as the natural size of the left. Tricuspid valves healthy. Pulmonary artery about half its usual size at its commencement; sigmoid valves corrugated and thickened. Left auricle and ventricle collapsed; parietes much attenuated, and the cavities diminished. Mitral valves healthy. The aorta arose from the right ventricle, below and rather to the right of the pulmonary artery, and anterior and inferior to the aorta was the opening in the septum, about the size of a shilling; the superior part of its concavity being bounded by the commencement of the aorta, the inferior by the remaining of the septum. Aortic valves healthy.

Abdomen.—Liver healthy. Lower portion of the ilium free from ulcerations, but presented patches of enlarged glandulæ aggregatæ.

NOTE FROM MR. MACLURE.

Mr. Maclure has written to say that we have not represented his opinions correctly in our analysis of his Report on Cholera: we subjoin the passage alluded to *in his own words*, and any one who feels sufficient interest in it may judge for himself whether we did or did not render it fairly, at p. 115 of our last No.

"Though the undersigned has treated, since the commencement of this year, many cases of cholera, and still more of diarrhœa, he does not think that any of the cases which came under his notice were new to this country and climate; certainly none of them were so severe as some which he met with in the summer and autumn of 1831, before the present epidemic was supposed to have reached Great Britain. Of course he cannot be sure but that some of the cases which he has treated this year might have ended in the malignant cholera, if they had been neglected or improperly treated at the commencement."

WEEKLY ACCOUNT OF BURIALS,

From the Bills of Mortality, *Oct.* 30, 1832.

Abscess	3	Fever, Typhus	4
Age and Debility	30	Hæmorrhage	2
Apoplexy	4	Hooping-Cough	17
Asthma	11	Indigestion	27
Cancer	3	Inflammation of the Bowels & Stomach	11
Childbirth	2	Brain	5
*Cholera	17	Lungs and Pleura	7
Consumption	77	Insanity	2
Convulsions	35	Liver, Diseases of the	7
Croup	3	Measles	15
Dentition or Teething	6	Paralysis	1
Dropsy	9	Rheumatism	1
Dropsy on the Brain	12	Small-Pox	17
Dropsy of the Chest	4	Spasms	1
Dysentery	2	Thrush	2
Erysipelas	3	Tumour	2
Fever	8	†Unknown causes	54
Fever, Intermittent or Ague	3		
Fever, Scarlet	14	Stil born	13

Increase of Burials, as compared with the preceding Week . . . 116

* Of the number of deaths by cholera above stated, 11 were reported by the clerk of St. Botolph, Aldersgate, as having occurred in that parish since the 17th of July. He neglected to make any report for fifteen weeks.

† The report of burials in the parish of St. George Middlesex, not having been accompanied with a list of diseases, the number returned is placed with the unknown causes.

METEOROLOGICAL JOURNAL.

October 1832.	Thermometer.	Barometer.
Thursday . 25	from 37 to 53	30·33 to 30·31
Friday. . . 26	37 53	30·31 Stat.
Saturday . 27	33 51	30·28 30·27
Sunday . . 28	43 54	30·19 30·07
Monday . . 29	44 56	29·97 29·90
Tuesday . 30	33 52	30·06 30·00
Wednesday 31	38 53	30·04 30·00

Wind variable, S.W. prevailing.

Except the 25th and 30th, cloudy; rain on the 28th and 29th, and evening of the 31st.

Rain fallen, ·275 of an inch.

Charles Henry Adams.

ERRATA.

In Mr. Bracy Clark's paper, in our last number, page 111, about middle of column 2, *for* "stroppos," *read* "strophos." Page 112, line 26, col. 2, *for* "it," *read* "he;" p. 113, line 11, col. 1, *for* "inapplicable," *read* "inexplicable." Page 114, bottom col. 2, *for* "as," *read* "or;" p. 115, *for* "digestion act," *read* "digestive act." Towards the close of the essay the word "*cardiac*" occurs; Mr. Clark desires us to say that he intended this to have been "*cordiac*," considering it "a more concise mode of expressing the heart and arterial system, without the round about way in common use."

In Dr. Elliotson's Lecture in our last No. p. 98, col. 2, line 21 and 24, dele the comma; p. 100, col. 1, sentence 10, remove the parenthesis after "*morbilli*," and place it after "madder;" and for "*senession*," read "*senepion*."

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 10, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

BY DR. ELLIOTSON.

CUTANEOUS DISEASES.

Erysipelas—Treatment: concluded.

IN speaking, gentlemen, of erysipelas the other day, I merely laid down the general principles of treatment—those measures which are of a decidedly antiphlogistic kind, and those which are necessary when the body requires supporting, or even stimulating.

Bark.—I mentioned that you cannot lay down the treatment in any universal way; that you now and then must bleed: in other cases you must give nourishment of the best description—wine and bark. But I did not mention that some old practitioners imagine, from having learned it in their youth, that bark is a specific for this disease; and in every case of erysipelas they give, or (as they call it) "throw in" the bark. It was at St. Thomas's Hospital that this practice was first established. Dr. Fordyce gave bark in erysipelas with very great success, and his colleagues and successors, down to within a very few years, all adopted the same practice, and extolled it highly. Now I never fell into the practice of giving bark universally, whatever was the state of the patient. Very often there is tenderness of the epigastrium; very often there is vomiting; very often there is a robust constitution and a strong pulse; in short, a decidedly inflammatory state; and I could not in my conscience think of treating the case with bark. No doubt bark might be given in many inflammatory diseases without doing any harm, except so far as it prevented you from doing good; but you see many cases where antiphlogistic measures are decidedly required, and I could not bring myself to omit them. There are many gentlemen now in practice who were educated under Dr. Fordyce (for he was the principal medical lecturer in London at that time), and who regularly give bark in this disease. I have no doubt that a number of their patients get well, because many cases are assisted by the bark, and many cases will get well of themselves, if you do not adopt any measures which do serious harm.

There is certainly a great peculiarity in erysipelas: you will frequently see cases do well with little or no treatment—without those evacuations that other inflammatory diseases require. I have seen cases neglected, which, had they been pleuritis or enteritis, would have proved fatal without vigorous antiphlogistic treatment; but which, notwithstanding they were neglected, did exceedingly well.

Specific Character.—Erysipelas is considered a specific inflammation; not contagious like small-pox—not limited to its occurrence once during life—but still altogether of a peculiar nature. It will bear stimulants, and bark, and nourishment, in a way that other inflammations will not; nor will they do the same degree of harm that would ensue from their exhibition in other inflammatory complaints. You may omit antiphlogistic measures to an extent that you dare not in other cases; and it will require on the whole, however violent the inflammation, much more moderate evacuations, and less bear great evacuations, than other inflammations. There is another important consideration: when you are in doubt as to whether you should support these patients or not—whether you should not give them wine, bark, quinine, and porter in moderation—you may then do it with the greatest safety. I never saw

harm done when it was near the balance. In other cases of inflammation, I have thought that the time was arrived for this species of treatment when it was not, and I have been obliged to desist; but in erysipelas such a circumstance very seldom occurs. As to sulphate of quinine, that may be given in most cases of the disease, and I never saw injury arise from it under any circumstances. I have seen decidedly active cases of this disease treated with quinine, without their being the worse for it: I do not know that they were improved, but certainly they were not rendered worse. Dr. Heberden gave it as his opinion that bark would not do harm in inflammation; and in a great many cases it is true; but as to quinine, I have given it over and over again in inflammation, for some other reason—for example, in ague, where I have not seen the inflammation increased; but in these cases I have always treated the inflammation, at the same time, by proper measures. Hence, in erysipelas, if you feel disposed to give quinine you always may, except there be vomiting; and even where there has been vomiting I have given it, and it has put a stop to it. Therefore, though this is a disease that is to be treated by decided antiphlogistic measures, yet it permits the exhibition of wine, bark, and porter; and though you adopt antiphlogistic measures, yet it does not bear those evacuations that other inflammatory diseases do. It sooner requires supporting measures, and a larger number of cases require support, than perhaps in any other inflammation.

Starch, Zinc, &c.—Respecting local applications, I mentioned merely heat and cold. I have found cold answer better than heat. Some practitioners sprinkle starch and other powders over the skin; and I do not know that it does any harm, provided the powder be of the slightest possible description, so as not to lie heavy on the part. If there be vesication, it certainly is a good plan to sprinkle a little powder, for the purpose of absorbing the discharge which may have occurred. The oxide of zinc, or calamine powder, either the one or the other, is as good an application as you can employ; but this should not prevent you from applying cold water, which you may still do by means of cloths.

SQUAMÆ.

I now proceed to consider those inflammations which, although they are attended by no secretion under the skin, still cause such a disease of the cuticle that a scale is produced. In those inflammations which I have already spoken of—lichen, strophulus, measles, and so forth—there is for the most part a degree of scurfy exfoliation after them; the cuticle is separated more or less, either in fine grains, so as to form a scurf, or in large portions. But the diseases we are about to consider produce something more than a separation of the cuticle, which becomes a little diseased, and lies in plates upon the inflamed spot. That is the only difference. These thickened portions of cuticle are called scales. The definition of Dr. Willan is, "a lamina of morbid cuticle, hard, thickened, whitish, and opaque." A scurf is only a little exfoliation of cuticle, the cutis not becoming diseased; but if the cuticle be not merely separated, but become hard, thickened, whitish, and opaque, then it is called a scale. Still, however, there is no ulceration; there is neither pus nor serum, nor any thing else effused under the cuticle; but the cuticle is separated, and not only separated as in common inflammation, but thickened and diseased. Now in this order of diseases there are three genera, and these are of common occurrence; diseases that you will have to treat every day—diseases of a chronic character. None of them are contagious; they may occur twenty times during life, and they are all disposed to become chronic.

Pityriasis.

Species.—The first of these of which I will speak, is Pityriasis. I speak of it first, because the scales are exceedingly thin, and the affection altogether very superficial. When it occurs in the head of children, it is called *P. capitis*, dandriff of the head. When a child's head has this disease, a fine powder falls off in all directions; in fact, it is called pityriasis, from its resemblance to bran. It is a very common disease of children. Now and then the inflammation is considerable under these scales, and then it is called *P. rubra*. It is only worth while for you to remember, that just according to the degree of inflammation of the skin underneath the scale, the part is either rather pale or pretty red.

Duration.—This is a disease which lasts only for a time in children; for the most part it gets well, and I dare say sometimes spontaneously.

Treatment.—It is best treated as inflammation, having the parts pretty well moistened twice a day, keeping them exceedingly clean, and cutting the child off from stimulants. Small doses of hydrarg. c. creta, I believe, are the best internal means that can be used—the best, at least, that I have found. It is said by Bateman to be removed by antimonials, with the decoction of woods, but I have no faith in these; and I know, that what I have stated, answers better than any thing else. You may keep the parts soft by ung. zinci,

which is one of the best; but it is well that you should know, that in diseases of the skin, ointment, however mild, may produce irritation. I have seen many diseases of the skin kept up by medicinal applications. It is well to remember this, because you might imagine that it was only something stimulating in the ointment that was injurious, and that a milder ointment would answer better; whereas, it is the ointment *itself* which produces the mischief. I have seen the disease entirely kept up by patients putting on grease, and when they have exchanged it for calamine powder, and kept the parts moist by rags laid on them, they have improved almost immediately.

Pityriasis is said to occur frequently in another form, called *P. versicolor*;—I am not sure that it is really the same disease. You will see it in young women, particularly about the breast; and sometimes on the neck there are yellow patches of it. Now this state is called by Willan P. versicolor—variegated pityriasis; but Rayer does not place the disease under pityriasis. Now and then there is a little redness, a little heat, and a little scurf.

Treatment.—I do not believe that this is under the influence of internal medicine; at least, I have tried a great many prescriptions without any effect; but you may destroy it with acids. The thing is painful; but you may have a part painted, and if that be cured, and the patient has no objection, you may go all over it. It is a complaint that is not attended by derangement of the constitution any more than the scurf of children. I do not know why these affections occur; the causes are not known that I am aware. It may now and then arise in children from weakness, and it may be right to give tonics, some preparation of iron or quinine, and good nourishment; but, for the most part, I believe the treatment I have mentioned, hydrarg. c. creta, and mild diet, answer very well.

Lepra.

The two others in this class you will see every day. They are diseases which a great number of young men and women are particularly subject to; and I think they are more common in the latter than in the former. These two affections are very similar to each other; they run into each other, and, indeed, I think they might be considered as the same disease in different forms.

The first of these is called *lepra*. Lepra does not signify leprosy, according to the ancient term; it is a different affection. This is by no means a loathsome disease; it consists merely of red spots on the skin, or patches covered with scales. For the most part it does not affect the health, except so far as it may sometimes be connected with an inflammatory state; otherwise it is merely disfiguring and inconvenient.

Character.—In the disease denominated lepra, to distinguish it from psoriasis, you will find that the patches are circular—that the margin extends a little beyond the skin, and is red and elevated. The cuticle is sometimes very much thickened, and sometimes very white and silvery. You will first see the disease in dots, varying in size from a pin's head to a pea, and these become confluent and form patches. It is about the outer part of the elbow, and below the knee, that these are most conspicuous. You will see it too about the occiput, behind the ears, and it will affect the face more or less, and the whole of the scalp. Of course the character of the disease is shewn more in one part than in another; and it is a good general rule when you investigate cutaneous diseases, not to be satisfied with looking at one part of the body, for the disease may be but ill characterized at one part, and extremely well characterized at another. It is best, in looking at cutaneous diseases, to examine all over the body; and in doing so, you will come to one part where the disease is so characteristic, that you may name it without any difficulty. The patches in lepra are sometimes as large as a crown piece, and the disease much more frequently affects the extremities than the trunk, but you see it also very much about the head.

Species.—The most common form of the disease is that which is called *L. vulgaris*. You will observe [exhibiting a plate] that the eruptions all affect a circular form; that the large patches, which are made up of an aggregation of small ones, are still more or less circular, and you will observe also a red margin around them, which is elevated. When they heal, they generally do so from the centre. If we had a hospital attached to the school, I could bring patients before you in order to illustrate these various cutaneous diseases. This is the most common form, but I mentioned that now and then the scales are very silvery; they are really as silvery as the scales of a fish, and then it is called *L. alphoides*. Now and then the scales are a little dark, and then it is termed *L. nigricans*. You may remember that sometimes it is very white, and sometimes it is black; that will do as well as remembering vulgaris, alphoides, and nigricans. It is a great mercy that we have no other names given for the intermediate shades.

Age at which it occurs.—This is a disease which I do not think I ever saw in an in-

fant, or in a child. You seldom see the disease in patients under 10 or 11 years of age, and even then it is not so frequent as in the first stage of adult life. From about 17 or 18, up to 30, you see the disease more commonly than at any other period. Why this is I cannot tell, and as to the cause, it is very common to discover none; but now and then one is able to trace it to a person having drank cold water, or some other cold fluid, when overheated. This is a common cause of lepra and a variety of diseases of the skin which are not contagious.

Duration.—It is a disease which will last a very considerable time, perhaps two or three years, though sometimes it will go off in a few months. It is an affection which will recur, and now and then there is very great tingling and very great heat of the skin. I always make it a rule to inquire in this, as in other chronic diseases of the skin, whether there are not some internal symptoms; and in a large majority of cases you will hear the patient complain of drowsiness, headache, heat of the head, and giddiness; and if you take away blood you find it buffed, and perhaps cupped. This is an every day occurrence, and it is by no means dwelt upon by Willan and Bateman as it should be; in fact, they were only forerunners to better writers on the subject; they were occupied as historians, pointing out diseases, rather than pointing out the pathology or the rational mode of treatment. But if you will make inquiry in cases of lepra, as well as in other diseases of the skin, you will find the head affected at first, and frequently throughout the course of the disease. There are cases where nothing can be discovered about the head, but even there you find the irritation and tingling very much relieved by bleeding.

Psoriasis.

The other disease which bears so great an affinity to lepra, and runs into it, is called *psoriasis*. The difference between the two is, that in psoriasis the patches, or spots, are not circular, but more or less oblong; the margin is not raised, and it more frequently heals from the margin than at the centre.

Character.—In this disease the skin is very apt to crack; you see fissures in the skin, called *rhagades*, and there is for the most part much more inflammation than in lepra. You may, in a great number of cases, easily distinguish between these affections. In lepra the patches are circular, the margin is elevated, and there are no cracks; whereas, in decided psoriasis the spots are oblong, the margin is not elevated, and there are fissures or cracks. But in intermediate cases you might almost defy any one to state positively whether it is lepra or psoriasis; they certainly run into each other. There is very frequently great irritation in this particular form of the disease; it tingles and smarts severely.

Species.—You will observe the different species from the plates. In one you observe a form where there is little inflammation, and it occurs in dots—it is called *P. guttata*; if it occur in patches, it is called *P. diffusa*. If any cause of irritation be applied to the skin, this may be aggravated; for instance, in washerwomen the soap may produce this effect. Now and then it takes place very locally in the palms of the hands, or the soles of the feet—but chiefly in the palms of the hands, and it is called *P. palmaria*; there are generally cracks in this variety. The patches, you perceive, [exhibiting a plate] are oblong, and the margins not raised. There are rhagades and fissures, which are so common that you rarely see the disease without them. This affection will sometimes last for a great length of time, and cover the whole body; the cuticle is separated in great quantities, and beneath it there is more or less fluid oozing forth. The more severe the inflammation, the greater is the disposition to crack. Now and then this disease appears in a form like that of worms, and then it is called *P. gyrata*. This woman [exhibiting a plate] is ornamented very beautifully. I never saw this form of the complaint; it looks as if her mother had longed for snakes.

You have only, then, to discover whether the disease is attended by scales, and if it be, it is one of the three species to which I have now adverted. If it be pityriasis, you find the scales very minute, coming as near to scurf as possible; if the scales be thick, the patches circular, the margin elevated, and there be no cracks, you may depend upon it it is lepra; if, however, the patches assume an oblong form, and there be cracks, it is psoriasis.

I stated that these diseases are not contagious, and that is allowed to be the case; but two or three times I have met with the disease apparently from communication with another person labouring under it. It has happened to me, I am quite sure twice, if not three times, to see persons have lepra come on after using the towel of, or sleeping with a person affected with, the complaint. These instances occurred in St. Thomas's Hospital; one about three years ago, and two, I think, within the last twelvemonths. It might have been chance; it is impossible for me to say it was not chance; but it so happened that another person had lepra about a week or a fortnight after employing a towel which had been used by a person with the affection; and in another case, a young woman slept with another who laboured under it, and she had patches as large as a half-crown.

I cannot venture to say that the disease is not contagious.

You will see one form of the disease which you might consider a pustular affection; namely, *P. inveterata*. Psoriasis sometimes lasts a great length of time; in fact, till the whole body is covered with scales, so that scarcely an inch is free from it. The disease being very severe, those cracks which are peculiar to it, or characteristic of it, become very considerable, very large, and they produce a degree of oozing. The irritation of the skin is sometimes so great that it not merely produces a diseased enticle, but perhaps an oozing of fluid under the enticle, so that psoriasis runs into lepra on the one hand, and into tho e diseases which are characterized by a morbid secretion on the other; but still the cracks and the occurrence of a scaly enticle shew that it is a scaly disease. But you must look at these things as pathologists, and not as historians.

Treatment.—In the treatment of this disease, it is improper to begin with any empirical medicine till you have ascertained whether there is a sufficiently inflammatory state of the skin or of the surface to justify you in taking antiphlogistic measures. Many cases will be cured by putting persons on low diet, and bleeding them from time to time. I do not know that in either lepra or psoriasis, mercury is of use. Lepra, however, is often a venereal affection, and so likewise is lichen; and in such cases you will fail in doing good unless you exhibit mercury. But when the disease is of a syphilitic character, the redness is of a coppery hue, and the spots are hard, in consequence of the disease approaching to a tubercular state. When you see that, no matter what the patient says, even if he aver that he has never been with a woman in his life, you had better give mercury; for on this subject patients will tell all sorts of untruths without the least hesitation. The hardness of the parts, and the copper hue, are sufficient to make you suspect that the lichen, lepra, or psoriasis, is of a syphilitic nature. But when you have ascertained that there is no decidedly inflammatory state sufficient to make you bleed the patient, or if you have already used antiphlogistic measures to reduce the inflammatory state, then other remedies may be employed, but of the mode of operation of which I am ignorant.

Now there are some which doubtless deserve all the character that has been given them, and one of these is dulcamara. I have seen so many cases give way under the persevering use of this medicine, that I have no doubt it is a remedy for the disease. A pint of the decoction may be given in the course of twenty-four hours. You may begin with two ounces three times a day, and then gradually increase the dose. Arsenic also has very great power over the affection. I have seen many cases yield decidedly when a person took arsenic. I think that these two are by far the most useful remedies in the disease. Some mention pitch as being serviceable, but I do not know that it has any particular power over the affection; if it have, I have not observed it, though I have made a patient swallow an ounce or two in a day; it is, however, perfectly harmless. The warm bath is very useful; but if there be much irritation of the skin the heat is unpleasant, and then I have not persevered with it. If the warm bath be used, it should be in a decided manner. The vapour bath is likely altogether to be more beneficial than the warm bath; but if either of them be used, it should be every day or twice a day. There is nothing weakening in it if patients do not keep themselves warm afterwards. The warm bath is seldom used to the extent that is required.

With respect to external applications, many persons wash the surface with a decoction of dulcamara, but you often find that the tar ointment is very useful; if, however, there be much irritation, it is not proper, and zinc ointment is better. Tar ointment is certainly one of the best applications that I am acquainted with in this disease, provided it is not of a syphilitic character, and you have employed antiphlogistic measures as long as the blood was buffy and cupped, or the patient's pulse justified it. Dulcamara, or liq. arsenicalis, should be united with it, as an internal medicine.

In regard to psoriasis, you will find antiphlogistic measures, particularly bleeding, of the highest use. Many cases will be cured by moderate bleeding and low diet. I do not know that dulcamara is of the same use in this form of the disease as in lepra, but I have seen many cases cured by sulphuric acid, and by various other acids, perseveringly given. It is singular how large a quantity of the acids you may give. One would imagine that, being chemical substances, you could not increase the quantity to a great amount. It is a common remark how you may increase the dose of narcotics; but we know that the susceptibility of the body to any sedative agent becomes less and less the more frequently it is employed; yet we should not suppose that it would resist chemical agents. We may however increase the dose of sulphuric acid, properly diluted, to a great extent; and I have frequently done so in psoriasis with the best effect.

But what I am anxious to impress upon you is, the importance of antiphlogistic treatment in all cases of this description,

where it is needed, and to impress upon you the necessity of looking out for inflammation.

When the skin cracks, you sometimes find greasy applications of great use in softening the affected part; but in a large number of cases they cannot be borne. You will find it of great use in the treatment of psoriasis, to prevent the patient from taking stimulants;—you will often find the disease kept up by stimulants taken as articles of diet. It is in vain to give acids, to bleed from time to time, or to give specific remedies, such as arsenic or dulcamara, unless the patient will submit to proper diet. If patients will take so many glasses of wine a day, they must expect that the disease will be so much the worse. Alkalies are said to be useful in this disease as well as acids, and I have no doubt that it is so. The treatment of the disease, so far as the parts are concerned, is empirical. I have no idea how arsenic and these other things can act; but the treatment by bleeding, local and general—by low diet, and by the use of the warm bath, is very rational.

[We think it right to state that Dr. Elliotson has not revised the proof of the above lecture: we believe, however, it will be found to be as correct as those which have preceded it.—E. G.]

LECTURES

ON

DISEASES OF THE EYE;

Delivered at the Birmingham Eye Infirmary,

By Richard Middlemore, Esq.

DISEASES OF THE CONJUNCTIVA.

In accordance with the arrangement I have proposed to adopt in the prosecution of my subject, I proceed to consider the diseases of the external tunic of the eye—the conjunctiva.

The conjunctiva is subject to a great variety of diseases, chiefly of an inflammatory kind; its situation renders it very liable to be injured by external agents, while the nature of its texture exposes it to all those diseases to which the mucous membranes in general are subject. I need not point out to you the anatomical characters of mucous membrane; but there are one or two circumstances connected with the anatomy of the conjunctiva to which I shall direct your especial attention. In the first place, you will remember that the entire conjunctiva presents a surface of considerable extent, commencing at the tarsal margin, constituting the internal surface of the eye-lid, and being afterwards reflected upon the eye-ball, the whole anterior surface of which it covers. That part of the conjunctiva which is extended over the cornea is very delicate and transparent, and in it the vessels which nourish the outer lamina of the cornea, ramify. Thus you will perceive why the conjunctiva is distinguished into three portions, named from the parts upon which they are situated—the corneal, the sclerotic, and the palpebral, portions of the conjunctiva.

Simple Acute Inflammation of the Conjunctiva.

By this term I mean an acute inflammation of the most simple kind, of the mucous membrane covering the anterior portion of the eye-ball and lining the lids, not possessing any particular character occasioned by constitutional peculiarity, or any specific disease of the system at large.

The first indications of this malady are, a sensation of itching and uneasiness of the eye, slightly increased vascularity, and a sense of stiffness on moving the lids upon the eye-ball—a sensation occasioned by an alteration and diminution of the conjunctival secretion, by which the motion of these parts is performed with more friction, and consequently with less facility, than usual; these constitute the first set of symptoms—symptoms so slight, indeed, that patients usually neglect them entirely, or attempt their removal by some trivial remedy. Presuming that the cause of irritation, whatever may be its nature, continues in operation, or that the remedies employed for the removal of the inflammation are inefficient, or unsuitable, these uneasy feelings become additionally troublesome; the vascularity of the conjunctiva is increased; many red vessels appear upon, and others may be seen situated within, the conjunctiva, towards the circumference of the eye-ball; the pain and the intolerance of light are augmented; the stiffness on moving the lids is extremely annoying; the edges of the eye-lids are covered by a glutinous secretion; and there is a sensation as though fine sand or dust had been insinuated beneath the lids, occasioned, as we know, by the inequalities of the contiguous surfaces of the conjunctiva, owing to the projection and sudden distention of its blood-vessels—a distention which is very considerable during the diastole of the arteries. Undoubtedly the extreme variability in the size of the blood-vessels of the conjunctiva (already in a morbidly enlarged condition), in accordance with their state of systole or diastole, must be considered the real cause of that peculiar sensation which patients under these circumstances experience, and which they sometimes characterize as

closely resembling the uneasiness they might be expected to suffer if sand or other rough particles had been insinuated beneath the lids.

Now if this state of things be not checked, the symptoms previously enumerated will all become aggravated in severity, and we shall have in addition, profuse lachrymation, increased conjunctival secretion, and chemosis—that is, a swelling around the cornea, owing to the enlargement of the vessels of the conjunctiva, and effusion into its texture, and between it and the sclerotica; the lining membrane of the eye lids will become thickened and tumid, projecting between them, and in severe cases producing a state of ectropium, and presenting an appearance similar to scarlet velvet. This swollen state of the conjunctiva will be very likely to produce sloughing of the cornea, and the consequent destruction of vision. At this period the deep-seated textures of the eye may become inflamed, and there will be added to the symptoms previously enumerated those of ophthalmitis—that is, inflammation of the tunics generally, a condition of things which is very likely to lead to suppuration of the eye-ball. The sloughing of the cornea in these cases is to be mainly attributed to the pressure of the effusion beneath the sclerotic portion of the conjunctiva, by which its vascular supply, and particularly that of its superficial layers, is compressed and diminished; at the same time the inflammation of the deep-seated tunics, originating in the general irritation to which the eye is subjected, and also from the contiguity of its delicate parts to those in a state of acute inflammation, terminates sometimes, as I have previously mentioned, in the effusion of a purulent fluid in the cavity of the eye; the crystalline lens loses its transparency and its vitality; the aqueous and vitreous humours become opaque, owing to the inflammation of those surfaces which secrete them, and unless they are discharged by the sloughing, or by a puncture of the cornea, they will, by increasing the distention of the globe, occasion the most intolerable suffering.

You know that when inflammation has proceeded to this extent, it destroys either altogether, or in a great measure, the absorbing surfaces of many parts of the eye, and renders them quite incompetent to take up those fluids which in their healthy state, and under circumstances of trivial disease or alteration, they were accustomed to remove. If, therefore, you wait in the expectation that the fluids effused into the globe will be absorbed, or delay to puncture the cornea, in the hope that it will spontaneously burst, you allow your patient to remain in a condition of agony—of indescribable severity, and, of course, you also permit the continuance of a risk of the occurrence of a destructive degree of inflammatory or irritative fever, and also the extension of inflammation and suppuration near a part of the highest importance to life—the brain.

At this stage the constitution will suffer more or less from this condition of the eye; there is, in fact, a certain degree of disturbance of the system; the pulse is quickened, the appetite diminished, the tongue loaded, and there will exist, in nearly every instance, a considerable degree of feverish disturbance, varying of course in its amount, in accordance with the previous state of the patient's health, and the susceptibility of his constitution.

This is a description of the disease when unchecked by timely and judiciously employed treatment: in ordinary cases it is speedily relieved, and the symptoms subside without leaving behind any injurious effects; this is the termination of the disease by resolution. It may, however, leave behind a diseased state of the meibomian glands (tinea), which may require a long course of treatment for its removal; it may terminate in chronic ophthalmia—that is, the acute stage may pass by, but the eye will continue irritable and weak, morbidly susceptible of atmospheric influence and strong light, and liable to become inflamed from a very slight cause; the vessels of the conjunctiva continue to be somewhat enlarged, and do not speedily regain their original size on the removal of the acute symptoms; it may produce a thickened and altered state of its own structure—the granular and cuticular state of the conjunctiva, as it has been termed; it may occasion deposition in, and beneath, that portion of the conjunctiva which covers the cornea, forming a troublesome opacity of that part; it may cause an extension of red vessels over the cornea—the vascular state of the cornea—which, when combined with the previously mentioned morbid product, is then termed pannus; it may (at least as some writers have asserted) leave behind a tendency to pterygium; or, finally, it may give rise to staphyloma, either of the cornea or of the sclerotica, or to hydrophthalmia. This is a mere enumeration of its effects and modes of termination, which I have mentioned here merely to render my subject more complete than it might be considered to be without this recital of its modes of conclusion, and its occasional products. Some of the last-named effects are, of course, produced by the extension of the disease to other textures. Many of the occasional effects of this disease to which I have just adverted, will furnish us with subjects for separate consideration at a future part of these lectures.

Diagnosis.—This form of inflammation will be distinguished at its commencement by the mildness of its symptoms, and the absence of much constitutional disturbance; there will be little pain, and scarcely any aversion to light; the blood-vessels will be of a bright scarlet colour, superficial in their situation, least abundant near the cornea, and scarcely at all influenced by the motions of the globe, but will be governed by the movements of the eye-lids: if you move the loose conjunctiva in various directions upon the eye-ball, the enlarged vessels will be moved also. You will experience no difficulty whatever in detecting the distinction to which I am now referring, by merely fixing the conjunctiva by pressing the lower lid upon the globe, while the patient at the same time moves the eye freely in various directions; and, lastly, you will observe that in severe cases, the conjunctival vessels project, and elevate that portion of the conjunctiva in which, or between which and the sclerotica, they may be placed.

In stating that the vascularity of the conjunctiva is chiefly situated at the periphery of the eye-ball, I ought to mention that this only refers to its earlier stages, for when the disease is fully developed in its most acute form, the conjunctiva is an entirely red, and almost uniformly red surface. The vessels are first merely a few enlarged trunks towards the periphery of the globe; by degrees they become more numerous, and ramify very extensively, gradually approaching the cornea, until, as has been stated, the whole sclerotic portion of the conjunctiva acquires a florid appearance. These are some of the means by which you would be enabled to distinguish inflammation of the conjunctiva from that of the sclerotica; and, if you contrast them with the phenomena usually connected with inflammation of the deeper-seated textures, you cannot, I think, form an inaccurate diagnosis: for instance, in sclerotitis you will have not smarting merely, but severe pain, profuse lachrymation, and extreme intolerance of light: the blood-vessels will assume a pink appearance, from the circumstance of their being seen through the interposed conjunctiva; there will be only a slight apparent increase of vascularity, and the majority of the vessels will be situated in a circle around the margin of the cornea, and not, as in the former case, chiefly at a distance from it, and they will also move with the globe of the eye, and not with the conjunctiva covering it.

As the other forms of acute inflammation of the conjunctiva are characterized by the quantity or quality of the discharge secreted from the inflamed surface, or by other sufficiently distinctive symptoms, I have not considered it necessary to direct your attention to the various circumstances by which they are distinguished from the disease now under consideration; indeed they can only be confounded by an extremely ignorant, or culpably inattentive person.

Causes.—The causes of this description of inflammation are very various: it may be produced by small tumors at the edge of the eyelids, an inverted condition of the tarsal cartilage, irritation from the friction of one or more of the ciliæ, which may be occasioned either by their improper inclination towards the globe, or by their original malposition. Foreign substances, by destroying the smoothness and equality of those parts of the ocular and palpebral surfaces which move upon each other, growths beneath or from the surface of the conjunctiva, the irritation of minute particles of dust, sand, or metal, keen winds, suddenly contrasted temperatures, and excessive use of the organ, particularly by a bright artificial light, such as a gas-light, may also excite inflammation of this membrane: in short, any thing capable of mechanically irritating this part may be classed among the causes of its inflammation. And lastly, various constitutional defects, or sympathy with various states of the constitution, give rise, on many occasions, to conjunctival inflammation—such as scrofula, prolonged lactation, various disordered or diseased conditions of the uterine system, and of the alimentary canal; and to these causes of inflammation of the conjunctiva may be added various eruptive and irritable states of the skin, and the recession of a cutaneous eruption, or the sudden healing of a wound, or the suppression of some long accustomed and habitual discharge.

Treatment.—We now proceed to the treatment of this disease. You will remember, that after having described the earliest symptoms by which its existence was known, I proceeded to point out those phenomena which characterized its unchecked progress.

When called to a case of this description during the existence of the first set of symptoms, we can most certainly control it at once (particularly if it do not depend on any constitutional cause), by bleeding from the arm or by cupping, if the patient's strength will justify us in so doing; by the use of active purgatives, such as calomel and jalap; by directing the patient to bathe the eye frequently with a little Goulard water; to exclude all brilliant light from his apartment; and to lessen the quantity and lower the quality of his food; not omitting, of course, to ascertain, and if possible to remove, the original cause of

the irritation, for if this be neglected the cure may be impracticable, or at least unnecessarily protracted, and relapses will almost certainly occur. I lately saw a young man who had a severe attack of conjunctivitis, which did not yield to the treatment recommended by his surgeon, and, on perceiving a swelling of the upper lid, I everted it, and removed a small portion of a twig, which had remained there ever since he had received the blow which gave rise to the inflammation.

But, to return, if we do not see the case until the symptoms are at their height, and chemosis is commencing, our treatment must be at once active and decisive. If you are content with applying a few leeches and relaxing the bowels by aperient medicine, vision will be certainly injured, and probably destroyed. You must commence your treatment by largely depleting the system, by bleeding from the arm, repeating the operation as frequently as may be consistent with the strength of your patient, and the effect of the previous bleedings upon the eye; at the same time the bowels must be well acted upon, by the administration of calomel and jalap; the eye must be kept cool by Goulard water, or some similar application; all exercise of either organ must be proscribed; light must be in a great measure excluded from the patient's apartment; and the diet must be limited to the most simple and unstimulating aliments.

By these means you will generally *arrest* the inflammatory process: should this be the case, you may apply a number of leeches beneath the lower eye-lid, and excite counter-irritation near, but not close to, the diseased organ. You will find the application of a blister to the nape of the neck a useful form of counter-irritation; and that situation is, perhaps, under these circumstances, as good as any. It is customary with some practitioners to employ stimulants at this stage—such as the wine of opium, a solution of nitrate of silver, or the sulphate of zinc; but I cannot recommend this practice as one generally necessary or uninjurious. Unless the vessels of the conjunctiva have been much distended by long-continued inflammation, they will usually regain their original magnitude on its subduction, without the aid of such irritating applications, and without leaving behind that irritable state of the eye which they have always a tendency to excite, and, in some instances, most certainly produce. You will imagine that so delicate an organ as the eye will not, when much inflamed, bear with impunity remedies which, in its healthy state, would seriously injure and severely inflame it.

It was for the removal of this state of things that Mr. Ware so strongly recommended the thebaic tincture; but it is scarcely necessary to remark that this stimulant must be considered a mere palliative and subordinate remedy. If you employ it to the exclusion of active depleting measures, you may lose that time and those opportunities of subduing the disease which may not again occur.

I have told you that Mr. Ware (who had formerly a most extensive experience in the treatment of diseases of the eye, and who wrote a book on what he quaintly termed "The Ophthalmy,") urgently advised the use of the thebaic tincture (a preparation for which the tinctura opii was afterwards substituted in our pharmacopœia), and was at great pains to explain to the profession the mode in which it should be insinuated beneath the lids, and the quantity to be employed for that purpose. He objected to the custom of dropping several drops upon the eye, from what he termed a considerable height, and recommended that one drop only should be placed in the inner corner of the eye, and allowed to flow gently and gradually over its surface. He recommended this remedy, nearly indiscriminately, in every state and stage of almost every variety of inflammation of the eye, and was consequently compelled to admit that there are some cases in which its employment occasions severe symptoms, and requires to be omitted until the irritation it has produced has been subdued by antiphlogistic and other necessary measures; when its use may be resumed. Such a mode of using a remedy is, of course, highly injudicious; and it is by no means justifiable to employ this, or any other means of relief, without a due discrimination of the case to which it is suited, and the proper time at which it may be safely and beneficially employed.

You will generally find these measures sufficient to effect a cure without the aid of mercury, which, in inflammation of this texture, is seldom necessary, although its utility in many of the forms of inflammation of the deep-seated textures is established beyond the shadow of a doubt.

There is another stage, concerning the treatment of which I have as yet said nothing—namely, when the disease has been either not treated at all or treated by inefficient or inappropriate means, and has been permitted to proceed to an extent adequate to produce the state of chemosis and its concomitant symptoms, formerly described. I do not know that you can, with advantage, much vary the plan of treatment recommended for the relief of the acute stage. You must bleed to as great an extent as the patient's strength will permit, and, in addition to the other mea-

sures then suggested, employ the alum or some other astringent lotion, and freely scarify the tumid conjunctiva. You will in this way obtain a certain quantity of blood from the inflamed part; you will lessen the compression upon the vascular supply of the cornea, and diminish that painful tension of the eye-lid which the swollen state of the conjunctiva occasions. After these scarifications have been made, you will find it useful to instil into the eye a few drops of a solution of the nitrate of silver (about two grains of the nitrate to twelve drachms of distilled water); it would seem to constringe the loose conjunctiva, and to diminish its size. Mr. Ware has said that the vapour of æther, applied to the surface of the eye, has a very beneficial influence in the removal of chemosis; and you may adopt his advice if you wish to trifle with disease rather than cure it.

It may even be necessary to scarify the eye-lid if the chemosis be not promptly subdued, on account of the pain excited by the distention of their vessels by the compression produced by the elargement of the conjunctiva, and the consequent risk of mortification of the palpebral integument. If the cornea assume a dull ashy appearance, and the pain and distention of the globe, the hemicrania, and the constitutional symptoms render it probable that there is ophthalmitis present, which is producing a purulent effusion within the eye-ball, the cornea must be freely divided, so as to permit the escape of the humours and effused fluids, and remove that tense condition of the globe, which, owing to the strength of its tunics, might not be effected by natural efforts alone until the patient has experienced the most agonizing torment, and even hazarded his life. You would not, in this case, judge it requisite to reduce the system, for it almost invariably happens, that when the disease has proceeded so far, the powers of the system are depressed and the patient is suffering from the *effects*, rather than from the *actual existence*, of inflammation. Your antiphlogistic remedies cannot now preserve the eye, but may increase the langour and irritability of a system already exhausted by pain and depressed by active treatment. But it is impossible for me to lay down any precise rules for your guidance in every instance; the exercise of your judgment alone can, in many cases, direct you when to deplete and when to support and tranquillize the system; but remember it is most important to decide correctly.

As scarifications have been recommended for the removal of chemosis, allow me to call your attention to the varieties of chemosis to which this operation is suited, and to describe the mode of performing it. Chemosis is of two kinds, the active inflammatory and the mild inflammatory, or the lymphatic and the œdematous chemosis. The former is, of course, its severest form, and occurs in connexion with acute inflammation of the conjunctiva in strong plethoric subjects. It is distinguished by its firmness and the greater degree of uneasiness it excites; and you will find that it consists chiefly of enlarged blood-vessels and lymph effused into the cellular membrane by which it is connected with the sclerotica. The mild inflammatory chemosis, on the contrary, occurs in feeble persons, or in connexion with a milder degree of conjunctival inflammation; it is loose and flabby in its texture, is more voluminous than the preceding variety, and extends generally so far over the cornea as nearly to conceal it entirely. It is attended with scarcely any uneasiness, and, if it be examined, it will be seen to be composed chiefly of serous effusion into the cellular texture immediately beneath the conjunctiva.

These varieties of chemosis differ in degree—for instance, there may be merely a tumid condition from enlargement of vessels, or there may be, in addition, a slight or a more considerable amount of serous infiltration into the cellular structure connecting the conjunctiva to the sclerotica; or the chemosis may chiefly consist of a deposition of lymph into the cellular web just mentioned. The effusion of blood beneath the conjunctiva is quite distinct from the morbid product to which your attention is now directed. I shall not enlarge upon this subject by alluding at all in detail to the changes occasionally wrought in the conjunctiva, by the continuance or organization of the lymphatic portion of active inflammatory chemosis; but you will be aware, from your knowledge of general pathology, that deposited and partially organized lymph undergoes various subsequent changes, which constitute a source of interesting investigation and inquiry to the zealous pathologist.

Let me for a moment allude to the object which the effusion termed chemosis is intended to fulfil, to the effects it sometimes produces, and to its treatment. The inflamed conjunctiva has a mode of relieving itself externally by various secretions, as I have previously mentioned, and it possesses also the means of lessening the plenitude of its vessels, and consequently of limiting its inflammatory excitement, by effusion from its sclerotic aspect; which effusion, in conjunction with other occurrences, is termed chemosis. This deposition separates the inflamed membrane from the sclerotica and from the margin of the cornea, and in this way generally prevents the extension of inflammatory action

to those parts; but if the chemosis continues, there is frequently produced gangrene of the external layers of the cornea, either from an excessively inflamed state of that portion of the conjunctiva which covers and supports it, or from the strangulation of those vessels which pass from that part and thence to the cornea. This incipient gangrene is very likely to spread in a part so feebly organized and so unfavourably circumstanced as the cornea, when in a state such as has been described; and, accordingly, the whole of that tunic not uncommonly sloughs.

The operation now to be described is suited to both forms of chemosis. You request an assistant to elevate the upper lid, and, standing in front of the patient, you depress the inferior palpebra with the left hand; you then draw an instrument similar to that invented by Mr. Wardrop (or, in its absence, a lancet) gently along the surface of the tumid conjunctiva. You need not be apprehensive of scarifying too deeply, for the effusion beneath the conjunctiva will prevent the instrument from injuring any part beneath it, and it will be quite necessary to divide that membrane completely, inasmuch as without such division you can neither relieve its tension nor sever many of its enlarged vessels, nor discharge the more fluid portion of the effused matters.

ON THE LAW OF THE DIFFUSION OF GASES.

By Thos. Graham Esq. M.A. F.R.S.E.
Professor of Chemistry, Andersonian University, Glasgow.

[Concluded from page 143.]

1. *Diffusion Volume of Hydrogen Gas.*

I shall in this paper adopt the specific gravities of the gases generally received in this country. Of hydrogen, the specific gravity is 0·0694 (air = 1), of which number the square root is 0·2635. Now, according to our law, 1 volume hydrogen should be replaced by 0·2635 air. But to have the replacing volume of air = 1,

$$0{\cdot}2635 : 1 :: 1 : 3{\cdot}7947;$$

or, $\frac{1}{0{\cdot}2635} = 3{\cdot}7947$; that is, 1 air should replace 3·7947 hydrogen. With the specific gravity of hydrogen adopted by Berzelius, namely, 0·06885, the equivalent diffusion volume of hydrogen is 3·8149.

In a diffusion tube standing over water, temperature 65°, 88 volumes hydrogen were replaced by 26 air; 84 hydrogen by 25 air; and in another tube, 130 hydrogen by 38 air. The quantity of return air is here related to the hydrogen diffused, as 1 to 3·38, 3·36, and 3·42, numbers which approach to, but fall short of, the theoretical diffusion volume of hydrogen, namely, 3·79. But the hydrogen in these experiments was saturated with vapour at 65°, which would make its density 0·0809, and reduce its diffusion volume to 3·5161; while the air without, being comparatively dry, would be somewhat expanded *after* it entered the diffusion tube, by the ascent of vapour into it. This would occasion the quantity of return air to appear greater than it should be; but it is difficult to find elements for a proper correction, as not only the quantity of vapour in the atmosphere must be taken into account, but also the hygrometric state of the plug itself. The increased return air, however, evidently lowers the diffusion volume of the hydrogen gas.

With the view of increasing the capacity of the instrument, and the number of its divisions, and of obviating the interference of vapour, the mode of performing the experiment was varied. On a tube, four-tenths of an inch in diameter, a bulb of two inches in diameter was blown. The tube above and below the bulb was graduated into two-hundredths of a cubic inch. The upper end of the tube was closed by stucco, as in the case of the simple diffusion tube. The general mode of proceeding was as follows:—The bulb being sunk in water with the air syphon in it, the whole air was withdrawn, with the exception of a certain quantity, which was noted, and the instrument filled up with newly-made hydrogen gas. As soon as it was filled, it was placed in a glass jar of about the same height, with a little water left in the bottom, and in proportion as the water rose in the upper tube, from the subsequent contraction, the jar was filled up by repeated additions of water, so as to keep the surface of the water, within and without the tube, as nearly as possible at the same level. With the view of having the external air in a constant state in regard to humidity, means were taken to saturate it.

A small cone of damp paper was inverted, like an extinguisher, over the upper part of the instrument; the jar containing the instrument was placed on the shelf of the pneumatic trough, and a bell jar with an opening at the top, which could be shut at pleasure, inverted over the whole. The return air must, therefore, have been in the same state, in regard to humidity, as the hydrogen itself. Aqueous vapour would diffuse neither outwards nor inwards, as it existed in the same proportion on both sides of the plug; but dry hydrogen only would be exchanged for dry air, in the proportion of their equivalent diffusion volumes.

As the quantity of hydrogen and of return air is amplified in the same proportion by vapour, provided the temperature be the same at the beginning and end of the experiment, it is unnecessary to know the absolute quantity of vapour in either case, in determining the diffusion volume of hydrogen. We may simply divide the gross amount of hydrogen gas diffused by the gross amount of return air, the quotient is the diffusion volume of hydrogen.

The results of five experiments, with the same instrument, into which 1085·7 measures hydrogen were introduced, are, in one view,

Measures of Return Air.	Diffusion Volume of Hydrogen.
285·1	3·808
286·1	3·795
278·4	3·900
279·1	3·890
282·2	3·847
Mean, 282·2	Mean, 3·848

New hydrogen gas was made for each experiment by the moderate action of dilute sulphuric acid on zinc, and it was collected in the diffusion instrument from the beak of the retort. The observations could not be made with so much accuracy as to entitle us to place any reliance on more than two decimal places of the calculated diffusion volumes. A great variety of experiments were performed on the diffusion of hydrogen with the diffusion bulbs employed above, and several others of similar construction, principally with the view of discovering the cause of the slight variations in the results, and why the quantity of return air was pretty uniformly somewhat less than the theoretical quantity, which has the effect of increasing the proportion of the hydrogen diffusion volume. The results in the case of coal gas, carbureted hydrogen, and olefiant gases, were found to be affected in the same manner. The cause was eventually found to be the unequal frictional resistance these gases experience in passing through the pores of the stucco, compared with air.

The same volume of different gases entered an exhausted receiver through the pores of a mass of stucco, in the times expressed in the following table, under the same pressure, or beginning at a pressure of 29 inches mercury, and terminating with a pressure of 27 inches:

	Min.	Seconds.
Air, dry	10	0
Air, saturated with moisture at 60 deg.	10	0
Carbonic acid	10	0
Nitrogen	10	0
Oxygen	10	0
Carbonic oxide	9	30
Olefiant gas	7	50
Coal gas	7	0
Hydrogen	4	0

Dried bladder answers for shewing the diffusion of hydrogen when stretched over the open end of the tube receiver. The diffusion, however, through a single thickness of bladder, is effected at least twenty times more slowly than through a thickness of one inch of stucco. While, on the other hand, either air or hydrogen, under mechanical pressure, passes more readily through bladder than a great thickness of stucco. Goldbeaters' skin is even more permeable by gases under a slight pressure than bladder, and less suitable for diffusion.

The superior aptitude of stucco for exhibiting the unequal diffusion of gases of different densities, seems to depend upon its pores being excessively numerous, but exceedingly minute, making in the aggregate a considerable channel. In the bladder, or goldbeaters' skin, the pores I suppose to be few in number, but wide; making, however, when added together, but a small channel. Air passes through them but little impeded by friction.

Dry and sound cork answers exceedingly well as a substitute for the stucco-plug. The diffusion takes place slowly, but is not apt to be deranged by a slight mechanical pressure. So do thin laminæ

of many granular minerals, such as the flexible magnesian limestone, &c.; charcoal also, and woods, if not too porous, may be applied to the purpose.

It might occur, in explanation of our experiments with the diffusion instrument, to take Mr. Dalton's hypothesis, and suppose, in the case of hydrogen, the external air to be a vacuum to the hydrogen, and the hydrogen a vacuum to the air, and that the *inequality* of the diffusion depends upon the hydrogen *being least resisted in passing through the plug*. The experiments on the permeability of the stucco by gases under pressure, above detailed, were projected with a view to settle this point among others; and they are evidently incompatible with such an application of the theory, for hydrogen passes 2·4 times more swiftly, and not 3·8 times, as in the diffusion of experiments. Carbonic acid, too, permeates the plug, under pressure, as rapidly as air does, or even somewhat more rapidly, for our results inclined to this side rather than to the other; whereas carbonic acid diffuses through the plug more slowly than air does, or is replaced by more than an equal volume of air, as will presently appear.

Those experiments previously narrated, are perhaps sufficient to establish the law in regard to hydrogen, particularly when we find it hold in the case of other gases.

As hydrogen is a very light gas, I was anxious to establish the law also in regard to a heavy gas, such as carbonic acid.

2. *Diffusion of Carbonic Acid Gas.*

The most satisfactory experiments with carbonic acid gas were performed by confining it over a solution of common salt, saturated in the cold, which absorbs this gas very slowly, and, instead of the diffusion instrument with bulb, a long diffusion tube was found most suitable.

In one experiment, 176·6 volumes carbonic acid were replaced by 217·6 air; and of course an ultimate expansion of 41 measures occurred. In another 201 gas by 246 air.

In a third, 169 gas by 206 air.

By theory, 1 volume air should replace 0·809 vol. carbonic acid; and by these experiments, 0·812, 0·813 and 0·816 vol.

The following table exhibits a summary of the results in the case of the preceding and other permanent gases which can conveniently be submitted to diffusion. Vapours cannot be rigidly examined, as they are all condensible in the pores of the stucco.

Table of Equivalent Diffusion Volumes of Gases; Air = 1.

	By Experiment.	By Theory.	Specific Gravity.
Hydrogen	3·83	3·7947	0·0691
Olefiant Gas	1·0191	1·0140	0·972
Carbonic Oxyde	1·0149	1·0140	0·972
Nitrogen	1·0143	1·0140	0·972
Oxygen	0·9187	0·9487	1·111
Sulphureted Hydrogen	0·95	0·9201	1·1805
Protoxide of Nitrogen	0·82	0·8091	1·527
Carbonic Acid	0·812	0·8091	1·527
Sulphurous Acid	0·68	0·6708	2·222

In the diffusion volumes of oxygen, nitrogen, and carbonic oxide, the correspondence between theory and experiment is as close as could be desired. Indeed, admitting our law, I believe that the specific gravity of these gases can be determined by experiments on the principle of diffusion, with greater accuracy than by the ordinary means.

The density of any gas diffused into air, both being in the same state as to aqueous vapour, is obtained by the formula $D = \left(\frac{A}{G}\right)^2$; where G is the volume of gas submitted to diffusion, and A the volume of return air.

A peculiar advantage of this mode of taking the specific gravity of gases, besides its simplicity, is, that we can operate upon a most minute quantity of gas: it is possible to come within 100th of the specific gravity, operating

upon no more than one cubic inch of gas.

I had occasion to remark, more than once, a singular accident to the stucco plugs. After being disused for some days or weeks, and left in the interval exposed to the air, which might be either dry or damp at the time, the plugs occasionally, on a new trial, did not permit diffusion to take place through their pores, at least immediately. Hydrogen, however, always opened a passage in the course of two or three minutes, and then the diffusion proceeded as rapidly as ever. Carbureted hydrogen, and the other gases, often required a longer period. A slight heat restored the action of the plug. The obstruction could not be attributed to moisture, nor to any thing but dust.

It may be mentioned, that there was nothing peculiar in a mixture of two gases, in the proportion of the numbers expressing their diffusion-volumes;—nothing that could be considered an indication of mutual saturation.

Evaporation, or the elevation of vapour from a liquid into air, or any other gas, comes now to be explained on the principles of diffusion. The powerful disposition of the particles of different gaseous bodies to exchange positions, may as effectually induce the first separation of vapour from the surface of the liquid, as a vacuum would do. Once elevated, the vapour will be propagated to any distance, by exchanging positions with a train of particles of air, according to the law of diffusion. The length to which this diffusion proceeds, in a confined portion of air, is limited by a property of vapour, namely, that the particles of any vapour condense when they approximate within a certain distance. Hence, the quantity of vapour which rises into air, has the same limit as that which rises into a vacuum, and is the same.

I may be allowed to mention an application of the law of diffusion, in explanation of the mechanism of respiration. The cavity into which air enters during respiration, consists, first, of a large tube, the windpipe; secondly, of smaller tubes, into which the windpipe diverges; and, thirdly, of a series of still smaller tubes, diverging from the last, themselves ramifying to an indeterminate extent, till at last the tubes cease to be of sensible magnitude, but are believed to terminate in shut sacs. The capacity of the whole cavity cannot easily be determined, but we may estimate it at 300 cubic inches. In a natural expiration, about 20 cubic inches, or $\frac{1}{15}$th of the contents are thrown out, from the application of a general pressure to the whole. But it is evident, that these 20 cubic inches will be the 20 cubic inches nearest the outlet, or the contents of the larger tubes. The contents of the second-sized tubes will advance at the same time into the largest tubes, but no further, and will recede again into their original depositories on the next inspiration, which will fill the larger tubes with fresh air; which identical quantity will again be expelled in the next expiration. This illustration is perhaps too strongly stated; but it is evident, that in ordinary respiration, the slight mechanical compression will have little or no effect in emptying the most distant tubes, or the ultimate air-cells, of their contents. The bulk of the air, also, is not altered, during respiration, although, for a quantity of oxygen, carbonic acid gas is substituted. This substitution, which is the great end of respiration, undoubtedly takes place most abundantly, in the minute and distant air-cells, which present the largest surface to the blood; and the carbonic acid there produced, must be moved along the smaller tubes by the diffusion process, (which we know to be extremely energetic, and also inevitable), till it is thrown into the larger tubes, from which it can be expelled by the ordinary action of respiration. But the action of diffusion is always twofold: at the same time that carbonic acid is being carried outward from the air-cells, oxygen is carried inwards in exchange, and thus the necessary circulation kept up throughout the whole lungs.

Farther, by a forced expiration, from 160 to 178 cubic inches may be expelled, after which, there still remain in the lungs about 120 cubic inches, which are not under the control of the respiratory action.

There can be no doubt that much of this quantity occupies constantly and permanently the most minute tubes and air-cells, for it can scarcely be withdrawn by means of the air pump. Now the question has arisen, how these ultimate tubes and air cells are so powerfully inflated; for they are not distended by the action of muscular fibre, of which

they are known to be destitute. This state of distention must be highly useful by exposing surface; and the law of diffusion enables us to account for it. The heavy carbonic acid which these minute cells may contain, is not merely exchanged for oxygen, but for a larger volume of oxygen, in the proportion of the diffusion-volumes of carbonic acid and oxygen, namely, 81 carbonic acid are replaced by 95 oxygen. The resistance to passage through the most minute tubes, is overcome by the diffusion action, as in the case of the pores of the stucco-plug, and there follows a tendency to accumulation on the side originally occupied by the carbonic acid. This accumulation is limited by the increased facility with which the air-vessels can empty themselves mechanically of a portion of their contents, from their distended state.

In the law of diffusion of gases, we have, therefore, a singular provision for the full and permanent inflation of the ultimate air-cells of the lungs.

But it is in the respiration of insects, that the operation of this law will be most distinctly perceived. The minute air-tubes accompanying the bloodvessels to every organ, and like them ramifying till they cease to be visible under the most powerful microscope, are kept distended during the most lively movements of the little animals, and the necessary gaseous circulation maintained, wholly, we may presume, by the agency of diffusion.

In regard to the terms of the law of diffusion: "The diffusion, or spontaneous intermixture of two gases in contact, is effected by an interchange in position of *indefinitely minute volumes of the gases.*" My experiments, published on a former occasion, on the diffusion of mixed gases (*Quarterly Journal of Science*, Sept. 1829), afford the first demonstration of the fact, that diffusion takes place between the ultimate particles of gases, and not between sensible masses, and therefore that diffusion cannot be the result of accident. For, in the case of a mixture of two gases escaping from a receiver into the atmosphere, by apertures of 0.12 and 0.07 inch in diameter, it was not so much of the mixture which left the receiver in a given time, but a certain proportion of each of the mixed gases, independently of the other, corresponding to its individual diffusiveness. The same separation of mixed gases occurred in diffusion through the pores of stucco, or the fissure of a cracked jar.

"Which volumes are not necessarily of equal magnitude, being in the case of each gas, inversely proportional to the square root of the density of that gas." This may be demonstrated, when different gases communicate by very narrow channels, or by very small apertures, and when inequality of pressure is guarded against. In the case of a gas communicating with the air by a wide aperture, on the other hand, although the diffusion or intermixture takes place precisely in the same way, still the result is different; for where a contraction takes place from the process of diffusion the air flows in mechanically through the aperture, wholly unresisted, and makes up the deficiency. A gas, however, of large diffusion-volume escapes, in these circumstances, *in a shorter time* than a gas of small diffusion-volume. Indeed, it was the conclusion of the former paper, that gases diffuse more or less rapidly according to some function of their densities, "apparently inversely as the square root of their densities." The advantage, in illustrating the process of diffusion, of minute apertures or channels of communication, such as we have in the stucco-plug, depends upon the circumstance, that when a contraction or expansion takes place in the gaseous contents of a diffusion-instrument, any current in an outward or inward direction is prevented by frictional resistance; so that the simple result of diffusion is exhibited, not complicated by the effect of any other force.

The law at which we have arrived (which is merely a description of the appearances, and involves, I believe, nothing hypothetic), is certainly not provided for in the corpuscular philosophy of the day, and is altogether so extraordinary, that I may be excused for not speculating farther upon its cause, till its various bearings, and certain collateral subjects, be fully investigated.

APPEARANCES OBSERVED IN A CASE OF DOUBLE UTERUS, IN WHICH *Impregnation had taken place.*

By Robert Lee, M.D. F.R.S.*

[With an Engraving on Wood.]

On the 2d of August, 1831, I was present with Dr. Sims and Mr. Morley, of Leicester Square, at the examination of the body of a woman who had died eight days subsequent to parturition, from inflammation of the peritoneum, appendages and veins of the uterus. She had previously borne several living children, but nothing unusual occurred during labour on any of these occasions. The uterine organs were found on dissection to be malformed, and several remarkable appearances were observed in their structure, of which the following is a short history.

The body of the uterus was cleft as it were down the middle, from the fundus to the cervix, so as to form two lateral halves, which opened into the cervix, like the uterine cornua of most mammiferous animals. The cervix, os uteri, and vagina, presented the ordinary appearances observable at the same period after delivery. The right cornu had contained the fœtus, and it did not differ perceptibly in its form and size from the uterus in common cases a week after delivery. Coagula of the fibrine of the blood were found closing the semilunar orifices of the uterine sinuses, and the whole inner surface was lined with rough irregular flakes of deciduous membrane, or a layer of the fibrine of the blood. One ovarium and one Fallopian tube were connected with this cornu, and the same was the case with the unimpregnated cornu. Both ovaria were enlarged, but the right was much larger than the left, and contained a corpus luteum. In the left ovarium no corpus luteum existed.

The left cornu was about the ordinary size of the unimpregnated uterus. Its parietes, when divided, were observed to be unusually soft and vascular, and its internal surface was everywhere coated with a delicate and beautifully formed deciduous membrane. At the opening of the cornu into the cervix, the deciduous membrane formed a shut sac, but it presented a smooth circular opening at the uterine orifice of the Fallopian tube. The fibres of this membrane as they approached the opening of the tube, ran in a converging direction like radii to the centre of a circle, and passed into the opening, leaving it completely pervious, although of the ordinary small dimensions. The distance to which the fibres of the deciduous membrane extended into the Fallopian tube could not be clearly ascertained, nor was it positively determined if the whole extent of the canal of the tube was open.

In the works of different authors, various irregularities in the formation of the human uterus have been described, under the terms bilocular, bicorned, bifid or double uterus, in all of which, without a single exception, the uterine appendages have been simple, or have consisted of one ovarium and one Fallopian tube annexed to each cornu of the uterus, and not of two ovaria and two Fallopian tubes, as the term double uterus would seem to imply. In the examination of a great number of children at the Maternité of Paris, the division of the uterus, as in the case now related, was often met with. Professor Chaussier has described the case of a woman who was delivered in the Maternité of her tenth child, in whom it was found after death, that the right side of the uterus existed, with one ovarium and one Fallopian tube*. Littre, in dissecting the body of a little girl, found the vagina divided by a fleshy perpendicular septum into two equal cavities. Vallisneri relates the history of a woman who was poisoned by cantharides, in whom two uteri were found to exist, one of which opened into the vagina, the other into the rectum†. M. Cassan has referred to numerous other examples of similar malconformations of the uterine organs, and to those more particularly which are contained in the Memoirs of the Royal Academy of Sciences‡. In the Museum of the Royal College of Surgeons, there is a specimen of bifid unimpregnated uterus, and another was preserved in the collection of Mr. Brookes, in which the fun-

* From Medico Chirurgical Transactions, vol. xvii.

* Bulletin de la Faculté de Médecine, Paris, 1817.

† Esperienze ed Osservazione spettanti all' Istoria Naturale, &c. l. 4.

‡ Recherches sur les cas d'Uterus Double et de Superfœtation; par A. L. Cassan. Paris, 1828.

dus, cervix, and os uteri, were all divided by a thick septum.

The whole of these malformations have been reduced to the four following varieties, which have been accurately delineated by Messrs. Lauth and Cruveilhier. 1st, Where the uterus and vagina are separated into two cavities by a septum running in the direction of the mesial line, while the external configuration of the uterine organs presents nothing unusual. 2ndly, Where the fundus and body of the uterus were divided into two cornua; the cervix, os uteri, and vagina, remaining in the normal state. 3dly, Where the uterus is bifid, as above, while the cervix and vagina are also divided by a septum. 4thly, Where the vagina forms a single canal, with a double os uteri.

All these deviations from the natural formation of the uterus, have been referred by Meckel to a suspension of the development of the parts, in consequence of which the uterine organs manifest, during the whole of life, some of the conditions peculiar to the embryonic state. This principle, indeed, explains some of these varieties of malformation, as, for example, those which have been classed by Blumenbach under his genus of monstra per defectum; but in the cases where redundant parts are met with, it is wholly inapplicable, and physiologists cannot at present account for these in a satisfactory manner.

Morand, Bartholin, Tiedemann, Ollivier, and Dr. Blundell, relate cases of double uterus, in which impregnation had taken place, and the fœtus had been retained till the full period. None of these authors have alluded to the presence of a deciduous membrane in the unimpregnated cornu of the uterus; but that it is formed in all similar cases, appears probable from this circumstance, that in the gravid uterus of the lower animals, the membrane which surrounds the product of conception, invariably occupies the whole inner surface of both cornua.

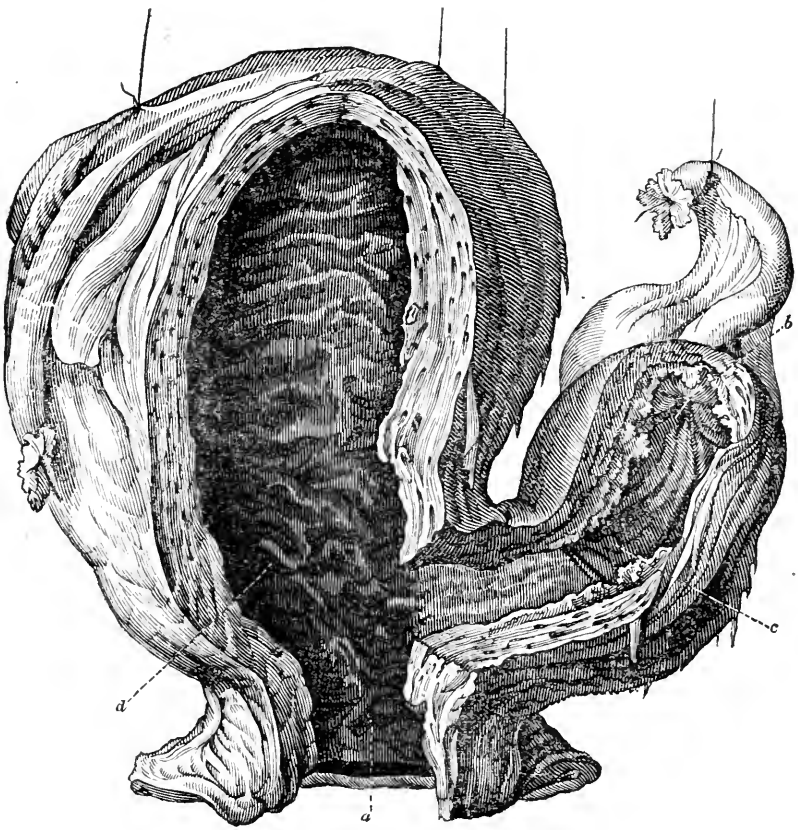
The disposition of the deciduous membrane, in the case I have now related, must have rendered superfœtation, or the conception of a second embryo during gestation, impossible, and its history tends entirely to overturn the recent speculations of M. Cassan also, on the possibility of superfœtation where a double uterus exists. Menstruation must have been equally impossible in this case, as in ordinary pregnancy, where the inner surface of the uterus is lined with decidua.

The most remarkable example of impregnated double uterus which has perhaps ever occurred, is the following, which has been recorded by Dr. Purcell, of Dublin, in the Philosophical Transactions, vol. lxiv. p. 474:—

"Last summer (1773) the body of a woman who had died in labour, in the ninth month of pregnancy, was dissected in the Anatomical Theatre of Trinity College. Upon opening the abdomen, an uterus appeared of such a size and form as is usually observed at that period. It contained a full grown fœtus, but was furnished with only one ovarium, and one Fallopian tube, which were situated on the right side. On the left was placed a second uterus, unimpregnated, and of the usual size, to which the other ovarium and tube were annexed. But these two uteri were wholly distinct and separated from each other, except at the lower extremity of their necks, where their union extended a quarter of an inch, and an acute angle was formed between. There was nothing extraordinary in the formation of the external parts of generation; but from each side of the meatus urinarius, a membrane ran downwards, and the two having comprehended this orifice between them, were joined together a little below it, so as to form, by their union, a septum or mediastinum, which taking the remainder of its origin from all that hard ridge called the superior columna, so as to extend from the entrance of the vagina as far backwards as its posterior, and thus divide it into two tubes of nearly equal dimensions. But each of these did not lead to the womb of its own side; for the right vagina became gradually wider as it ran backwards, and at last was so far dilated as to comprehend within its circumference the orifices of both uteri, while that on the left side having taken an oblique direction, ended in a cul-de-sac or cæcum."

The preparation of the parts thus described, was afterwards purchased by Mr. Hunter, and is now in the museum of the Royal College of Surgeons in London, and forms one of the most valuable specimens in the collection. Dr. Purcell having omitted to lay open and describe the condition of the unim-

pregnated cornu, I applied to the Board of Curators for permission to examine this part of the preparation, to determine if it were lined with a deciduous membrane, and if the uterine orifice of the Fallopian tube were open. Permission was readily granted, and the necessary examination was made in the presence of Mr. Clift and Mr. Owen, but no trace of deciduous membrane could be detected, and even the internal membrane of the left cornu appeared to be wanting. It is impossible now to determine whether these membranes were removed artificially when the part was laid open by Mr. Hunter, after it came into his possession, or if they subsequently disappeared from decomposition during the lapse of fifty-nine years. Prior to the examination, the impression upon Mr. Clift's mind was, that when the left cornu was first laid open, a deciduous membrane had been discovered lining its surface.



Explanation of the Woodcut.

a, The cervix uteri.

b, The right cornu, which contained the fœtus.

c, The left cornu, lined with deciduous membrane.

d, The orifice of the Fallopian tube open.

APPLICATION OF COLD IN CHOLERA,

PARTICULARLY AS EMPLOYED IN BERLIN.

To the Editor of the Medical Gazette.

42, Mortimer-Street, Cavendish-Square.

SIR,

DURING the early part of last September I had the opportunity of witnessing the re-appearance and progress of the Asiatic cholera in the town of Berlin, and also the treatment of the disease by the free use of cold water, both externally and internally. My friend, Professor John Casper, M.D. has employed this treatment with great success, both upon the former incursion of the cholera, and also during this second attack. The same accomplished physician has very recently published a small work "On the Treatment of the Asiatic Cholera by the Application of Cold," (Die Behandlung der Asiatischen Cholera durch Anwendung der Kälte), of which I beg to offer a few extracts, accompanied by some observations of my own, drawn from an experience of about twenty cases treated in that manner under my own observation, in the hospital at Berlin.

Before I describe this plan of treatment, it is necessary to premise, that Professor Casper "regards the Asiatic cholera as a paralysis of the functions of the skin, and that the cause which produces the disease, primarily attacks the cutaneous surface, paralyses it, and lastly kills it; and that all other pathognomonical symptoms must be regarded as consequences of this first seizure."

The Professor then proceeds at considerable length to support this theory; and I have endeavoured to arrange the different parts of his argument according as he attaches more or less importance to them.

1. "The skin in all cholera patients, from the simplest degrees of diarrhœa cholerica up to the most frightful forms of the disease, has lost its *extensibility* and *contractility*."

If the skin of cholera patients be pinched up into a wrinkle or fold, particularly about the sides of the neck and the lower part of the abdomen, it feels between the fingers of a peculiar flabby, doughy, death-like consistence; and the plait or fold, which has been thus made, does not, as in the healthy elastic skin, immediately subside, but on the contrary, if left to itself, it remains elevated for some time, and only very gradually sinks down again. This state of the skin is more or less apparent according to the severity of the case; and "in well marked forms of the disease, one may give to a large fold of the skin, particularly about the lower part of the abdomen, any direction at pleasure—as curved like an S—and the skin will sometimes remain in this form for nearly half an hour.

"This pasty, sluggish condition of the skin, is the only constant, never-failing symptom of this disease, whilst each of many other peculiar symptoms are wanting in particular cases. On this account," the Professor adds, "I would particularly call the attention of my professional brethren to this symptom, first pointed out by myself, because it is truly pathognomic, and in doubtful cases confirms the diagnosis, which is here so especially important."

2. The diminished temperature of the skin, from a state of coolness to that of icy coldness.

3. The shrivelled fingers and toes; also, 4. the collapsed countenance and sunken eyes, all indicate a want of turgescence in the vessels of the skin, and diminished vitality of that organ. "According to my observations the temperature of the skin is not indicated so low by the thermometer as it appears to the touch; still it is always remarkably less than in its normal state."

The most powerful stimulants applied to the skin scarcely produce any effect.

"Frictions, which were so much advocated, only cause a transient redness of the surface, and if employed in excess, destroy the cuticle beneath; and on this account are the cause, at a later stage of the disease, when the vitality of the skin returns, of severe and tedious sores. The same remark may be made of the application of mustard poultices and common blisters."

After reasoning on the injurious after effects of such remedies, the Professor communicates the following interesting facts, to the correctness of which I can add my testimony.

"Being fully convinced of the slight re-action produced by all hitherto recommended stimulants of the skin, I very soon arrived at the employment of a more powerful one, which I have now applied more than an hundred times, and

the operation of which is therefore well known to me.

"I lay upon the region of the stomach a piece of linen, previously dipped in spirits of wine, which I then ignite by the application of a common lighted match. I allow the flame to burn about five seconds, and then extinguish it by covering it with the bed-clothes. It is impossible," says Dr. Casper, "to apply an easier, more simple, and efficient stimulus to the skin. This cautery always produces re-action; sometimes indeed, in the very worst cases, the patient only moans, or makes an attempt to extinguish the flame with the hand; at other times, however, the patient screams out loudly, and in many cases complains for a short time after of a burning sensation; and this is always a favourable sign.

"Even this powerful stimulant, in cases of cholera, does not raise a blister; at most there is a redness around the edges of the linen; but I can also affirm, that in many cases there remains not the slightest trace as to where this application was made."

I must confess, that when I first saw this remedy employed in the hospitals of Berlin, it astonished and alarmed me, and I supposed the effects upon the skin would be very severe. The result was quite contrary to my expectations. The effect was exactly that described by Dr. Casper; and in some cases I could find no trace of this convenient cautery. It is, however, principally employed in the after stages of cholera, particularly in the typhoid state accompanied with coma, and then of course the effects of the burning spirit are proportionably greater as the surface has regained its vitality.

6thly. The bloodless state of the skin, and of the vessels of the extremities, indicates nothing else than the prostration of the vital powers of the surface of the body.

"It is well known to physicians of cholera hospitals, that leeches and cupping-glasses obtain very little blood In the asphyctic form of the disease (stage of collapse), the blood-vessels of the extremities are more or less empty, and on this account venesection in such cases is an unnecessary trouble to the patient.

"I have already communicated to the medical public (in the Berliner Cholera Zeitung), that my talented friend, Professor Dieffenbach, has exposed and opened the brachial artery in some of my patients, and that it was found *completely empty*. In other cases a mere thin clot of blood was found in it; and only once, in the hospital of a colleague, was a stream of blood found in the axillary artery."

7thly. The after-diseases of cholera may also be regarded as explanatory of this view of the nature of the disease. "Of such secondary diseases, the most common are serous effusions and exanthematous eruptions. These do not occur as distinct diseases, but generally commence towards the termination of cholera, immediately after the congestive or typhoid stage. Amongst these I have observed eruptions resembling varicella, roseola, urticaria, and the common furunculus, and likewise a general scaling off of the skin. Œdematous legs, and fatal effusions into the chest and abdomen, take place at a later stage."

8thly. "The low, hoarse, and often entirely lost voice of the cholera patient, one of the most common symptoms, agrees with the above views; for the same sympathy between the skin and the organs of voice is often shewn in the hoarseness of catarrh attending a severe cold."

9thly. "In a like manner the want of secretion of urine might be attributed to the sympathy between the skin and kidneys, were not this symptom more easily explained as a consequence of the frequent and copious stools, which must draw off the fluids from the kidneys."

10thly. The mucous membrane of the small intestines, in persons who die from cholera, is always found of a reddish colour, and the vessels more or less injected. Analogous phenomena are observed after death from extensive burns, from confluent small-pox, from pemphigus, and, in short, in all cases where a large extent of the skin is so much injured that it is incapable of performing its important functions. "All these above mentioned phenomena seem to agree better with this view of the disease than with former theories; so that I must repeat, that I consider the extinction of the vitality of the cutaneous surface as the essence or nature of the cholera, and as the principal cause of the subsequent phenomena.

"When it is necessary to excite—to raise, the prostrate vital powers, and that an extreme state of depression is

present, I believe that there are no means more powerful, none more quickly efficient, and, at the same time, none more simple and natural in accomplishing this point, than the application of cold itself; it excites and rouses the person by the mere act of shivering; it animates the surface, and relieves the internal organs; because nature, repulsing that which is inimical to herself, makes an effort against the cold."

It is said that the Persians stripped their cholera patients naked, and poured cold water over them; but of their practice we have not sufficient information to draw any conclusions from it. "Also in St. Petersburgh, in Riga, and Königsberg, cold affusions over the cholera patients were employed in some cases; but this application of cold was not satisfactory, because internal stimulants were made use of at the same time; and from the experience that, in spite of the cold affusions so many died of the cholera, this plan was not thoroughly prosecuted. On this account I hope, through the publication of the following method, to encourage my colleagues to a complete and persevering use of cold, and, at the same time, to abstain as much as possible from all remedies which are exciting or heating, and only to make use of such as are very gentle in their operation.

"*Treatment.*—The cholera patient is to be lifted from the bed, and placed in a large bathing tub. When the skin is dry and wrinkled, the bathing tub should be quite empty; but when the skin is softer, and moderately perspiring, or when it is covered with a clammy sweat, some luke-warm water (92° Fah.) should first be poured into the tub, so that the patient may sit up to the hips in water, and the upper part of the body remain quite uncovered. Three or four bowls or pitchers of water should then be poured successively over the head, back, and chest. The assistant should recede a few paces from the end of the bath, and then dash a bowl of water over the patient's chest and stomach. The affusion of cold water should be performed very quickly, and then the patient should be lifted into bed, and wrapped up in a dry blanket. In the very worst cases no re-action follows this operation; in less desperate cases the patients sigh and groan; and in the slighter they attempt to get away. The slight re-action after the first of these baths will, in the greater number of cases, astonish those who have never applied the remedy. In favourable cases the re-action is more manifest upon the future use of the bath; and the greater or less degree of resistance is very important in determining the favourable or unfavourable prognosis on the case. These baths should be repeated every three or four hours, according to the severity of the case.

In addition to this, I order cloths wrung out of cold water to be applied to the head, and, in bad cases, also over the chest and abdomen. I regard this application of wet cloths as a principal remedial agent in this plan of treatment, because, on account of the frequent changing, they are continually new stimulants.

"If the patients complain of chilliness, I always consider it a favourable symptom. The attendants have little trouble with these wet cloths at first; later, however, the cloths become more quickly warm and dry, on account of the vitality returning to the surface, and then they must be more frequently changed. All fear of cold is here, I can most boldly assert, quite misplaced, and is only a "clinging*" to the recollections of the heating plan of treatment.

"In less urgent cases I have not applied the cold wet cloths to the body, but am so partial to the cold applications to the head, that I never omit them even in the slighter cases. I have found that they are always agreeable, and that nothing so effectually prevents the typhoid stage as these cold applications to the head.

"At the same time I envelop the feet in hot flannels, or cloths wrung out of hot water.

"This, and only this, method warms the cholera patient; but it accomplishes it gradually, and the warmth may almost be said to be seen coming from the internal parts to the surface of the body, and thus requiring a more frequent application of the cold fomentations.

"With this treatment is combined the internal use of cold water, cold table-beer, or lemonade. At the commencement of the epidemic I followed the generally recommended plan, and would not allow my patients cold drinks.

* "Anklang" in the original.

Since I have permitted my patients cold drinks, I have never had any cause to regret it.

"Lastly, when the employment of purging clysters is indicated, I even apply cold in this form, by injecting equal parts of cold water and vinegar, with the addition of a table spoonful of common salt."

I should here observe, that Professor Casper is far from employing cold applications in all cases of cholera, or always to the same extent. When there is simple diarrhœa cholerica, he treats it upon ordinary principles, and only resorts to the above-described application in the approaching or confirmed stages of collapse.

According to Dr. Casper's experience, bloodletting is only indicated at the commencement of cholera, when the diarrhœa cholerica is present, and also upon the development of the stage of re-action.

The same remarks hold good with respect to the application of leeches, which in the stage of re-action must be repeatedly applied to the head. At the same time cold cloths should be continued to the head, and the further use of the bath discontinued; and calomel gr. ij. c. pulv. rhei. gr. v. may be given every one or two hours.

"After an experience in 400 cases," adds Professor Casper, "I am convinced that, in the severest forms of cholera asphystica, all internal medicines are useless, and therefore I give none; but I make use of the application of cold in its fullest extent, with hot applications to the feet. If this succeeds in restoring vitality to the surface of the body, this form of the disease is reduced to one less severe, which, according to circumstances, I treat with bloodletting, calomel and rhubarb, and the liq. ammoniæ acet."

This little treatise is accompanied by some clinical reports of cholera cases; but I fear this paper has already transgressed its proper length. Neither Professor Casper nor myself pretend to offer the external and internal use of cold water as specifics in the treatment of cholera; we merely assert that this is the most powerful means of bringing on a stage of re-action and a return of vitality to the surface.

I must add, that I have seen patients in the worst stage of collapse, livid, cold, and pulseless, removed from their beds to the bath like living corpses. After the application of the cold affusions, as above described, I have watched them for half an hour as they lay wrapped up in the blanket. After the lapse of ten minutes or a quarter of an hour, I have observed the cholera physiognomy gradually disappear, and the natural countenance return; the livid colour of the surface change into a more healthy hue; the icy coldness succeeded by a moderate but genial warmth; and the before pulseless arteries at the wrist offer a sensible expansion under the forefinger of an anxious by-stander.

I am, sir,
Your obedient servant,
GEORGE BURROWS, M.D.
Physician to the Cholera Establishment of St. Bartholomew's Hospital.

VALUE OF PREVENTIVE MEASURES — CHELTENHAM EXEMPT FROM CHOLERA.

Board of Health,
Cheltenham, Nov. 3, 1832.

SIR,

I BEG leave to acquaint you, for the information of the Lords of his Majesty's Privy Council, that the malignant cholera has now entirely subsided every where in this neighbourhood. The Board of Health of this town have in consequence felt it their duty to make the following report to their Lordships:—

The town of Cheltenham having been surrounded in all directions for several months by this disease, without its occurrence in it, the Board beg leave to express their belief, that, under divine Providence, this exemption from its ravages has been owing to the great care that has been taken in the removal of every description of nuisance, as far as was practicable; together with the airy and healthy situation of the town generally.

In the discharge of the duties entrusted to them, their first care was to prevent, as far as it was possible, all vagrants, trampers, and other suspicious travellers, entering the town from infected districts. Constables were placed, with proper assistants, to guard the principal avenues, by which means near two thousand persons of the above description, (and who could not give a good

account of themselves,) were, after being relieved, either sent back from whence they came, or conducted circuitously on their way. This important duty was effected at an expense comparatively insignificant.

In the removal of nuisances generally, the Board are bound in justice to state that their endeavours have been assisted with the greatest cheerfulness, not only by the parochial and other authorities connected with the town, but by individuals generally.

Inspectors, who were members of the Board, minutely examined every quarter of the town, and even every individual house, where filth and nuisances were likely to exist; and, as far as was practicable, the Board had them removed.

In many of the crowded streets, the Board discovered numerous nuisances connected with want of proper ventilation:—yards common to several houses; pools of stagnant and filthy waste water, which had no outlet; with privies and pig-sties of the most filthy description; which of themselves, from the exhalations constantly arising from them, contaminated the air, and became a fertile source of fever, and other contagious diseases. These, in many instances, have been entirely removed, and in all greatly abated. In fulfilling this duty, all stagnant water was removed, and the places purified with lime; and wherever the nature of the ground admitted of it, drains and water courses were made, to prevent a recurrence of similar future mischief. More than seven hundred houses have been thoroughly cleansed inside and out, and lime-washed in the most effectual manner. All accumulations of dung, dust, rubbish, or other impurities, have been removed, in doing which the Board received every assistance from the gratuitous loan of carts, &c. belonging to the constituted authorities and individuals; as well as by being liberally assisted with pecuniary and other aid, by the different neighbourhoods which required cleansing. By these means, the expenses of the Board were in many instances much diminished.

In the formation of culverts—a measure of great importance from their permanent advantages,—the Board have the satisfaction of stating, that in different parts of the town, and where they were most urgently wanted, they have been constructed to the length altogether of nine hundred and eighty-seven feet, and generally above three feet in heighth. This is independent of others, which have been made entirely by individuals at their own expense, at the recommendation of the Board. In this great work, the Board have been aided in so spirited a manner by public bodies, and individuals who have property contiguous to them, that the whole expense to the Board upon this head has not exceeded twenty-six pounds.

It may be of importance here to mention, that in a populous neighbourhood, and where one of the longest culverts and most wanted was constructed, the typhus fever had for a long time been fatally prevalent. This disease has since entirely subsided in that district; furnishing an instructive example of the great importance of an efficient drainage to the public health.

Similar beneficial results have been found from a minute attention to the state of the lower description of lodging houses, where vagrants and trampers congregate together in great numbers. These have been minutely inspected and visited, often two or three times a day; the bedding and furniture attended to; and in every instance, they have been thoroughly cleansed and lime-washed: while their management, it is hoped, is improved.

The first duty of the Board after its formation was the establishment of a Cholera Hospital. An eligible house was taken, fitted up with beds, and every necessary for the reception of patients. A nurse was provided, and except an expenditure for coals, there has been no other on this head since, except the rent, which is thirty-five pounds a year.

I have the honour to be, sir,
Your most obedient, humble servant,
THOMAS NEWELL, M.D.
Secretary to the Board.

To the Clerk of the Council,
Council Office, Whitehall.

ANALYSES OF SIX REPORTS ON CHOLERA.

Transmitted to us by the Central Board of Health.

DRS. BAIRD and MACRORIE, MESSRS. M'CULLOCH and NIGHTINGALE (Liverpool, Oct. 27), in charge of the wards

of the Fever Hospital, appropriated to cholera. Admitted, 210 cases; died, 117; recovered, 93: of the fatal cases, 48 almost immediately after admission. Have bled in all cases when bilious diarrhœa did not yield to opiates, astringents, &c., following this up with calomel, ʒj. and opium, gr. iss., a wineglass of brandy in water, having a drachm of carbonate of soda added to it. Afterwards calomel and opium in small doses, for a few hours, followed by castor-oil, with or without laudanum. Many cases so treated have run into consecutive fever, but this has been mild; at least rarely fatal. Collapse has very seldom followed where system became affected by the mercury. Vomiting and spasm at stomach always relieved by cupping and sinapisms. In second stage, bleeding adopted, if vital powers not greatly depressed. An enema of a pint of warm water, thirty drops tinct. opii, and a grain of sulphate of copper, generally arrested the serous discharges. A scruple or half drachm dose of calomel, with gr. i. to iij. of opium, followed up by minute doses of the above, or by hyd. c. creta and laudanum, every five minutes. Soda water, tea, cold water, &c. for drink. When vomiting urgent, with severe cramps, and dejections ceased, croton oil an "invaluable remedy." When stools have assumed a sanguineous appearance (a very fatal symptom), turpentine, with æther and laudanum, has completely changed their appearance, rendering them healthy; although the patients have sunk immediately after.

In third stage, bleeding at the commencement of the epidemic seemed to do good; latterly it has done harm. Have nothing to say in favour of any of the remedies so much vaunted in this stage. Towards its termination, the epidemic assumed a more malignant character.

"When we say that the cases recently admitted have put on a more malignant type than in the earlier period of the epidemic, it may be necessary to explain in what respects the difference consists. In the first place, there is an almost entire absence of pains and cramps at the stomach and extremities; secondly, purging and vomiting are neither so profuse nor severe; thirdly, there is less blueness, or discoloration of any kind, of the skin; and, fourthly, there is a great development of heat over the whole surface of the body: yet, with these symptoms, apparently so favourable to the success of remedial measures, we regret to say, that, let the practice adopted have been what it may, we have, in the great majority of these cases, been baffled in our efforts to arrest the progress of the disease."

Dr. Bournes, Coventry (Oct. 29.)—In premonitory stage, calomel, followed by castor oil; then rhubarb and ginger, or soda with a few drops of laudanum, every five or six hours. If pain in stomach, bowels, &c. a mustard emetic was generally exhibited first. In more advanced stage, however, an "antistimulant and antinarcotic" plan; giving "little" opium, and "less" brandy. Approves of the saline powders and abundance of cold water being allowed, and had been in the habit of using it before he read Dr. H. Shute's paper in the Medical Gazette. The Doctor enters upon some theoretical views, into which we regret that our space is not ample enough for us to follow him.

Mr. Humphreys, of Bonhill (Oct. 23).—Has had the medical charge of cholera cases in the above parish. In the form of bilious diarrhœa, as well as in all other stages of the disease, thinks highly of venesection, followed by a powder consisting of pulv. ipecac. comp. grs. v. given at intervals of two hours, until the purging ceases; afterwards, the following: calomel, gr. x.; jalap, gr. v.; rhei, gr. v. M.

In rice-water evacuations, after bleeding, a pill containing calomel, gr. iij. camphor, gr. iij., and opii, gr. ss. every half hour, until purging ceased, with a little hot brandy and water. Has found a draught containing sulphuric æther and laudanum useful, when given every half hour or oftener. Friction with turpentine; tin cases filled with hot water; mustard cataplasms to abdomen, calves of legs, soles of feet, and to chest. Clysters of starch, with tinct. opii. If local congestion, leeches, cupping-glasses, with blisters, and mercurial purgatives.

In collapse, tries to abstract blood. Relies principally on calomel and opium, gr. v. to x. of the former, and gr. ss. to ij. of the latter, at intervals of half an hour to two hours. When heat is restored, and vomiting and

purging abated, gives calomel, grains x., jalap, gr x., rhei, gr. v. Has sometimes given croton oil, in doses of from one to three drops: in two instances it gave great relief, by causing a large discharge of flatus. Attributes his success in this period of the disease to his constant endeavours to cut short the fever, by giving quinine at an early stage. When stomach continues irritable, has found large clysters "very valuable." Remainder of treatment same as in second stage. No cases or numbers given.

Mr. Symonds, Surgeon to Oxford Medical Dispensary, (Oct. 30.)—In first stage has found an emetic of ipecacuanha, followed by half grain or grain doses of opium and ipecacuanha, made up into pills with aromatic mixture, and repeated every three or four hours, "the most available remedies." When diarrhœa is very urgent, gives in addition to the above, after every liquid evacuation, two spoonsful of chalk mixture, with tincture of catechu, and six or eight drops of laudanum. When the diarrhœa takes on a chronic form, has found the sulphate of copper and opium, in half grain or grain doses, made up into pills, with aromatic powder, "not a little serviceable."

In the second stage has found the disease yield without difficulty to calomel in grain doses, combined with about a sixth of a grain of opium, repeated every half hour or hour until the alvine excretions have assumed their natural appearance. Gives with every dose of the calomel saline effervescing draughts.

In third stage gives calomel in larger doses—a scruple to half a drachm. Considers bleeding, in the second and third stages, of great power, but requiring nice discrimination in its employment. Cold water *ad libitum*. When nausea continues, approves of a blister to the epigastric region, and hydrocyanic acid in drop doses, in plain water. Disapproves of opium and stimuli.

Mr. Prouse, Bristol, (Sept. 1832.)—Disapproves of bleeding in the early stage. Has been very cautious in the administration of purgatives. Astringents freely used in slight cases with very great success. Considers that alum, chalk, catechu, and opium, have amply repaid the confidence placed in them. Carbonates of soda, &c. uniformly efficacious in the removal of acidity from the alimentary canal. Has used stimulants in large quantities in the worst cases, carefully regulated by the indications in each particular case. Gave nitrate of potass in 20 or 30 grain doses, and in general with the desired effect. Has treated upwards of 150 cases, of which number 3 only proved fatal.

Dr. Hardy, of Doncaster, has favoured us, under date 27th October, with two cases of cholera of the most formidable description, successfully treated by means of full doses of calomel (gr. v.) every quarter of an hour. The Doctor thinks favourably of the mustard emetic. He concludes with the following judicious observations:—"Having been in attendance on more than 100 cases of this disease, there is no fact of which I am more convinced than that the patient's best security is in the very frequent visits of the medical attendant, who is thereby enabled to prevent his own intentions from being defeated, either by the whim or dislike of the patient to the means prescribed, or by the caprice of the nurse or friends of the sick."

[The preceding paper is addressed to the Gazette, not to the Central Board.]

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Observations on the General Principles, and on the Particular Nature and Treatment, of various Species of Inflammation. By J. H. James, Surgeon to the Exeter Hospital, &c.

This is the best manual on the subject of inflammation which we at present have in the English language. John Hunter's great work neither is, nor ever was, fit for the perusal of the student, from the complicated and unskilful construction of the language; and Dr. Thomson's volume is both out of print, and nearly as much out of date, as that of his great predecessor. It is deeply to be regretted, that the learned professor in the northern school has not found leisure to bring his work, in new edition, down to the knowledge of the present period. The work itself is so good, that the pro-

fession has felt disappointed to see it suffered to fall into the back ground, when, by a little activity, it might have been retained in the first rank. It is satisfactory, however, to find that Mr. James is resolved to extend his "Observations" to all that is passing around. On a stem originally good, he has engrafted the fruits of other men's labours, and added to their value by the culture of his own mind. The chief additions are to be found in the accounts of diffuse inflammation of the cellular texture, as well as in that of fascia, and of blood-vessels, both arteries and veins —on all of which subjects, but particularly the last, much information has been presented to the public through the medium of this journal. The style of the author is perspicuous and good, the views are practical and judicious, and the volume altogether extremely well "got up."

The Substance of the Official Medical Reports upon the Epidemic called Cholera, which prevailed among the Poor at Dantzick, between the end of May and the first part of December, 1831. By JOHN HAMETT, M.D. &c.

WE have already published the chief results of Dr. Hamett's labours—indeed, the earliest extracts from them appeared in this journal (Dec. 24, 1831, page 441, also p. 473, also p. 532.) As, therefore, we devoted many pages to these papers in a former volume, it is unnecessary for us to do more at present than announce their publication in a complete and extended form, by the author himself; at the same time stating our opinion, that they constitute as complete a history of the epidemic in one particular place, as can well be conceived.

Dr. Hamett is a most zealous non-contagionist, and more than insinuates that he was unfairly dealt with on that account after the dissolution of the first Board of Health. This is a question between him and the parties to whom he refers. For ourselves, though adopting opinions at variance with the author's, he must do us the justice to acknowledge, that we took the earliest opportunity which was afforded us of making known his views—while we confidently appeal to our readers whether we have not invariably given as free admission to the communications on the one side as on the other. We allude to the subject, because we perceive that a vapouring blockhead has been recently stating this and other circumstances connected with the Gazette to be—just the reverse of the facts.

The Anatomy of the Horse, embracing the Structure of the Foot. By WILLIAM PERCIVALL, M.R.C.S. &c.

THIS volume contains a complete account of the anatomy of the horse. It is furnished with an excellent index, rendering it easy of reference. The plan of the work is good, and we have no doubt, from Mr. Percivall's reputation, that it is correctly executed. The description of the foot, in particular, is very full and distinct. To the veterinary surgeon, desirous of being completely master of his art, the work cannot fail to be acceptable.

MEDICAL GAZETTE.

Saturday, November 10, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

ASSOCIATIONS FOR THE PROMOTION OF SCIENCE.

WE take up our pen to acquit ourselves of a task too long left unperformed. It was with feelings of no ordinary interest that, within the last half-year, we witnessed the regularly organised proceedings of one, and the organization of another, admirable association, expressly instituted for the advancement of knowledge, and the promotion of friendly and familiar intercourse among the learned; but our incessant engagement with one ephemeral topic or other, pressing at the moment, though comparatively, perhaps, less important, left us but little leisure and less space, to pay that tribute of approbation which, however we felt it due, we were sensible did not need immediate payment. We ac-

cordingly procrastinated longer than we could have wished, and, of course, in coming forward at the eleventh hour, are sensible that we lack that gracefulness and influence of recommendation to which at an earlier and more convenient season we should have undoubtedly been entitled. Not that even now we have any thing new to offer, in stating our views of what we have looked upon for some time with unmingled satisfaction, but in inditing the few observations which follow, we feel that we shall have tendered in some sort an earnest of our good will, and a cheerful homage of that which we are aware would have been better worth acceptance had it been presented sooner.

Both the associations of which we speak have the interests of medicine at heart—the one collaterally, the other directly; both have indisputable claims upon the patronage and support of the profession. It is true that, at the Oxford meeting of the British Association, which took place in June last, the transactions which had medicine for their object were of a hurried character, and not very well managed; but that cannot again occur; the fault was not unnoticed at the time, and measures to prevent its recurrence will not be wanting in future. In place of throwing the medical sciences into the section of natural history, it is understood that physiology will henceforth have a distinct section allotted to itself, and that in other respects many necessary and desirable arrangements will be effected. It is only surprising to us how so much has been already done in the way of order, the last being but the second meeting of this grand national institution.

The proceedings of the other association have yet to be seen: as yet they have been but preparatory; but the objects of the society being strictly professional, or, as we have said, directly medical, less difficulty can be experienced in arriving at perfect harmony of organization. May we not be excused if we give a more distinct account of the nature and objects of this society? Its existence and express purpose cannot be too extensively made known throughout Great Britain; and we premise that, in contributing our services towards this end, we need do little more than avail ourselves of the excellent address of Dr. Hastings, delivered upon the occasion of the first meeting of the association, held at Worcester in July last.

In presence of an assemblage of some of the most distinguished practitioners of the provinces, Dr. Hastings being called upon for his statement of the plan of the society—already in some measure explained in the circular by which the meeting was convened—that gentleman came forward. He congratulated the assembly on the promptitude with which they had obeyed the call, and announced the large number of applications which he had had besides from all quarters of the country—from eminent cultivators of medical science, who were anxious to be enrolled among the members of the proposed association. To the editors of the Midland Medical and Surgical Reporter was the credit of its suggestion due; they had, after four years' experience in conducting that work, convinced themselves that provincial labourers in the field of medical science are neither few nor valueless, and hence, that the enterprise which they recommended was not only feasible, but would be certainly crowned with success They proposed to associate the provincial medical practitioners of England in a comprehensive co-operating institution, which, by bringing the energies of many minds to bear on one object—the advancement and the dignity of the art—would place medicine on that sure and honourable foot-

ing in this country, which there is no good reason why it should not attain. Dr. Hastings then read from the prospectus, drawn up by the committee, the following list of objects to which the attention of the new association should be directed:—

1. The collection of useful information, whether speculative or practical, through original essays, or reports of provincial hospitals, infirmaries, or dispensaries, or of private practice.

2. Increase of knowledge of the medical topography of England, through statistical, meteorological, geological, and botanical inquiries

3. Investigation of the modifications of endemic and epidemic diseases in different situations, and at various periods, so as to trace, so far as the present imperfect state of the art will permit, their connexions with peculiarities of soil or climate, or with the localities, habits, and occupations of the people.

4. Advancement of medico-legal science, through succinct reports, of whatever cases may occur in provincial courts of judicature.

5. Maintenance of the honour and respectability of the profession generally, in the provinces, by promoting friendly intercourse and free communication of its members; and by establishing among them the harmony and good feeling which ought ever to characterize a liberal profession.

The means by which these objects are to be carried into effect are, first, the holding an annual meeting of the members at some one of the provincial towns (it will be Bristol in 1833,) changing the place of meeting each year; and secondly, in addition to thus securing the advantages of friendly intercourse, by devoting the time of each meeting to such special business as shall be calculated to promote the cause of medical science. It is proposed for the furtherance of the latter object, that it shall be the allotted duty of one of the members, to give a history of the progress of medicine during the year expired, *or* to pronounce an oration on some such subject, *or* to read a biographical memoir of some eminent cultivator of medical science who may have resided in the provinces. We do not see why all three should not be regularly performed by three competent individuals, and thus three valuable contributions be bespoken for the volume in which the annual transactions shall be recorded. Dr. Conolly's suggestion is also very important, that a certain number of members shall be appointed each year, whose duty it shall be to report on the state of medicine in foreign countries. Thus the state of the science in France, Germany, Italy, and America, would become familiar to the members, and much interesting information could not fail to be elicited. "In this respect," adds Dr. Hastings, "the British Association may be imitated by us with great advantage. They have appointed committees of their body to select the points in each science which most call for inquiry, and endeavour to engage competent persons to investigate them; and they attend particularly to the important object of obtaining reports, in which confidence may be placed, on the recent progress, the actual state, and the deficiencies of every department of science." It is understood, in consequence, that in the Provincial Association a certain number of members will be appointed annually to report at each meeting the progress of the distinct branches of medical science during the preceding year.

We will not follow Dr. Hastings in his able summary of the various departments of medicine, in which he shews that investigations laborious and minute are still wanted: but we fully concur with him in most of his positions, and at some future period may bestow further attention upon them. The result of the meeting has been, as we suppose most of our readers are already aware, that the Association is now regularly organized, with its President, Secreta-

ries, and Council. It is very gratifying to observe the list of members which we have before us: it includes a surprisingly large number of distinguished practitioners—all resident in the provinces, and who have all pressed forward eagerly and at once to testify their desire of mutual co-operation.

It is impossible to contemplate the formation of a great professional body like this, without anguring from it the most important consequences. Union, which, under ordinary circumstances, is productive of the most striking results, becomes an engine of incalculable value, when, as in the present circumstances, it is directed to the attainment of an end that is both great and good. What—even if nothing more were to be expected—what can be compared in value to the friendly feeling, and good understanding, which must inevitably grow out of this periodical intercourse between educated men, leagued together with so noble a design? "Men," says an eloquent writer, "not only accumulate power by union, but gain warmth and earnestness. The heart is kindled. An electric communication is established between those who are brought nigh and bound to each other in common labours." And if such be the case with mere masses of human beings, how are the chances of accumulated power increased when the mass consists of the educated and the refined? That the validity of so natural an inference should be questioned, appears to us to be so remarkably absurd that we cannot easily forget the comment of a leading journalist, when, in the course of the summer, he condescended to notice the congress of British science at Oxford. He argued, that because there were ample means of scientific intercourse through the press and the post-office, it was perfectly idle and superfluous for learned men to be congregating together for the mere purpose of *viva voce* announcements of their labours. He left out of the question altogether the main purpose of their assembling; and, with singular obliquity of intellect, or obtuseness of natural feeling, would not, or could not, appreciate the value of friendly and familiar intercourse. "Iron sharpeneth iron"—can be a proverb of no truth or application to such a man; though perhaps it might be otherwise if that metal could sharpen *lead*.

MEDICAL APPLICATION OF MATERNAL SORROW.

M. Double—whose name must be familiar to our readers as that of an eminent physician in Paris—had lately occasion to read a memoir to the Academy of Sciences, in which he mentions the following circumstance as having first directed his attention to the sounds of the heart. Many years ago, when he was taking leave of his mother, she laid his head upon her bosom and wept in an agony of maternal grief at parting with him: but her philosophic son was otherwise employed the while. He was struck with the distinct manner in which he heard the beating of her heart and the convulsive sobs of her breathing—he listened to every sigh as illustrating the principles of acoustics—and hence he assures us the origin of the mode of examining into diseases of the chest by auscultation, now so generally adopted. M. Double evidently thought the anecdote redounded to his credit; but we fear he will look in vain for any compliment on the score of feeling—truly his *sang froid* was indeed *cold blooded*.

MILITARY HOSPITAL, ALGIERS.

CLINICAL OBSERVATIONS ON WOUNDS FROM FIRE-ARMS.

By M. Baudens,
Surgeon-Major, and Professor in the Algerine Hospital.

WOUNDS OF THE FACE.

There are few lesions which at first sight appear to be so serious as those of the face,

especially when inflicted by wounds from fire-arms; yet they are seldom dangerous. In almost every instance cases which have looked very alarming have got well without difficulty—the surgeon principally taking care to prevent the spread of inflammation to the interior of the head. But care must be also taken of the lips of the wound, when union by the first intention is aimed at; for if they be not refreshed and connected by a few sutures, the cicatrix will be furrowed and jagged in place of being linear and invisible. After fire-arms this caution is particularly requisite, for gangrene cannot be united to gangrene. I shall select a few remarkable cases.

WOUNDS OF THE EYES.

Lesion of the Orbital Arch—Emphysema of the Eye-lid—Cure, but with loss of sight and memory.

M. D., a captain of the 30th regiment, in the sortie from Medeah was struck by a ball at the inner third of the orbital arch, on the right side. The projectile shattered the external plate of the frontal sinus, and remained so fixed in the internal as to compress the anterior lobe of the brain. I removed it with some difficulty, dressed the wound, and had the patient, in a state of coma, carried to Algiers. I did not see him till three days after. There was then fever present, which I combatted with antiphlogistics. I found also that there was a fistulous communication formed between the frontal sinus and the anterior ethmoidal cells, attended with emphysema of the eye-lid. That the air passed through this communication was evident when the patient sneezed or blew his nose. I recommended him to avoid as much as possible doing either, and with the help of nitrate of silver and a compress got rid of the fistula, as well as the emphysema of the lid. But the eye itself, though apparently not at all altered in its structure, was totally deprived of the power of vision, which I attribute to injury of the frontal nerve of the fifth pair, the communications of this branch with the nasal twig of the same nerve, and the connexions of the latter to the ciliary nerves of the ophthalmic ganglion. The memory is so much impaired that the patient loses all recollection of his acts. Things which interest him now, in twenty-four hours are completely obliterated from his mind. All that happened to him previous to the accident he remembers perfectly. His power of expression, so far as relates to calling things by their right names, is also much impaired. What support does this afford to the opinions of Gall and his disciples?

Lesion of the Crystalline—Extraction—Cure.

Mustapha, a Turkish cannonier, aged 60, a robust and vigorous man, was struck, at the explosion of the Emperor's fort, by a small round stone about the bigness of a large pin's head, which came from below upwards, and after tearing through the transparent cornea of the right eye lodged in the crystalline. It was on the third day after his accident that I saw him. He was then suffering under intense ophthalmia; the globe of the eye was voluminous; exophthalmia was commencing; and there was a purulent discharge proceeding from the lens, in the centre of which the stone was easily perceived. The wound in the cornea was cicatrized. I performed the operation for cataract by extraction, when scarcely was the cornea divided when the crystalline, compressed by the humours of the eye, was forcibly expelled, together with the stone and the aqueous humour. I bled the patient several times, bandaged up the organ with closed lids so as completely to exclude the light, and in about six weeks found that the organ had recovered its power—not perfectly, however, owing to the Turk's impracticableness. I have preserved the stone carefully.

Singular lodgment of a Ball in the Orbit without any very visible external injury.

At the descent of Mount Acoza, Z. a private of the 28th regiment, feeling himself struck about the external angle of the right eye, hastened to the ambulance. The eyelids were by no means ecchymosed. The conjunctiva towards the external angle of the globe was red, a little injected, but not torn. The inferior eyelid slightly swollen. Not having time to examine the parts more attentively, and taking the patient's word for it, that he must have merely been hit with a small stone or branch of a tree, I dressed the eye simply, and put compresses on it steeped in cold water. I found the man afterwards in the hospital at Algiers. M. Molinard had discovered behind the lower eyelid a roundish body, receding on the slightest pressure: it was doubtless a ball, which should be removed immediately, in order to check the progress of acute ophthalmia setting in momentarily. He made a transverse incision through the lid: but the impossibility of fixing the foreign body rendered all attempts vain at extracting it in this way. On the following day, he bethought himself of making the patient roll back the eyeball, while he drew forward the lid, so that he was enabled to get a spatula behind the foreign body, and to remove it by leverage. Nothing more was to be done but to combat the ophthalmia, which was soon got under.

WOUNDS OF THE NOSE.

Wounds of this nature, especially if at-

tended with loss of substance, singularly mar the harmony of the visage. All the resources of our art, then, ought to be put in practice to prevent such deformity.

Loss of substance of the Lobes of the Nose—Rhinoplastic Operation—Cure.

A soldier was shot across the base of the nose, and nearly deprived of the whole of that part. The bare nostrils exhibited a frightful appearance: but little of the septum remained; and the bones of the nose were shaken, but not shattered. I pared the edges of the wound, and, after the example of M. Larrey, detached portions of the integuments on each side over the canine fossæ; by means of which, with the aid of a few sutures, I masked the bony skeleton of the nose, and supplied the place of fibro-cartilage by allowance of integument for the base, and stuffing slightly with charpie the cavity of the artificial nostrils. In short, I succeeded in giving the organ the desired form, and especially prevented flattening at the base by the application of wooden pincers. In six weeks all was well.

Perforation of the Right Nostril, and Stoppage of the Ball in the corresponding cavity.

When we were at Mount Atlas, B. a soldier, who was attending me in the ambulance, received a shot in the middle of the right nostril. The ball was of the cylindrical kind. It made a large opening for itself, but remained free in the nasal fossa, without touching the septum in any remarkable manner.

Perforation of the floor of the Nasal Cavities and of the Tongue by a Ball—Cure.

A corporal, who was at the bottom of a ravine, was struck with a ball, coming downwards, which divided into two portions the lobe of the nose, broke part of the cartilage and the vomer, passed through the floor, pierced the tongue and soft parts situated under the median raphé between the os hyoides and the lower jaw. Another soldier received a similar wound, except that the ball stopped on the tongue, and scarcely did it any injury. In both cases, after removing the bony splinters, the lobe of the nose was replaced by sutures, and cold fomentations were applied to the parts. The first case experienced an intense glossitis, which required a deep scarification of the tongue. In other respects, the cure was complete in twenty days. There remains, of course, in both patients an anormal communication between the mouth and nose, which will require in one of them the constant application of an obturator.

WOUNDS OF THE CHEEK.

Lesion of the Maxillary Sinus and the Parotid Gland—Cure.

A soldier of the 28th regiment was struck, below the zygomatic apophysis of the left side, with a ball, which came out at the opposite side, in front of the *pavillon* of the external ear. The projectile crossed the maxillary sinus, the bony structure of the face, and the parotid gland. The escape of air along with a quantity of bloody mucus, left no doubt of the lesion of the maxillary sinus, while the parotid gland, much bruised, was covered with an eschar. Having carefully removed the splinters of bone, I pared the edges of the wounds made by the entry and exit of the ball, and closed them by sutures. A slight compression, managed carefully, over the first aperture, and a strict injunction to the patient not to make any effort in blowing his nose, sufficed to stop the air-passage. There was not much danger of a subcutaneous emphysema, as the integuments were so strongly adherent to the parts more deeply seated, and as the cellular tissue was here so little permeable. But in thus closing the two orifices, in order to prevent the formation of fistulous openings, one aerial and the other salivary, had I not reason to fear for the consequences of stopping up the natural issues of the purulent discharge which generally attends gun-shot wounds on the removal or fall of the eschars? My experience did not give me reason to entertain any such apprehension; for I was well acquainted with the energy of absorption observable in wounds of the face;—and, besides, did not the nasal fossæ offer an easy exit for the flow of the purulent matter? With the aid of a severe regimen and general bleedings, the cure was complete: after a month's treatment, the linear and scarcely visible cicatrices adhered to the subjacent parts. The aerial fistula never reappeared—the salivary did not exist for a moment. The patient was one of those soldiers who were twice wounded in the defiles of Mount Atlas. He received a ball in the arm, the wound from which got well without accidents.

Singular Wound by a Spent Ball.

An officer of the 30th regiment, who went, with his cigar in his mouth and sword in hand, to cover the retreat of the army in the descent of Mount Atlas, had his mouth completely full of tobacco-smoke, which even kept the dental arches asunder, when he was struck on the right cheek by a spent ball, which entered and lodged in the oral cavity without any other lesion than the perforation of the soft parts which it met in its route. The officer spat out the tobacco-smoke and the bullet together. There still remains a slight scar on the cheek.

DR. ELLIOTSON.

On Thursday afternoon (the 8th,) when the second sheet of this journal had been made up, we received a letter from Dr. Elliotson in reply to our last leader, in which we pointed out some inaccuracies into which he had fallen, respecting the Medical Schools of England. The letter contains questions requiring categorical answers, as to numbers, &c. which we are unwilling to venture upon off-hand, for the satisfaction of a gentleman in such a state of prodigious excitement as the learned Professor appears to be, and by whom the slightest inaccuracy would obviously be magnified into a heinous offence. We therefore postpone it till next week, pledging ourselves both to insert the letter, and to answer every point which it contains. If Dr. Elliotson had really wished it to be inserted in this week's Gazette along with the information which he professes to seek, he ought to have sent it sooner,—and he knows this: nevertheless, we find that it has been in time for the *Lancet*. It is admirably managed of the Doctor, thus to keep back his letter till too late for us (though it is dated the 6th), and meantime get it into the Lancet, which appears before us,—we must presume, of course, without any intimation to that journal that it was forthcoming; indeed the Doctor knows well that if he had sent a letter abusing the Gazette even at the eleventh hour, his patron would gladly have inserted it,—aye, though it had been necessary to cancel the first impression.

On the wrapper of the present No. will also be found an advertisement from Dr. Elliotson, intimating that he is not answerable for his Lectures as published in the *Medical Gazette*. The Doctor will find that we anticipated him in a note appended to his Lecture in the first sheet, and which was printed off before his communication was received. Dr. Elliotson is evidently quite prepared to find the Lectures inaccurate, and states that he has spent hours upon their correction. Those who know as much of the Doctor, and his compositions, as we do, will readily believe him: the fact is, he corrects and recorrects the merest trifles, apparently striving to give to elaborate and studied Lectures the appearance of being unpremeditated. The reader will find a fair specimen of his errata in our last No. wherein two commas, in different parts of the Lecture, are directed to be struck out, and the limb of a parenthesis (God save the mark!) transposed. We have, in truth, been most distressingly hampered by these puerilities, and shall explain to our readers next week the inconsistencies of which *we* apparently have been guilty towards them, regarding those same Lectures, and by which it will be seen that we could not much longer have submitted to the inconvenience and injury caused to our journal by complying with Dr. Elliotson's request, that he might be allowed to see the proof-sheets,—even though we had not been so presumptuous as to question the infallibility of his views in our last leader. We ventured to criticize Dr. Elliotson's opinions just as we should have done those of any other man,—*hinc illæ lachrymæ*.

To prove, however, that Dr. Elliotson has no ground for anticipating inaccuracies, we have to state, first, that his Lectures have been taken down by the same first-rate short-hand writer, whose reports of Mr. Lawrence's Lectures were so much admired for their correctness; secondly, that we have had Dr. Elliotson's Course taken down by the same expert hand during two successive seasons,—so that we have the extraordinary advantage of two copies to compare, in the event of meeting with any questionable passage. The Doctor's proofs have been preserved, and are still in the hands of the printer, in order that the exact nature of the corrections may be proved, if the Doctor compels us to do it. Lastly, we appeal from Dr. Elliotson condemning by anticipation, and in a state of excitement, to Dr. Elliotson in his calmer moments—we challenge him to point out any instances of inaccuracy.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 6, 1832.

Abscess	1	Fever, Scarlet	11
Age and Debility	38	Typhus	1
Apoplexy	4	Gout	3
Asthma	16	Hæmorrhage	3
Cancer	2	Heart, Diseases of	4
Childbirth	2	Hooping-Cough	8
Cholera	7	Inflammation	19
Consumption	63	Bowels & Stomach	4
Constipation of the Bowels	1	Brain	3
Convulsions	24	Lungs and Pleura	1
Croup	4	Insanity	1
Dentition or Teething	8	Liver, Diseases of the	6
Dropsy	6	Measles	11
Dropsy on the Brain	8	Mortification	2
Dropsy on the Chest	1	Paralysis	2
Erysipelas	3	Small-Pox	19
Fever	10	Still-born	17

Decrease of Burials, as compared with the preceding week . . . 122

METEOROLOGICAL JOURNAL.

November 1832.	THERMOMETER.	BAROMETER.
Thursday . 1	from 40 to 53	29·56 to 29·82
Friday . . . 2	39 53	29·89 29·82
Saturday . 3	44 54	29·78 29·62
Sunday . . 4	36 52	29·59 29·66
Monday . . 5	29 43	29·56 29·99
Tuesday . 6	33 47	30·13 30·30
Wednesday 7	32 47	30·31 30·29

Prevailing wind S. W.

Alternately clear and cloudy; rain at times on each day, except the 3d.

Rain fallen, ·375 of an inch.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

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OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 17, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

VESICULÆ.

We now, gentlemen, enter upon the consideration of those inflammatory diseases of the skin which are characterized by the secretion of fluid under the cuticle. I shall begin by speaking of those which are characterized by the secretion of a thin watery fluid; and among these, of such as exhibit very minute collections, so that the first description applies to those which are termed *vesiculæ*. If the liquid be not water but pus, the diseases are called *pustulæ*; if the secretion be water, and the collections are large, the affections are called *bullæ*. Vesiculæ and bullæ merely differ in point of size. The contents therefore of a vesicle are serous; they are also called *limpid*, but limpid is an indefinite word, and it is therefore better to say serous.

Definition of the terms Vesicle and Scab.—A vesicle is defined by Dr. Willan to be a small orbicular elevation of the cuticle, containing lymph (we had better say serum), sometimes clear, transparent, colourless, but often opaque, whitish, or coloured. The serum may be quite clear, or it may be rather opaque, or purple; and such an eruption as this may be succeeded either by a scurf or by a scab. If the fluid be absorbed, and the cuticle which is detached rub off by degrees in minute portions, you have scurf; if, on the other hand, the fluid be not absorbed, but the cuticle is ruptured, as the fluid exudes you then have a scab formed by the drying of the fluid. A scab may be formed either by such serum, or by pus; of course, therefore, in this disease you may have a scab. A scab is defined by Dr. Willan to be a hard substance formed of fluid discharged from ulceration. A scab may be formed, therefore, either of serous fluid, or by the concretion of pus.

Miliaria.

Now the first disease among those which are characterized by a watery secretion in a minute collection, and of which I shall speak as being the most minute—as having the most minute vesicles—is the miliary eruption; it is called in Latin, *miliaria*. In this disease the vesicles are exceedingly minute, and exceedingly numerous, about the size of millet seeds; whence their name. There is a slight inflammation of the skin, and a slight rash; sometimes a little more, and then the disease is called *red* miliary eruption. If there be scarcely any, or what there is disappears, and there be only white vesicles, then it is called *white* miliary eruption. Some imagine that the red is neither more nor less than scarlet fever. Formerly the diagnosis was so imperfect that many cases of miliary fever were called scarlet fever; however, if there be much inflammation the skin will be red; if not, it will look white, from the number of these little vesicles.

Now these miliary eruptions are very frequently nothing more than attendants upon other diseases; they will come on at an uncertain period of various cutaneous diseases. In measles and in scarlet fever you continually see a little miliary eruption. I have frequently seen it on the hands in the case of acute rheumatism. These eruptions are most abundant on the breast, neck, and back; on the face and extremities they are less copious, and they will appear and disappear in uncertain order.

Symptoms.—If the disease be very copious

indeed, the eruption is immediately preceded by an unusual degree of languor and faintness, and by a profuse perspiration, which perhaps accompanies it the whole of its course, and which is sour to the smell, or smells like rotten straw. There is sometimes a sense of heat pricking and tingling in the skin before the eruption comes out, and even during it. The vesicles at first are exceedingly small, and filled with transparent lymph; but in about thirty hours the lymph will become more or less opaque and milky. The tongue may be affected; it may be dark and red at the edges, and the papillæ may be elongated. There may be aphthæ of the mouth and fauces.

Duration.—The duration of the disease is very uncertain; it is said to last from seven to ten days, or longer; but crop after crop may come out, and protract the case perhaps six or seven weeks.

Causes.—Now this disease is supposed by Bateman to be nothing more than the effect of bad treatment. It was very common formerly when lying-in women were kept in a heated room, when a number of blankets were placed upon them, thick curtains were drawn around the bed, and a fire was kept blazing in the apartment. Under all this it would have been strange if they had not sweated and had a miliary eruption of the skin. It is supposed that there never was a specific disease of this kind, but that it was the result of over-excitement of the body when there was more or less feverishness. Now there can be no doubt, I think, that there is such a specific disease as miliary fever, besides the miliary eruption which may be produced by stimulating a person improperly by heat. Formerly in this country, at different times, there was a disease called *sweating sickness*, which was characterized by these very symptoms; and this disease now prevails from time to time in some parts of France, as in Languedoc, and in Normandy. The disease has frequently prevailed in those places, not sporadically, but as an epidemic. These are moist places, and the disease is there thought to be—as old writers in this country declared it was—contagious. The fluid from a vesicle has been inoculated without success; but in the places I have mentioned people declare there is no doubt of its being contagious. It affects adults, and particularly women. It is said to prevail only between 43 and 59 degrees, north latitude.

Symptoms.—When it comes on in the epidemic form, it may, like most other diseases, be either mild or severe, so that it is divided into benign and malignant. The miliaria benigna is preceded by lassitude, frequently by pain over the eyes, and loss of appetite; but persons sometimes go to bed well, they wake in a profuse sweat, very soon vesicles appear, and they sweat on till they die, or the symptoms cease. Now and then before the eruption comes on, they complain, as people do in this country, of a sense of heat along the skin; and the sweatings are so profuse that the patient is actually steaming. In the violent form of the disease all the symptoms are intense, but the stomach is found to be particularly affected; what is called *gastro-enteritis*, an inflammation of the mucous membrane of the stomach and intestines, takes place. The sweats are very fœtid, and the patient smells exactly like rotten straw. The eruption generally comes out on the second or third day, and continues from two or three days to two or three weeks. There may be merely scurf afterwards, the contents of the vesicles being absorbed; or there may be an oozing from the vesication, and extensive desquamation may ensue: there may be violent headache, with giddiness and delirium. Such is the disease as it prevails in many parts of France. Several persons in Paris deny that there is any such disease, exactly as other people will sometimes deny things that they do not happen to see themselves.

Treatment.—The treatment of this disease, when it occurs as we see it from the effect of hot regimen, or a violent inflammatory complaint, consists in simply keeping the patient cool, and the whole will then subside. But abroad, when the disease prevails epidemically—when they have what is called the sweating sickness—then it is frequently necessary to take away blood, to give a patient fresh air, and, I should think, to sponge him well. But sometimes it is necessary to take away blood, and pay attention to the inflammatory state of the stomach and intestines—to take especial care not to give any thing that will irritate those parts—to give neither emetics nor purgatives. I should presume that other cases might occur, in which it was necessary to support the patient well.

The appearance of the eruption as we sometimes see it at the back of the hand in rheumatism, is very well represented in this plate (exhibiting one). You perceive that there is scarcely any inflammation. It is a thing of common occurrence, and the disease is easily recognised, in consequence of the extreme minuteness of the vesicles.

Herpes.

The next disease of this description is one of very common occurrence, but as far as I know, is without any danger whatever. It is called *herpes*.

Symptoms, &c.—Herpes is a vesicular disease, characterized by a great degree of inflammation at the base of the vesicles.

You may distinguish it from some other vesicular diseases, by the great degree of inflammation with which it is attended. It is a disease on which you will be continually consulted. Patients are very much frightened, and fancy they have some terrible disease coming; but you may easily quiet their fears, and indeed, for the most part, very little treatment is required. In most of its forms it is an acute affection; it begins, perhaps, with general feverishness, and a great degree of smarting and tingling of the skin; the skin looks red, and clusters of vesicles then appear; it generally lasts from eight or ten days to a fortnight. There is not a large number of vesicles diffused over different parts, but they occur in clusters, and cluster after cluster will appear. Those eruptions which you see coming on suddenly upon the chin, for example, are of this description. At first the contents may be clear, but they soon become opaque and yellow. The scabby mouths of children are nothing more than herpes. Now and then it will occur around the whole body. The patient shall be seized with a violent pricking, tingling, and smarting, and then vesicles are seen which form a cluster; and this will go on, cluster after cluster being formed, till a belt is made. In common language this is called *shingles*, but in medical language it is called *H. zoster*. Now and then the patient is a little indisposed at first; he has a little head-ache, and a little feverishness; but as often as not there is nothing at all. The disease, when it occurs in separate clusters, is called *H. phlyctænodes*; but when it extends round the body, it is *H. zoster*. That is the only difference in the two forms of the disease. In the plate you see there is a great degree of redness, a great degree of inflammation, and the vesicles here are larger than in the former disease; then again, if you look at that form which runs round the body, you see a high degree of redness. It can make no difference as to the nature of the affection, whether it occur in clusters or mere patches. There is at first smarting and tingling in both, and when this is all over there is great itching.

Treatment. — There is not the least danger in this disease, and the patient would do well if you gave him nothing. In this species of the affection, however, I believe it is a very good plan to cut the patient off from a little of his diet—to give him a gentle dose of physic—and one of the best applications to the part is oxyd. zinci. It is well not to apply grease—it irritates the part very much; but if you powder it with zinc, the fluid is generally absorbed, and you find the disease go away. You may thus lessen the smarting and the irritation, and lessen the duration of the disease: it would go away of its own accord, but you may mitigate it, and give considerable comfort to the patient.

Herpes Præputialis and Labialis. — This disease frequently appears in a very local manner—for instance, about the prepuce of the male; also on the pudendæ of women little vesicles will sometimes appear, which are herpes. They occur, too, about the lips and angles of the mouth, and sometimes they occur to a great extent over the mouth, and children, from picking them, raise a scab, and thereby induce a sore which lasts for a considerable time. If it occur on the prepuce, it is called *H. præputialis*; but if it take place on the lip, it then receives the name *H. labialis*.

Treatment. — Moderate antiphlogistic treatment, purging, the application of cold water, and some moderate astringent powder to suck up the discharge, is the best mode that can be adopted.

On the prepuce it is frequently mistaken for a venereal affection, and patients often go to medical men in a great fright.

Herpes Circinatus.—Sometimes the disease will be so arranged that you have a circular form of the patches, with the vesicles only on the circumference, and then it is called *H. circinatus*. It is merely a number of vesicles spreading on the outward boundary. This is represented here (shewing a plate). You see that it is all the same disease, and all the forms are characterized by a degree of redness. The great use of knowing the disease is, that you may not mistake it for a serious affection—that you may be able to give a good prognosis. The patches heal in the centre, and are commonly round; and hence it is called, by the common people, *ring-worm*.

Treatment.—The same treatment is applicable to every variety of this disease.

Herpes Iris. — There is one curious form of the disease which I have not seen above two or three times, where you have all the colours of the rainbow; and for that reason it is called *H. iris*. It occurs in circular patches, and each patch is of rather a different hue. It is generally seen on the back of the hands, and it occurred there in the cases that came under my notice. You will find it well described in Dr. Bateman's work. He says, "The central vesicle is of a yellowish-white colour; the first ring surrounding it is of a dark or brownish red; the second is nearly of the same colour as the centre; and the third, which is narrower than the rest, is of a dark colour; the fourth and outer ring, or areola, does not appear until the seventh, eighth, or ninth day, and is of a light red hue, which is gradually lost in the ordinary colour of the skin. The iris has been observed only in young peo-

ple, and was not connected with any constitutional disorder; nor could it be traced to any assignable cause." In fact, it is only inflammation of various hues. When speaking of inflammation in general, I said that it assumed different hues; a remark which is illustrated by the appearance of this affection. It is a very pretty sort of disease. There is no difference in its cause from the others, and no difference in its treatment. Sometimes we can discover no cause for this affection; but it will come on after some little error in diet. There are concentric circles, so that there may be a succession of these inflammations. Each of these forms of herpes may last a long time.

Eczema.

The next disease to which I will direct your attention is very much like herpes, so far as it is a vesicular eruption, but it differs from it in having little or no inflammation. This disease is called *eczema*. The decided difference between the two affections is, that herpes has a great degree of inflammation, and eczema none. You will frequently see an eruption of vesicles on the skin, without any inflammation at all; but they are larger than milaria, therefore they are not milaria, but eczema; and if there be inflammation attending them, you call it herpes. That is all the difference. You will very frequently see this on the neck or hands in summer. The eruption may last only two days, or it may last a considerable time.

Causes.—Any irritation of the skin may produce it; intense solar rays may give rise to it, and stimulating acrid substances will have the same effect.

Eczema Rubrum. — The disease, however, is sometimes very severe, extends over the whole body, and proves fatal. Perhaps we should hardly say it was the same disease; however it is so called by Willan. It is chiefly induced by mercury. Every now and then, when persons have taken mercury, they have been seized with great heat of the skin—with feverishness—a number of vesicles have appeared larger than the miliary; they have spread all over the body; the cuticle has come off; fluid has exuded; and the irritation been so great as to make the patient quite wretched. At the same time the mucous membrane has become affected, and there is almost always cough. This, however, is not all: I have seen more or less disease of the throat; frequently vomiting and purging; the mucous membrane running from the fauces down into the abdomen having also been affected.

Treatment.—In this severe form of the disease, which generally arises from some peculiar susceptibility of the constitution to mercury, it is necessary of course to leave off that medicine. It is well to give the patient the utmost supply of fresh air, to open the windows and doors, and ventilate the room as much as possible. The smell from the discharge is exceedingly disagreeable, and you find it necessary to apply something to absorb it; nothing answers better than zinc or calamine powder. The latter is exceedingly mild, and never produces irritation; so that you may have the patient well sprinkled with it. You also find it necessary to support the strength; to give nutritious broths, plenty of milk, and frequently porter, and even wine. There is extreme debility of body induced, and I have seen several die from it. Inflammation will come on, and you find a difficulty between supporting the strength on the one hand and subduing the local inflammation on the other; so that you have to give, not wine or beer, but good broths, and trust on the other hand to the depleting effect of leeches. The case is one which it is very unpleasant to treat; for after giving the patient the utmost support you can—tranquillizing his system by opium, and anxiously doing every thing you can—you will find that, after the lapse perhaps of six weeks, he will die; and it is not to be wondered at, when you consider the extent of skin which is in a diseased condition.

It is not always mercury which produces this disease, but by far the most violent form is that induced by mercury. All the cases that I have seen arose from that source. Other cases will occur, in which mercury has nothing to do with it.

Eczema Impetiginodes. — This affection is sometimes attended by the formation of a puriform serum. The disease runs into a pustular form, and is then likely to be chronic, and may last a considerable time. You see that the divisions of the disease are more or less arbitrary; for here we have a species of eczema which might, with equal propriety, be called impetigo, and therefore it is termed *E. impetiginodes*. This is represented here (exhibiting a plate), from which you perceive that there is scarcely any inflammation, compared with the intense redness of the other, and sometimes none at all.

Treatment.—In this local form of the disease occuring acutely, there is no need of any thing but just to give the patient a dose of physic that will do him no harm.

Respecting that form of the disease which becomes chronic and runs into a pustular affection, it really is so nearly allied to pustular diseases, that it will save confusion if I speak of it when I speak of impetigo. Every now and then you see a patient with vesicles in one part

and pustules in another; and therefore I think it better to speak of it under impetigo. If you choose, you may call it impetigo eczematodes, just as we have eczema impetiginodes.

Scabies.

Symptoms.—Another disease, gentlemen, which is seen more frequently in vesicles than not, is itch. It is spoken of by Willan and Bateman as a pustular disease, and it sometimes is so; but generally it is vesicular. Every body knows it by the watery heads, and therefore it may come under the head of vesicles. This is a contagious affection. The two last diseases of which I have spoken (eczema and herpes) are not contagious; but the itch is very much so. It is, however, contagious in the limited sense of that word; it cannot be communicated by the atmosphere. You may go as near to a patient labouring under itch as you please, provided you neither touch him nor handle him, without the least fear of imbibing the affection. But the itch is not so easily caught by contact as you might imagine. I have frequently touched people—taken them by the hand or wrist, not knowing that they laboured under the itch—without catching it. I once caught the affection, but then I was a little boy, and obtained it from the nursery maid. By washing my hands after touching them, I never caught it from patients. It is only by remaining close for some time, by sleeping with a person, or using something that they have touched for some time, that there is any chance of catching it. It is more commonly caught by sleeping with a person labouring under it, than by any other means. It is common for working men who come to London, and sleep in beds where the sheets have not been changed, to catch the disease. It is very common also among children who sleep together. More frequently than not, you find the disease caught by persons sleeping with one who has the disease, or sleeping in a bed in which some one labouring under it has slept before.

The itch is called in medical language *scabies*, and it occurs chiefly about the wrists, the roots of the thumbs, between the fingers, the ancles, and between the toes; but if it be any where, you are almost sure to see it about the thumb. It occurs, too, on the front of the body, on the chest, and in the axilla. I do not recollect having seen it in the face. These are all curious circumstances, and the reason of them I cannot tell; but it is far more frequently seen at the roots of the thumbs than any where else, then at the wrist, next between the fingers, at the ankles, between the roots of the toes, and next on the front of the chest. The disease is attended by an incessant itching. A Scotch king is alledged to have said, that no subject deserved to have it, on account of the great pleasure that was derived from scratching the affected parts.

I do not know how long the disease may last; it appears never to wear itself out.

It is attended with no danger whatever, except to young children. I have seen it excite such great feverishness in them, that if they had not been cured, it is possible that derangement of the alimentary canal or of the head might have been induced. If the patient scratch himself the vesicles are ruptured; they then dry, and get dirty, so that you have black heads. A little blood probably exudes; but between the dirt drying with the fluid, and a little blood oozing, you have small black heads. In children you may often be mistaken as to this disease; for the irritation is such, that superficial inflammation to some extent occurs. Besides this, between and around the vesicles there is frequently common inflammation of the skin, and it will cause desquamation of the cuticle, so that the appearance of the disease is much disguised. The intense itching, too, in infants, makes them rub their legs against each other, and that occasions the disease to be recognized with difficulty; but if you will look at the roots of the thumbs, you will see the vesicular form of the disease, and ascertain its nature.

Species.—If the eruption be of a watery character, the disease is called *S. lymphatica*; if it be very rank, resembling pimples, it is called *S. papuliformis*. These distinctions are not very important: it is of importance, however, to know that the disease is sometimes characterized by pustules—large, full, flat-looking pustules, resembling any thing but the little vesicles which you see in other cases. This is called in common language *pocky itch*: the common people know the disease well. In refined medical language it is called *S. purulenta*. This is a species of the disease often mistaken, from its being so unlike the common form of the affection. It occurs between the fingers and at the back of the hands and wrist, where you will see large pustules of that description called *phlyzacious*, attended with an inflamed base, and containing a thick yellow matter. When you have once seen the disease, you will have no difficulty in recognizing it again. It is said that this disease is sometimes caught from brutes which have the mange. When there is great inflammation, you will have suppuration necessarily induced. Even when you have the affection in this severe form, you will generally find that in other parts of the body the vesicles are very small. It is only where there is great irritation that this pocky form of the

disease occurs. You will recollect the general rule I laid down, that if you look all over the body, you will see the true form of the disease in some part or other.

I believe I mentioned, when speaking of fever, that it is very common after fever for itch to take place. I have frequently seen this occurrence, but whether it came on spontaneously, or contagion had been applied before, I cannot tell; it is, however, by no means uncommon for persons after fever to have the itch. The lymphatic form is that which generally occurs in such cases, a representation of which is contained in this plate (shewing it). For the most part you do not have the disease a thousandth part so severe as this. Some have imagined that this disease arose from a small insect, but that is only a part of the doctrine, that all contagious diseases depend upon animalculæ. Some deny that there is any insect; some declare that they have picked an insect out, and seen it through a microscope; but others declare that they never could do so.

Though this is not a dangerous disease, yet it is a very troublesome one, and is held in great abhorrence. If you tell parents that their child has got the itch, they hold up their hands as if it had got the plague.

Treatment.—I need scarcely say that the great remedy for this disease is sulphur—but why, no one can tell. I do not believe that it has any effect when given internally. When I have employed it externally, I never found the cure accelerated by its internal exhibition. It may be employed in the form of vapour, or by means of baths, or inunction. In the latter form, it should be rubbed in night and morning; and if a person do that, he will soon get rid of the disease. Some employ sulphur baths. Some have impregnated water with sulphur, and say they have cured the disease in that way rapidly, and in a more pleasant manner than by rubbing in the ointment. It is said by some who have had great experience in the disease among the lower orders, that it is more readily cured by what is called *sulphur vivum* than by pure sulphur; if so, it is probably from the acrid matters which this contains. If there be no great inflammation of the skin, the sulphur produces more effect if you add hellebore, or some stimulating substance. If the sulph. vivum answer better than pure sulphur it is on this account.

Pompholyx.

The last disease which we have to consider among those which are characterised by vesication, is what is called *pompholyx*. Willan, and also Rayer, make a separate order of this disease, while really the only difference is, that in those of which we have been speaking the vesicles are very small, and here they are very large. I cannot myself see the reasonableness of making a distinct order of diseases, when the symptoms are precisely the same, and the only difference is a difference of size. One might as well call a tumor by one name if it be as big as a nut, and by another if it be as big as the head. However, if the vesicles be very large, they are called *bullæ*; and because sometimes there are large vesicles in erysipelas, Willan and Bateman have placed that disease in the order bullæ; but as there are frequently only small vesicles, and indeed vesicles do not appear essential to erysipelas, therefore I have considered it, as Rayer does, under the order of rashes.

When there is a very large elevation of the cuticle, a large collection of water, the disease is called pompholyx. It was imagined formerly that there was a particular fever attended by an eruption of large bullæ, and it was denominated pompholyx; but it is now doubted whether there is a distinct fever of this description. In common continued fever, and in other fevers well known, there may accidentally be a large bulla, just as in other cases there are vesicles not larger than a millet seed—miliary vesicles. However, this disease, which is characterised merely by large blebs of water upon the skin, is not very common, and yet one can hardly call it uncommon. I suppose I may have seen about twenty cases of the disease. In many instances it is really nothing more than large eczema, or large herpes;—a vesicle will appear on the skin, and instead of being small as it is in eczema, it is large, and sometimes there is an inflammation around it just like eczema, and sometimes it is a good deal like herpes; that is the whole history of the matter. Now and then you will have a vesicle on the skin of a person out of health, and if it be small, it is herpes or eczema; but if it be large, it is called pompholyx.

Species.—You find in Bateman three varieties of this affection: one *P. benignus*, there is no great harm in that; one *P. solitarius*, because there is only one; one *P. diutinus*, because it is chronic. It is almost a pity to make these names, for who would conceive that there was much difference between benignus and solitarius? If it be solitarius it is likely to be benignus, and one is at a loss to see why sometimes it should have one name, and sometimes another. It is well simply to recollect, that the disease may come on with only one vesicle, or there may be several; or it may last for a short time only, or for a long time. It is very properly called diutinus;

but we might as well call many other inflammations by the same term, for many last a long time. I do not know why the term chronic should not be employed. You will recollect, then, that large vesicles on the skin, occurring as an idiopathic affection, is called pompholyx. Sometimes there are only one of these, and sometimes a succession of them, and persons will have them month after month. I have seen all these forms of the disease. A patient in the hospital for some other complaint, all at once, without any reason, has had a great bleb on his foot, and you have nothing to do but prick it and away it goes. There is no treatment necessary.

But P. diutinus is a very obstinate sort of complaint, and I never saw any thing do good in it. I have seen it occur myself under two forms; the one in a worn-out constitution, where bleb after bleb appeared on the skin, which cracked and oozed like a sore; and then, when the body was one mass of these, the health gave way and the patient died. In the other cases which I have seen, it came on in regular succession. I recollect the case of a woman who, once a month, had some large bullæ out on her face; they were attended with considerable smarting; the fluid which oozed from them produced inflammation wherever it went; it then dried up, and the cuticle healed.

Treatment.—I need not say that that form of the disease which occurs in a worn-out constitution requires to be treated by soothing measures. You must exhibit opium and moderate astringents, sprinkle calamine to suck up the discharge, and support the patient well by means of wine, bark, and good nourishment. In other cases, where there is no debility, one would attempt to treat the patient on antiphlogistic principles. I did so in the case of the woman where the disease came out once a month, but the success was very limited; the irritation certainly was diminished, but the eruption came out again. By looking out for local disease and attempting to cure it, applying the warm bath, and if any phlogistic state of the system occurred, taking away blood, we should be doing what reason dictated; but more than that I cannot say.

Before I proceed farther, I had better show you those large bullæ which are called pompholyx (exhibiting a plate). You see how large they are; but I have seen some much larger than these. Sometimes they are not attended with any inflammation around them; but, in other cases, there is a very sharp kind of inflammation, producing smarting, tingling, and a burning sensation. Then, when they break, you have an excoriated surface, and a scab is formed of the fluid and the cuticle together. All at once a person will have one of these on his face or head, or both, and be much frightened. Here there must be something more than an inflammatory state, because I have treated them with antiphlogistic measures, and have failed entirely.

ON SOME SUBJECTS COLLATERAL TO CLINICAL MEDICINE.

A Lecture delivered at St. Bartholomew's Hospital, November 10, 1832.

By Dr. Latham.

Mode of taking Cases—Suggestions and Cautions in the reading of Books—Systematic, Nosological, Practical Books—The degree in which they are valuable to the Student—Division of practical Medical Literature into that which regards Works of Observation solely, and that which regards Works both of Observation and Research into Morbid Processes—The last properly called the Pathological, and especially recommended to the Student.

I have again called you together for the purpose of making a few remarks upon some things collateral to our proper business in the wards of the hospital. The student often asks me such questions as these—Would you recommend me to note cases down for myself in writing? What books should I read, or what studies should I pursue, in aid of my daily observation of disease? These are certainly very important questions, and I will now give you the best advice concerning them I am able.

I often see young men, at the very commencement of their attendance upon medical practice, taking cases; and when I do, I always dissuade them from doing so. At present it is quite impossible that they can do what they desire: they literally can not take a case. Their present business is to observe. They must learn to know the things themselves before they can put them down and set them in order for use and reference.

A twelvemonth is the shortest period during which any student will attend medical practice, and I will venture to give this general advice. During the first three or four months record nothing; use your observation to the utmost; be continually in the wards, looking at the sick and asking them questions; be inquisitive about the effects of medicines; be listening perpetually, with your bare ears or with the help of the stethoscope, to the chest, that you may become familiar with the sounds of healthy respiration and the healthy contractions of

the heart; and then try to use the same means for the detection of disease. Accustom yourselves to feel the pulse; the number of its beats is easily measured, but it has qualities which are referable only to the sensations of him who feels it, and you must educate your touch to the discrimination of them; for these qualities, much more than its mere number, serve to guide us in the detection of disease and the method of treating it. The tongue, too, must be often looked at, before you will be able to detect upon it the marks which are morbid. There are certain secretions too, the different morbid qualities of which you must learn by frequent examination: the expectoration, the urine—both have qualities upon which may depend the diagnosis of disease and the choice of remedies. I am not now making any orderly enumeration of symptoms, but merely instancing a few cardinal points with which habit must render you a little familiar and enable you to appreciate the information they are calculated to convey, before you can take cases for yourselves with any promise of advantage.

Let me also mention the physiognomy of disease. This can never be adequately described, and I urge you always to remark it and to dwell much on it; for some acute observers have drawn such secrets from the expression of the countenance, that it has been to them in the place of almost all other symptoms.

I would recommend, then, that for three or four months the student should allow his curiosity to range discursively among every variety of disease, familiarizing himself with the great signs which belong to all, before he binds down his mind to the rigid contemplation of particular cases. When I say discursively, I still mean diligently, and with an earnest purpose of improvement: and, in the course of three or four months thus employed, you will pick up much real knowledge, you hardly know how, but you will find it such as will stay by you.

And now you may begin to take cases: but take only a few at first, and be discriminate in your choice—let them be instances of well-marked acute disease; and, when you enlarge your number, I would advise you to employ yourselves upon several of the same denomination at the same time. Take three or four cases of dropsy, or of fever, or of rheumatism. Thus you will learn, by the benefit of comparison, what can be learnt in no other way. You will see shades of difference in the diseases themselves, arising from external circumstances or from the different constitutions of those who bear them, and a consequent variety in the modes of treatment required.

Take your cases in one of two ways. Either take them altogether independently for yourselves, or copy them out of the book kept by the clinical clerk, adding any particulars of observation or comment which may have occurred to your own minds during their progress. The last is the least laborious way, and I think the best, provided you make a point of never copying cases which you have not attentively watched during their whole course. At all events, you might trust to the clinical book for furnishing you their framework or leading facts, and their history; and thus leave yourselves more at leisure to note down your own remarks from day to day, as the cases proceeded.

If, in this employment, you make a good selection, and do your work carefully, you will, at the end of your hospital attendance, take away with you a little body of practical medicine founded on your own experience, which will be useful to you, very useful, as long as you live.

Do not let a suggestion which I am going to add seem trifling, or impertinent. I would wish to see the freest intercourse between pupils, with a view to mutual instruction. I would rather find two or three taking the same cases together, than one so employed alone. You have it in your power thus to give infinite help to each other. Of all modes of instruction, that is the most agreeable, and often the most valuable, where one a little senior, or a little more advanced in knowledge, communicates information to another not quite so forward. There are, besides, many little difficulties which no man can tell you better how to surmount than he who has just succeeded in surmounting them. At this day I continue to feel gratitude to two or three individuals a year or two senior to myself, whom I found at this hospital when I first became a student.

Then comes the important question, what books the student should read, and what studies he should pursue, simultaneously with his attendance in the wards of the hospital, in aid of the objects he has now view?

Now let me tell you, first of all, that there are some books which you should be very cautious how you read at the present period of your education.

Perhaps it may appear very strange to you, that while you are intent upon observing the symptoms of diseases and the effects of remedies, I should advise you to be very sparing in reference to books which treat expressly of such matters. You see the things themselves; then why learn them at second hand? I do not know that I have any objection to certain elementary books—"Vade Mecums," "Practical Manuals,"—provided they are short. Such

books are to the medical student what maps are to the traveller. They give a succinct summary account of the whole subject according to the last survey; they help him to explore the country; but no man can be said to know a country who has gone over it only on the map. The map may have given him his first general notion of it; but his more intimate acquaintance with it—that sagacity which enables him (if I may so say) to take the right turn in the dark—can only come from the habit of perpetually traversing it. Such are elementary books of practice to the student of physic. He wants them to tell him where he is, and just to give him a start; but he must never trust to them for any thing beyond this. The misfortune is, that these books are too often read, not to assist, but excuse the labour of practical observation. Many a young man has preferred to sit by his fire-side and read "Thomas's Practice of Physic," to a diligent attendance upon the sick in the wards of an hospital; and the consequence has been, that he has started into practice with Thomas under his arm and nothing else, and Thomas and he have been companions through life, and he has never been able to do without Thomas to his dying day; seeing and reading all things through Thomas's spectacles.

There are some books which are found in the hands of all students — books of nosology, and particularly Cullen's Nosology; which I am told they think it almost necessary to commit to memory. This they do respective to their examination. Now I do hope, since it is now prescribed to the student that he shall busy himself in learning disease *by actual observation* during one whole year — I do hope that he will be allowed the fullest, freest, and most unfettered exercise of his mind, to acquire knowledge *in the way prescribed;* that teachers and examiners will conspire to aid his progress *in that way*, and keep him from running out of it; and that, as he is told to learn physic in the wards of an hospital, he will *there* be taught it; and that, when he ultimately comes to be examined, he will be examined as one who has *there* been taught it, and has *there* learnt it, and no where else. If young men are to be examined nosologically, they must learn nosologically. They must commit to memory technical arrangements of disease; and the time required for this labour they must deduct from their hospital attendance. Nor is the loss of time the greatest evil: their minds are led astray from their proper object; for, while they are learning a nosology by heart, they are no more studying physic than if they were digging and delving in a field. It has often grieved me to see young men saunter about the hospital square, with a little book in their hands—grinding Cullen's Nosology, which they are sure to forget in a few months—instead of going from bed to bed, full of interest and alacrity, and gathering knowledge which would become their own, and remain with them as long as they live.

A more just way of examination upon practical medicine is this—first to ask the candidate what are the diseases which he has actually seen during the period of his hospital attendance, and then to make him give a strict account concerning them and their mode of treatment. Upon these terms *he* would always pass the best examination who had gone on acquiring knowledge in the way best suited for its use in after life, without thinking how he should be able to produce it in a technical form a few months hence.

No one should be examined beyond what he has seen, and he should be expressly asked what that is before he is examined. An attendance upon medical practice during a whole twelvemonth, in a large hospital like this, would bring him acquainted with an immense variety of diseases; so that there would be no fear of the examiner's interrogatories being cramped within too narrow a sphere.

What encouragement would it be to a zealous pursuit of practical medicine, if the student knew that this would be the form of examination to which he would be ultimately subjected! I am not without a hope that this will soon be the case.

But even if this were the case, it would, in my notion, still fall short of what is both desirable and attainable. I believe we have been all hitherto wrong; or, to speak more boldly still, I believe the best schools never yet were right, in the prescribed modes of imparting and acquiring, and ascertaining, the knowledge of practical medicine. The very examinations themselves should be conducted in the wards of the hospital. The presence of the patient is necessary at every step, for teaching, for learning, and, finally and most of all, for examining. Surely it is not possible to tell whether a man knows disease unless you see him in the very act of searching after it and finding it; or whether he can treat disease, unless you see him while he is applying his remedies to it.

But (it would be said) the arrangements of an hospital would not admit of all this. Nothing would be easier. This great hospital can provide for any thing which is manifestly conducive to the public good. I would only ask for a small ward containing half a dozen beds; and these beds should be occupied by half a dozen well-chosen cases, drafted from the rest of my patients.

This ward should be my clinical school, and into it none should be admitted but myself and half a dozen pupils. These I would have under examination for a month, and then the same number should succeed them; and so on, month after month, all the year round.

But how should I thus have them under examination for a month? By making them act before me, for a month together, the very part they will have to act, for good or for evil, as long as they live. They should have the cases under their own care and treatment, but strictly under my superintendance; for this superintendance would constitute the examination. They should question the patient before me, and apply whatever means they thought fit for the detection of his disease, and give their reasons for whatever notion they might form of it. Then they should prescribe before me, and make choice of their remedies, and give their reasons for whatever indications they thought fit to follow in the treatment. In short, every day they should give the same sort of little lectures as I am accustomed to give upon each patient as I go round the wards.

At the end of the month, I would give a certificate of competence to those whom I thought deserving of it.

This method, besides being the best possible test of the knowledge which a man had already acquired, would also be a lesson of instruction in the use of it. Such an examination, or rather such a practical exhibition of knowledge, in its use and exercise for a month together, would have none of the annoyance, either actual or prospective, which belongs to examinations as they now are. As this would be the most profitable, so it would be the most pleasurable part of the student's professional education. There would be none of the posing and puzzle of formal interrogatories, but, instead of them, there would be the ease and comfort of the most unreserved communion between pupil and teacher, upon the subjects most interesting to both.

After a student has gone through his prescribed course of education, and been examined, he is ready to practise as soon as any body will employ him; and I would ask any person of common sense to which of the two he would submit his body with the greater confidence—to him who had Vogel, Sauvages, Cullen, or any other nosologist, by heart, or to him who, having spent a twelvemonth in the diligent observation of a great variety of diseases in a large hospital, had brought his knowledge to the test of practice during a whole month under the eye of the physician?

In making these observations, I confess my desire that they may reach beyond those to whom I am immediately addressing them. All the years I have been an hospital physician, I have deplored the languid interest taken by students in medical practice. I wish, with all my heart, it were otherwise; and I will give all my diligence that it shall be: and let me hope to engage on my side those especially whose zeal in raising the standard of professional education cannot be doubted, and that they may aid me in making that department of instruction which belongs to me more easy, more popular, and more productive of good fruits.

I was led to make these observations in speaking of certain nosological books which students seem to be under some necessity of reading prospective to their examination. This is unfortunate; because I doubt whether, beyond this purpose, you will find them of any use.

There is another class of books, not systematic, yet purely practical; which professedly discuss the treatment of diseases and their nature and essence, entirely with reference to their cure. They are generally written upon some one particular disease, or upon several diseases of a like character. Some of them you will feel a great temptation to read.

Among this class are found the great treasures of medicine, and among the writers of them are found the great benefactors of the human race. The writer of a good practical book on medicine, who tells the world something which it did not know before—something of large application in fortifying or restoring the health, strength, and comfort, of man's body and mind; or who, if he tells nothing new, yet wisely sets in order what is already known, and gives it a better and more convenient adaptation to the same high purposes; such a writer, in all just estimate of things, is second, and second only, to the great expounders of moral and religious truth.

But, unhappily, among this same class of books is also found every thing that is wretched in the literature of our profession; and the bad practical works have a mighty predominance of quantity over the good.

In the shape of practical treatises our own age and country has bred, and is breeding, and the press is assisting at the birth of, the oddest and most worthless trash; and this often obtains a wide circulation, and a strange popularity.

While you are watching various diseases, you cannot help feeling a desire to know what they have said concerning them who have expressly written about them; and in your wish to read something, you are, without direction or warning, as likely to lay your hand upon a bad book as a good one:—Nay! more likely; for a bad book is generally a very easy book, having been composed by its

author with no labour of mind whatever; whereas a good book, though it be not necessarily a hard one, yet, since it contains important facts, duly arranged, and reasoned upon with care, must require from the reader some portion of the same attention and study to comprehend and profit by it as it required from the writer to compose it. A good book, at all events, is never a very easy book, and never suddenly popular.

What books of the practical kind you should read, I will tell you presently; what you should not read, I will tell you now.

Never read any book that bears internal marks of being addressed more to the public than to the profession. They are all bad, and many dishonest.

Mind that you are not betrayed to commit yourselves unwarily to books (especially of modern date) upon diet and digestion, upon the liver, and the stomach. Unfortunately, the public is well understood to have such a relish for reading upon these subjects (such a moral appetite for knowing what may peradventure give them a physical one) that new motives have been thus let in for medical authorship, which are not very creditable. There is a demand for books of the kind, and if they are executed with some plausibility, they have a certain sale, and a certain kind of reputation is gained by them. Any of you, who may feel himself a little sharp and clever, might write such a book to-morrow, with a tolerable chance of all its attendant advantages. There is not a medical publisher in this town who would not give you something handsome for a "bold bad" book upon the stomach.

But there are books upon practical medicine, written in our own times, much talked of, and containing much that is good, which, nevertheless, a student just beginning to observe for himself would do well to avoid, for they are sure to give an undue bias to his mind. Books, I mean, in which you find some strong predominant theory; as where numerous diseases, apparently different, are uniformly ascribed to some single cause, and an uniform practice recommended in conformity to the theory; where, for example, every sort of pain in whatever part, or every species of nervous complaint, is attributed to plenitude or emptiness of the blood-vessels, or to errors in the functions of the liver, or the stomach, or the duodenum, or the bowels generally; and bleeding or leeches, or mercury or purgative medicines given accordingly.

I do not mean to say that such books may not be read with profit; but they can only be so read when the reader is able to guard himself with the checks and reserves of his own experience. They have for the most part been written by men of talent; and, in attempting to shew that all, or nearly all, diseases are cured by the pursuit of one indication of treatment, while they fail of establishing the point they intend, they succeed in establishing something short of it. They often shew that the indication in question is just in many cases, and that it is one which deserves to be borne in mind in all.

The seat of fever is placed by one modern author, whom I greatly respect, in the head; and by another, in the abdomen. According to one, all febrile movements radiate from inflammation of the brain as their centre; according to the other, from inflammation of the mucous membrane of the bowels. The doctrine of both as a piece of philosophy, is untrue; but still both Dr. Clutterbuck and M. Broussais have deserved well of the profession, in so far as they have contributed to establish two paramount indications in the treatment of fevers—by shewing, that in numerous cases our success will entirely depend upon the undeviating steadiness with which we address our remedies to the head or the abdomen. Hereafter you may read these books, but not at present.

I think I can illustrate all I have to say by one great example. Recollect, I am cautioning the student, the medical student especially, against trusting his mind to the fascination of any tempting theory, before he has put it fairly upon its guard by much independent observation of his own.

The work of Mr. Abernethy upon "the Constitutional Origin of Local Diseases," has extraordinary merit and originality. The substance of the whole is this—that local diseases are rather symptoms of a disordered constitution than primary and independent in themselves; and that they are to be cured by remedies calculated to make a salutary impression on the general frame, not by topical dressings or any mere manipulations of surgery. All this is good, and entirely justified by experience.

Next, that this disordered state of the constitution either originates from, or is rigorously allied with, derangements of the stomach and bowels, and that it can only be reached by remedies which first exercise a curative influence upon these organs. Even thus far it is a beautiful theory, and I am not disposed to deny it a large share of truth.

Then come to be considered the real nature of these visceral derangements, of which little distinction is made, and the remedies proper for their cure, which lie in the small compass of a blue pill, or a compound calomel pill, at night, and a mixture of gentian and senna in the morning.

Practically the sum of all is this: that be the local disease what it may, the constitutional ailment what it may, and the derangement of the stomach and bowels what it may, this one method of treatment is at all times applicable.

What a tempting theory this is; and what a still more tempting practice! As soberly set down in print, the student can hardly help receiving them; for, being once faithfully received, what a world of tedious study and observation must they save him.

You, who never knew Mr. Abernethy, and have only read the doctrine which I have endeavoured to sketch, as it is carefully and beautifully developed in his book, have no notion what he made of it before his pupils in this room. A vein of it ran through every lecture that he gave. In his book it stands as a suggestion to surgeons, concerning the constitutional origin and treatment of local diseases; in his lectures it acquired an amplitude and extent which embraced every kind of disease incident to man.

You, who never knew Mr. Abernethy, have no conception of his powers as a lecturer. He so eloquently expounded some of the highest truths; he so nicely disentangled the perplexities of many abstruse subjects; he made that so easy which was before so difficult, that every man who heard him feels perhaps to this day, that, for some important portion of his knowledge, he is indebted to Mr. Abernethy. But he reserved all his enthusiasm for his peculiar doctrine; he so reasoned it, so acted it, and so dramatized it (those who have heard him will know what I mean); and then in his own droll way he so disparaged the more laborious searchers after truth, calling them contemptuously "the Doctors," and so disported himself with ridicule of every system but his own, that we accepted the doctrine in all its fulness. We should have been ashamed to do otherwise. We accepted it with acclamation, and voted ourselves by acclamation the profoundest of medical philosophers, at the easy rate of one half hour's instruction.

The great Lord Chatham, it is said, had such power of inspiring self-complacency into the minds of other men, that no one was ever a quarter of an hour in his company without believing that Lord Chatham was the first man in the world, and himself the second; and so it was with us poor pupils and Mr. Abernethy. We never left his lecture-room without thinking him the prince of pathologists, and ourselves only just one degree below him.

Now that an important practical doctrine had been unfolded, is most true; and that it had been carried to an unwarrantable extent, is most true also: but how far to accept it, and how far to reject it, were questions for the sober judgment of a matured experience.

Therefore I do say, that this great teacher, in so far as he taught an exclusive doctrine, and claimed for it an almost universal application, and won an acceptance for it by the fascinations which genius, and fancy, and eloquence can command—I do say, that this great teacher gave a hurtful bias to the mind of the student, and indisposed him to the indispensable task of observing for himself. For how is it possible that the mind, the youthful mind especially, can bind and buckle itself to the labour of getting possession of knowledge in the hardest possible way, by sifting every particular, and by patiently observing at the bed-side, when it believes itself already furnished with all the wisdom which such laborious and *jealous* processes can ever teach? Yes, observation of disease is not only a laborious but a *jealous* process; it allows nothing to pass but under the warrant of the most cautious reasoning, or of the senses themselves; for these are the natural sentinels of the truth.

Summarily then, I will venture to say, of all books which enter minutely into the practical examination of particular subjects, and those especially which open peculiar views, that it requires much personal experience to form a correct judgment of them, and to profit by them. While you are yet inexperienced in the subject-matter, you may be pleased with them as an argument, or a process of reasoning, and thus they are likely to make an undue impression upon your mind. But you will be at a loss about the simple conceptions, which are the pith and marrow of the whole. Under such and such conditions, and on such and such emergencies, says the writer, I reason thus; and this is my view of the case; and this is my practice. But to estimate the justness of his views, and the propriety of his practice, you must first be familiar with the conditions and emergencies he speaks of.

I fear that by this time you are beginning to fancy me possessed of some strange prejudice against books; for that, whether they be good or bad, I still find some reason for advising you not to read them.

Indeed, it is not so. In what I am now saying, I am only endeavouring to explain myself a little more at large concerning a subject upon which I have occasionally conversed with you in the wards, when (as often happens) some one has asked me what books he should read upon this or that disease, which has at the time been the subject of observation. In truth, I want to excuse you to yourselves from any misgivings you may have, that you are not doing all you might for your own informa-

tion, when you are *not* reading about every disease you see; for I am persuaded of nothing more certainly than this, that there is a previous necessity of disciplining our own mind by an independent course of observation, in order to fit it for any thing like profitable instruction by the teaching of other minds, or, indeed, to furnish us with any tolerable security against being deceived instead of being taught.

They only who are practically informed can read good books with profit, or bad books without injury.

But still the literature of our profession, in its direct bearing upon practice, is a matter of the highest concern to you all. It is true that you cannot make any great acquisitions in it at present, but you ought to begin even now; not by running from this writer to that for a scantling of knowledge concerning each particular disease as it presents itself, but by seeking an acquaintance with those great writers who hold the keys to the just knowledge of all diseases, and the just administration of all remedies. Simultaneously with the observation of cases in the wards of the hospital you must begin to learn pathology; and the study of pathology, and the observation of disease, begun together in this place, must never be separated in your minds as long as you live.

Hitherto I have spoken of books generally only, and as they may chance to fall in the way of the student; but now I would lead you to view a little more closely the character of medical literature in its bearing upon practice, in order that you may judge whether mine is a reasonable and sound advice, when I desire you to direct your studies to that part of it especially which is pathological.

Practical medical literature may be divided into that which is purely the result and product of observation, and into that which is the joint work of observation and of research into the nature of morbid processes.

I speak of that only as literature, whether ancient or modern, which is generally known and used and referred to, and has thus become classical by common consent. The part of medical literature bearing this character, which is purely the growth of observation, has many times struck me with wonder. For when I see that observation, exercised upon mere signs and external things, has so assorted and arranged them, so ascertained their import and described their succession, as if it possessed an insight into the inward processes out of which they arise, yet really possessing none; and when I see that, still guided by mere signs and external things, it has often given to powerful remedies the safest and the best direction; and that, concerning the event of diseases and the issues of life and death, it has been able to see clearly, and discriminate nicely, and prognosticate truly—I feel assured, that from the records of practical medicine may be adduced the highest instances of human sagacity and prudence. I have lately been turning over the Prænotions of Hippocrates, and the Epidemics of Sydenham, and this is the impression they have left upon my mind, concerning a class of writers of which they are pre-eminently the chief.

This part of medical literature, with which pure observation is conversant, receives few accessions from time to time; and this will hardly seem strange, when it is recollected that the same, or nearly the same, things which we now observe, have been observed by others, with the purpose of turning them to the same account, for more than two thousand years. The field of observation was well cultivated at an early period, and few names stand forth in any particular age, at subsequent periods, who have been really eminent in this department; and these have become fewer and fewer as the world has grown older.

Now, when I desire you to reserve the study and perusal of these writers for some future period, even until the time arrive when you have taken the treatment of diseases upon yourselves, do not conceive me to intimate that they are above the reach of your abilities. The truth is, that at present you have to learn their *language*. I do not mean the language of their words and phrases; these, indeed, are common words and phrases, but they smack of something beyond the common meaning.

This meaning you can only gradually pick up, by living in the same region where they lived—by seeing the same things, and conversing with the same objects, that they were conversant with. This region is the region of observation; and they who live in it, and they who live out of it, cannot understand each other. They can construe each other's phrases, but they have a very dark apprehension of each other's meaning.

Do not imagine that I am forming an exaggerated estimate of this class of writers, because you do not *now* hear of their being much read by medical men at any period of life. I know they are not much read, and I will tell you why: it is because the majority of medical men have no real love for the practical part of their profession. It is a labour to them to observe; therefore they are no observers. They cannot see clearly what they must strain their eyes to see at all; and I will tell you the reason of this also: it is because when they were students (pray take warning from what I say) medical practice was unpopular, and they never attended to

it; and they never were able in after-life to learn what they ought to have learnt in their youth. Their very faculty of observing was sound asleep when it should have been wide awake, and it could never afterwards be roused to discern more than the most obvious forms of things. No wonder then that the highest excellence in this same department of observation should have found few to appreciate it, and few to admire it.

But I hope better things from you. Only be diligent, and, at your time of life, and in so vast a field as this hospital, the very use and exercise of observation will naturally produce a taste and tact for observing; and then whatever you see in after-life you will see with profit, and draw sound experience from it; and not only so, but you will find yourselves of kindred minds with the great masters of our art, reading them, relishing them, and improving by them.

But there is another part of practical medical literature, viz. that which is the joint work of observation and of research into the nature of morbid processes—in a word, the pathological.

Observation, and mere observation, had been at work for ages, and the extent to which it had penetrated into the nature of diseases does, I confess, appear to me quite wonderful. But it could go no further alone; and it was obvious that, if diseases were ever to be better understood and better treated, observation must be aided by some new method of inquiry. That new method, in the course of time, was introduced, and is now popularly employed; it consists of research into morbid function and morbid structure, and is based upon the knowledge of healthy function and healthy structure. It is pathology founded upon physiology.

By the combination of these two methods, observation of symptoms, and a rigid research into the nature of morbid processes, the face of practical medicine has been completely changed, even in our day.

The advantage which the physician now has over the physician of old, is this: he has the same observation to guide him, and he has moreover a previous knowledge of the real condition of things, from which the immediate objects of observation derive themselves; and coming to his work of observation with that previous knowledge, he is able to make observation itself go as far again as it would go alone.

The fever, the cough, the sputa, the laborious breathing, the wasting of the flesh —these are the immediate objects of observation, and they at all times intimated fearful things to the physician of old, concerning diseases of the lungs. But effusions and congestions, and softening and hardening, and tubercles and vomicæ —these are the real things from which the fever, the cough, the sputa, the laborious breathing, and the wasting of the flesh, all derive themselves; and the physician now knows them all, and what they are in their origin, in their progress, in their termination, and which are capable of reparation and which are not; and knowing what they are, he has taxed his observation for the detection of them in the living man; and having detected them, he has further taxed his skill for a more exact application of remedies for their cure; and unquestionably he has often succeeded, both in detecting and curing, by the aids of pathology, what would have gone undetected and uncured if he had still worked by observation alone.

This pathology you must learn. Every day I go round the wards with you, I talk of things which must be quite unintelligible, if you are ignorant of morbid processes. There are forms of symptoms I am perpetually pointing out, which cannot be estimated except in their exact connexion with certain forms of disease previously understood. All the principal changes of structure which the lungs or the heart are capable of undergoing, must be well understood before you can appreciate any of the signs derived from auscultation or percussion. You may listen to the chest for ever and be no wiser, if you do not previously know what it is you are to hear. You may beat the chest for ever, and all in vain, unless you know what it is that is capable of rendering it now dull and now resonant.

In the diseases of various organs, the aid derived from pathology to practice is not always the same; but still there are few cases in which pathology does not contribute either to enlarge, or refine, or verify, our observation, and to direct our treatment with a surer aim.

This pathology, then, you must learn.

But pathology is not to be learnt only in the wards of an hospital, or in any one particular way. The sources of this knowledge are various, and so too are the methods of obtaining it. From lectures, from books, in museums, in dissecting-rooms, and by experiments upon the living or the dead body. It is conversant for the most part with demonstrable objects, which are capable of being measured, and weighed, and delineated. It is beginning to take the form of a science, and to be governed by certain rules.

In as many places, then, and in as many ways as it is capable of being learnt, you are at liberty to learn it.

And howsoever and wheresoever you learn it, you must bring it with you into the

wards of the hospital; and your observation will breathe a spirit into it and apply it to its proper use.

Thus patho'ogy will give greater effect and certainty to observation, and observation will test and confirm the truths of pathology; and both work together to the same end of improving the knowledge and treatment of diseases.

Such are the things which I have now called you together to communicate; and, simple as they really are, they have cost me some thought; and it is with some feeling of responsibility that I offer them, when I reflect that the advice which I am giving you now, at the entrance of your practical studies, according as it is good or bad, may lead or mislead you for life.

It is a matter of no trifling concern to the well-disposed student, that he should be put in the right way of using his own observation, and that he should be well aware of all the means which are calculated to aid or hinder him in his task.

With respect to the taking of cases, which is one chief mode in which the observation is exercised, I have advised that the student should not begin to take them too early, and before he has got a clear notion of the great cardinal symptoms which are the guides to diagnosis and treatment; yet that he should not begin to take them too late; that after he understands the import of symptoms, he should not allow his mind to rest too long in the abstract contemplation of them, but apply them at once to their use and exercise upon particular instances.

With respect to books, which are the chief aids or the chief hindrances to practical observation, I have told you what you must read with caution, and what you must not read at all—what you cannot read *now* without an injurious bias, but may read hereafter with profit; and what you may read *now* without harm, but hereafter with more certain advantage. But of all books and all studies, those, I have told you, are best calculated to promote the business of practical observation which are purely pathological and conversant with the nature of morbid processes.

Now pathology is a study for your whole life. But it must be begun here, and it is important that it should be begun in the right way; and I am interested in seeing that it is so, because every right notion of pathology will be a great assistance to you in the acquisition of that knowledge which is to be gained in the wards of the hospital, and every wrong notion a serious hindrance.

On some future day I will speak to you a little more at large upon this subject.

ON HYBERNATION.

By Marshall Hall, M.D.
F.R.S.E. M.R.I. &c. &c.

(Abridged from the Philosophical Transactions.)

That peculiar condition of certain mammalia during the winter season, which has been designated hybernation, has been aptly compared by various authors to ordinary sleep. In both, the respiration is diminished. This fact was first determined, in regard to sleep, by Messrs. Allen and Pepys. It obtains in a much higher degree in a state of hybernation. It is highly probable that in sleep, as in hybernation, the irritability of the muscular fibre becomes augmented. These two conditions of the animal system may therefore mutually illustrate each other.

Ordinary sleep is similar to the sleep of the hybernating animal; and the sleep of the hybernating animal is similar to that deeper sleep, or lethargy, which is designated hybernation. We are thus led to trace a connexion between the recurrent sleep of all animals, and the deep and protracted sleep of a few.

I. Of the Sleep of Hybernating Animals.

In the sleep of the hybernating animal, the respiration is more or less impaired: if the animal be placed in circumstances which best admit of observation, the acts of respiration will be found to have greatly diminished; if it be placed in the pneumatometer, little alteration is induced in the bulk of the air; if its temperature be taken by the thermometer, it will be found to be many degrees lower than that of the animal in its active state; if it be deprived of atmospheric air, it is not immediately incommoded or injured.

These facts I have observed in the hedge-hog, the dormouse, and the bat. If other authors have not made the same observations, it is because they have not been aware how easily this sleep is disturbed. To walk over the floor, to touch the table, is sufficient, in many instances, to rouse the animal, to re-produce respiration, and to frustrate the experiment.

The bat, which is a crepuscular or nocturnal feeder, regularly passes from its state of activity to one which may be

designated diurnation. The respiration and the temperature fail; the necessity for respiration is greatly lessened.

During the summer of 1831, I carefully observed a bat in this condition. If it were quite quiet, its respiration became very imperfect; its temperature was but a few degrees above that of the atmosphere; being placed under water, it remained during eleven minutes uninjured, and on being removed became lively and continued well.

I have more recently watched the habits of two hedgehogs, in a temperature varying from 45° to 50°. These animals alternately awake, take food, and fall asleep. One of them is frequently awake, whilst the other is dormant, and goes to sleep at a time that the other awakes, but without regularity. When awake the temperature of each, taken by pressing the bulb of a thermometer upon the stomach, is about 95°; when dormant, it is 45°; that of the atmosphere being 42° or 43°. The duration of this sleep is from two to three days, according to the temperature of the atmosphere. On the 4th of February, 1832, the temperature of the atmosphere being 50°, both the hedgehogs were dormant,—the temperature of one was 51°, and that of the other 52°; on the succeeding day the temperature of the atmosphere had fallen one degree, the temperature of one of the hedgehogs was 49°, whilst that of the other, which had become lively, had risen to 87°; on the succeeding day, the first had become somewhat lively, and its temperature had risen to 60°, that of the other being 85°, and that of the atmosphere 47°.

I have observed precisely the same alternations in the dormouse; except that this animal awakes daily in moderate temperatures, takes its food, and passes into a state of sleep, in which the respiration is greatly impeded, and the temperature little higher than that of the atmosphere.

On the day on which the observations were made on the hedgehogs, the atmosphere being 49°, that of two dormice was 52°; on the succeeding day, the external temperature being 47°, that is, lower by two degrees, the temperature of one of these dormice was 92°, and that of the other 94°; and only three hours afterwards, the temperatures were 60° and 70°, respectively, with a slight appearance of lethargy.

The hedgehog and the dormouse appear, in fact, to awake from the call of hunger, then to eat, and then again to become dormant, in temperatures which may be termed moderate. The bat, which could not find food if it did awake, does not undergo these periodical changes, except in the summer season. It appears to me, from the most careful observation, that there is every degree between the ordinary sleep of these animals and the most profound hybernation.

It is quite obvious, from these observations, that the ordinary sleep of hybernating animals differs from that of others, by inducing a more impaired state of the respiration and of the evolution of heat, with an augmented power of bearing the abstraction of the atmospheric air. This sleep probaby passes into true hybernation, as the blood which circulates through the brain becomes more and more venous, from the diminution of the respiration, and as the muscular fibre of the heart acquires increased irritability.

It is absolutely necessary, in comparing the powers of hybernating and other animals, of evolving heat, accurately to observe whether there be any degree of sleep. Mr. Hunter's and M. Edwards's experiments are extremely deficient, for want of this attention. Mr. Hunter, comparing the common mouse and the dormouse exposed to a very low temperature, observes, that the heat of the former "was diminished 16° at the diaphragm, and 18° in the pelvis, while in the dormouse it gained five degrees, but lost upon a repetition." The explanation of these facts is afforded by noticing that when the dormouse increased in temperature, it was "very lively," but on the "repetition" it had become "less lively." M. Edwards omits to mention whether the hybernating animals in his experiments were disposed to be lively or dormant, or whether they had recently recovered from a dormant state. Without a peculiar attention to this point, no correct result can be obtained. The hybernating animal in a state of vigour and activity, is a totally different being from the same animal disposed to become dormant.

II. Of true Hybernation.

I now proceed to the detail of my observations upon actual hybernation, and especially upon the state of the respiration and the irritability, of the sensibility, the circulation, and the digestion, in this singular condition of the animal economy.

1. *Of the Respiration.*

The respiration is very nearly suspended in hybernation. That this function almost ceases, is proved, 1st, by the absence of all detectable respiratory acts; 2ndly, by the almost entire absence of any change in the air of the pneumatometer; 3rdly, by the subsidence of the temperature to that of the atmosphere; and 4thly, by the capability of supporting, for a great length of time, the entire privation of air.

1. I have adopted various methods to ascertain the entire absence of the acts of respiration. I placed bats in small boxes, divided by a partition of silk ribbon, the cover of which consisted of glass, and in the side of which a small hole was made, to admit of placing a long light rod or feather under the animal's stomach. The least respiratory movement caused the extremity of this rod to pass through a considerable space, so that it became perfectly apparent.

Over the hybernating hedgehog I placed a similar rod, fixing one extremity near the animal, and leaving the other to move freely over an index. During hybernation not the slightest movements of these rods could be observed, although they were diligently watched. But the least touch, the slightest shake, immediately caused the bat to commence the alternate acts of respiration, whilst it invariably produced the singular effect of a deep and sonorous inspiration in the hedgehog. It is only necessary to touch the latter animal to ascertain whether it be in a state of hybernation or not: in the former case there is this deep sonorous inspiration; in the latter, the animal merely moves and coils itself up a little more closely than before. After the deep inspiration, there are a few feeble respirations, and then total quiescence. The bat makes similar respirations without the deep inspiration, and then relapses into suspended respiration.

2. As the acts of respiration are nearly suspended during hybernation, so are the changes induced in the atmospheric air.

On January the 28th, the temperature of the atmosphere being 42°, I placed a bat in the most perfect state of hybernation and undisturbed quiet, in the pneumatometer, during the whole night, a space of ten hours, from 1h. 30m. to 11h. 30m. There was no perceptible absorption of gas.

Having roused the animal a little, I replaced it in the pneumatometer, and continued to disturb it from time to time, by moving the apparatus. It continued inactive, and between the hours of 1h. 20m. and 4h., there was the absorption of one cubic inch only of gas.

Being much roused at four o'clock, and replaced in the pneumatometer, the bat now continued moving about incessantly; in one hour, five cubic inches of gas had disappeared. It was then removed. A further absorption took place of ·8 of a cubic inch of gas.

Thus the same little animal, which, in a state of hybernation, passed ten hours without respiration, absorbed or converted 5·8 cubic inches of oxygen gas into carbonic acid, in one hour, when in a state of activity. In an intermediate condition, it removed one cubic inch of oxygen in two hours and forty minutes.

[Various other experiments gave analogous results.]

It is important to remark, that the registration of the quantity of absorption in these experiments was not begun until several hours after the animal had been enclosed within the jar of the pneumatometer, so that the absorption of the carbonic acid, always present in atmospheric air, was excluded from the result.

It may be a question whether the slight quantity of respiration I have mentioned be cutaneous. The absence of the acts of respiration would lead us to this opinion. But it may be observed, that these acts have not been watched, and can scarcely be watched continuously enough, to determine the question of their entire absence. Some contrivance to ascertain whether the rod has moved along the index during the absence of the observer, would resolve every doubt upon this interesting point. And I think it right to remark, that after the apparent total cessation of respiration, as observed by the means which have just been described, there is probably still a slight diaphragmatic breathing. I am led to this conclusion, by having observed a slight movement of the flank in a favourable light, unattended by any motion of the thorax or epigastrium.

3. Much precaution is required in ascertaining the comparative temperature of the animal with that of the atmosphere. The slightest excitement induces a degree of respiration, with the consequent evolution of heat.

The plan which is best adapted to determine this question in regard to the bat, and which I have adopted, together with every attention to preserve the animal quiet and undisturbed, is the following:—A box was made of mahogany, with a glass lid, divided horizontally at its middle part, by a fold of strong ribbon, and of such dimensions as just to contain the animal. The bat was placed upon the ribbon, and inclosed by fixing the lid in its place. Being lethargic, it remained in undisturbed quiet. A thermometer, with a cylindrical bulb, was now passed through an orifice made in the box on a level with the ribbon, under the epigastrium of the animal, and left in this situation.

It was only now necessary to make daily observations and comparisons between this thermometer and another placed in the adjacent atmospheric air. The layer of silk, and the portion of air underneath, protected the animal from the immediate influence of the temperature of the table, on which the box was placed.

[Thirty-two observations are next detailed. In twenty-nine, the temperature of the animal and of the atmosphere were identically the same; in three, the animal heat was half a degree higher.]

From this it is obvious that the temperature of the hybernating animal accurately follows that of the atmosphere. When the changes of temperature in the latter are slight, the two thermometers denote the same temperature. If these changes are greater and more rapid, the temperature of the animal is a little lower or higher, according as the external temperature rises or falls; a little time being obviously required for the animal to attain that temperature.

Similar observations were made during the first three days of February. On the 4th, however, the temperature of the atmosphere rose to 50½°; that of the animal was now 82°, and there was considerable restlessness. On the 6th, the temperature of the atmosphere had fallen to 47½°, and that of the animal to 48°, whilst there was a return of the lethargy.

After this period there were the same equal alterations of temperature in the animal and in the atmosphere, observed in the month of January.

It is only necessary to add to these observations, that the internal temperature is about three degrees higher than that of the epigastrium. In two bats, the external temperature of each of which was 36°, a fine thermometer, with an extremely minute cylindrical bulb, passed gently into the stomach, rose to 39°.

The following experiments, made by the celebrated Jenner, illustrate this point:—

"In the winter, the atmosphere at 44°, the heat of a torpid hedgehog at the pelvis was 45°, and at the diaphragm 48½°.

"The atmosphere 26°, the heat of a torpid hedgehog, in the cavity of the abdomen, was reduced so low as 30°.

"The same hedgehog was exposed to the cold atmosphere of 26° for two days, and the heat of the rectum was found to be 93°; the wound in the abdomen being so small that it would not admit the thermometer.

"A comparative experiment was made with a puppy, the atmosphere at 50°; the heat in the pelvis, as also at the diaphragm, was 102°.

"In summer, the atmosphere at 78°, the heat of the hedgehog, in an active state in the cavity of the abdomen, towards the pelvis, was 95°; at the diaphragm, 97°.

There is an error in the admirable work of M. Edwards, in relation to the present subject, which it is important to point out. M. Edwards first ascertained the interesting fact, that the very young of those species of animals which are born blind, lose their temperature if removed from the contact of their parent; and justly concludes that they have not sufficient power of evolving heat, to maintain their natural temperature when so exposed. M. Edwards then subjected hybernating animals to the action of cold, and observing that their temperature also fell, he concludes that they, like the very young animal, have not the faculty of maintaining their temperature under ordinary circumstances.

It is remarkable that this acute physiologist did not perceive the error in this reasoning. In no instance does the young animal maintain its warmth, when exposed alone to the influence of an atmosphere of moderate temperature. Can this be said of the hybernating animal? certainly not. In ordinary temperatures, the hybernating animal maintains its activity, and with its activity, its temperature. The loss of

temperature in this kind of animal is an induced condition, occasioned by sleep.

4. It is in strict accordance with these facts, that the lethargic animal is enabled to bear the total abstraction of atmospheric air or oxygen gas, for a considerable period of time.

Spallanzani placed a marmot in carbonic acid gas, and makes the following report of the experiment in a letter to Senebier: "Vous vous ressouviendrez de ma marmotte qui fut si fortement léthargique dans l'hiver sévère de 1795; je la tins alors pendant quatre heures dans le gaz acide carbonique, le thermometre marquant—12°, elle continua de vivre dans ce gaz qui est le plus mortel de tous, comme je vous le disais: au moins un rat et un oiseau que j'y plaçai avec elle y périrent à l'instant même. Il parait donc que sa respiration fut suspendue pendant tout ce tems-là. Je soumis à la même expérience des chauve-souris semblablement léthargiques, et le résultat fut le même."

A bat which was lethargic in an atmosphere of 36 deg. was immersed in water of 41 deg. It moved about a little, and expelled bubbles of air from its lungs. It was kept in the water during sixteen minutes, and then removed. It appeared to be uninjured by the experiment.

A hedgehog which had been so lethargic in an atmosphere of 40 deg. as not to awake for food for several days, was immersed in water of 42 deg. It moved about and expelled air from its lungs. It was retained under the water during 22½ minutes. It was then removed. It appeared uninjured.

It seems probable that the motions observed in these animals were excited through the medium of the cutaneous nerves.

The power of supporting the abstraction of oxygen gas, or atmospheric air, belongs solely to the hybernating state, and is no property of the hybernating animal in its state of activity. After having found that the dormant bat, in summer, supported immersion in water, during eleven minutes, uninjured, I was anxious to know whether the active hedgehog possessed the same power. I immersed one of these animals in water. It expired in three minutes, the period in which immersion proves fatal to the other mammalia. Sir Anthony Carlisle has, therefore, committed an error, somewhat similar to that of M. Edwards, when he asserts that "animals of the class Mammalia, which hybernate and become torpid in winter, have at all times a power of subsisting under a confined respiration, which would destroy other animals not having this peculiar habit." The power of bearing a suspended respiration is an induced state. It depends upon sleep or lethargy themselves, and their effect in impairing or suspending respiration; and upon the peculiar power of the left side of the heart, of becoming veno-contractile under these circumstances.

[To be continued.]

GREEN PERSPIRATION.

Case *in which* Copper *was detected in the* Perspiration.

[Communicated by Sir Henry Halford.]

Sir,

I have great pleasure in laying before you the particulars and result of a case of green perspiration, in which, when I had last the honour of an interview with you, you were pleased to express much interest.

Miss ——, æt. 14, had for some months evinced much general debility, when, in September last, she was seized with an attack of rheumatic fever, which yielded to remedies slowly and unsatisfactorily. After some days, during which the perspiration was considerable, my attention was called to a collection of light green perspiration between the toes, and underneath the nails of the young lady's feet, whilst the same appearance was observable in a fainter degree on the upper, but more especially the under surface of the foot. Having collected a sufficient quantity of this matter, I submitted it to the examination of a scientific and practical chemist. His first experiments disproved my suspicion of its containing iron, and after fusion in a platina crucible, the mass, on being broken and separated with a drop of water, was found to consist chiefly of siliceous matter, intermixed with which (to my great satisfaction) small glittering spangles of copper were sufficiently evident. The experiment was repeated with a smaller quantity of the secretion, and with the same result, leaving me in possession of some minute spangles of the metal.

It was thus clear that the green co-

lour was attributable to an acetate of copper, and it only remained to investigate the source of this remarkable fact. An examination of the culinary vessels in common use (and in which the young lady's breakfast of milk was regularly prepared) solved the mystery to my satisfaction, inasmuch as the lining of tin had disappeared upon half the extent of their surfaces,—leaving the copper exposed. It is somewhat singular, that a day or two previous to this discovery, the mother of the patient had shewed to me her tongue, which was swollen and pale in such a degree that I at once said, "You must have been partaking of mushrooms, or some poisonous food:" yet it is fair to state that the other members of the family, although they had been ailing in one or two instances, betrayed no symptoms corroborative of the cause of the young lady's peculiar state. It appears to me, sir, that from the above case some questions of interest arise; namely,

It being presumed that the copper was so gradually introduced into the system as to prevent the necessary and immediate consequences of so virulent a poison under other circumstances, was it thus introduced in the form of an acetate? or was the acetate or lactate produced subsequently by the action of the lactic acid of the perspiration?

I would also ask, if it were possible that the action of sudorific medicines could have elicited that in this young lady, which, under similar circumstances, may have been in a like manner produced in others (at least those who partook of milk, &c. thus cooked) of the family?

I have searched in vain among the older writers for detailed cases of this nature. Sauvages gives them a place in his Nosology, but does not speak of them at large, referring to Borelli for examples of the "sudor colore viridi."

I am, sir, with feelings of much
respect and obligation,
Your obedient and humble servant,
JOHN PRICHARD.

Lower Parade, Leamington,
October 29, 1832.

CHOLERA IN PARIS AND BERLIN—CHARCOAL AS A REMEDY.

Extract of a Letter from M. MOREAU DE JONNES, *dated Paris, Nov.* 10, 1832.

"THE cholera is reduced here to a few isolated cases. The mortality during the month of October, caused by that disease, has been as follows:—

In their own houses	33
In the civil hospitals.....	33
In the military hospitals	0
Total deaths	66

"The Journal of Commerce of *Anvers*, (Antwerp) has inserted a letter from Berlin, dated 31st October, announcing that the cholera had just broken out in that capital with greater violence than ever, and that seven hospitals were already filled with sick.

"Dr. Garrandan, of Arras, writes to me, that having seen in my report to the Supreme Council of Health that powdered charcoal had been successfully used on board some American ships, whose crews were attacked with cholera, he employed that remedy in the department of the *Pas de Calais*. He administered the fourth part of an opiated enema, containing a tablespoonful of wood charcoal in powder.

"In twelve cases, of which he gives the details, the cure was complete and immediate. In several cases he omitted the opium, with the same success.

"Should you have occasion to make use of the remedy, be kind enough to let me know the result."

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Practical Observations in Midwifery, with a selection of Cases. Part the Second. By JOHN RAMSBOTHAM, M.D. &c. &c.

IT is now some years since the appearance of the first part of the work before us, and which was very favourably received by the profession both at home and abroad, having, indeed, constituted a valuable addition to obstetrical medicine. It is refreshing to turn from the pompous puerilities, with which the press has recently teemed in the shape of "Outlines" and "Manuals" of midwifery, to the observations of Dr. Ramsbotham. We have here some of the most important subjects connected with parturition fully discussed by one,

who speaks not merely of what he has read, but of what he himself has seen and done, and the result is correspondingly satisfactory, in that the observations are really "practical." The different forms of preternatural labour are fully discussed; and under the head of "shoulder presentation" are some very useful directions for the process of turning; we have also some important instances of those distressing cases wherein, from the attempt having been unskilfully made, the child becomes so impacted as to require to be removed piecemeal. Uterine hæmorrhage is likewise discussed; and among other circumstances, the unusual one of the placenta passing down before the head of the child, is described. Puerperal convulsions, with the appropriate remedies, are spoken of according as they occur before labour, during the process, or after it is over. Abortion and extra-uterine pregnancy, also come under notice, and are fully considered. Retroversion — polypus — rupture of the uterus — are severally described, and we have three cases of the latter detailed in which recovery took place.

The work ought to be on the shelf of every man in the kingdom practising as an accoucheur.

Leçons sur le Cholera Morbus faites du College de France. Par M. T. Majendie. Paris, Mai 1832.

It is not our intention to enter into any lengthened analysis of these Lectures; but as they have been put forth with very considerable pretensions, we shall give one or two short extracts, by which the reader will be enabled to judge of the consistency of the statements, and actual claims of the author to superiority in his plan of treatment.

"Of six hundred cholera patients admitted into the ward of St. Monica, at the Hôtel Dieu, under my care," says the Professor, "with the exception of thirty-eight, who died on their litters, *all* became warm, and *in all* the circulation appeared after the employment of the means already mentioned." These means were *Magendie's Punch*, composed thus:—

Infusion of Camomile .	1 pint.
Alcohol	2 ounces.
Sugar	1 do.
Lemon Juice	q. s.

Frictions, with camphorated spirit, ammonia, and turpentine. Warm bed. Bags of hot sand.

At page 235, the Professor writes thus:—"In my private practice, in which I treated many patients at the commencement of the epidemic, I have been fortunate enough *not to lose one*, even of those who had reached the very advanced periods of the disease."

But with regard to his public practice, checked as the returns necessarily are by the officers of the Hospital, we find the following, at page 233:—"Five hundred and ninety-four cholera patients were admitted into my wards, and underwent my mode of treatment: three hundred and sixty-four were cured; two hundred and eight died"! These discrepancies are sufficient to prevent us attaching much importance to the views of the writer.

MEDICAL GAZETTE.

Saturday, November 17, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

THE MEDICAL SCHOOLS AND DR. ELLIOTSON.

Our readers must have perceived from the advertisement on the wrapper of our journal last week, and from our notice referring to it, that we have the misfortune to be at issue with Dr. Elliotson. The immediate subject of the difference is connected with the observations on his Introductory "Address," contained in our leading article of the 3d instant; and as it is a very important step towards the decision of any question, to know exactly what the contested points are, we take leave to state them distinctly at the outset.

The learned Professor of Medicine in the London University, in the course of his Introductory Lecture, and which he has since published, (Longman & Co.) made use of these words:—

"In the medical department, the superiority of the plan of our University

over that, not only of Oxford and Cambridge, but of every other school in England, is very conspicuous. * * * The superiority of the plan of our University over that of all other English medical schools consists in the copiousness and extent of the information afforded. A course of lectures of six months' duration, and of almost every day in the week, upon the practice of medicine, the practice of surgery, anatomy and physiology, chemistry, materia medica and pharmacy, and all remedial means, is absolutely necessary to afford any thing like due information to the pupil on these respective subjects. Courses of only three or four months' duration, and consisting only of three lectures a week, must be very superficial, and leave the hearer but a smatterer, so that to become well informed, he must have industry enough to read extensively, and draw from other sources of information."

From this quotation it will be perceived that Dr. Elliotson was not contented with speaking of his own institution in such terms of commendation, as might without any violation of propriety or good taste have been bestowed upon it, but he insists upon the existence of great and "very conspicuous" superiority, and, consequently, charges the other schools with being inferior; for the expression "superiority" implies, not only comparison, but comparison to the disadvantage of others. But, further, he illustrates the alledged superiority by contrasting a course "of six months' duration, and of almost every day in the week," with courses "of three or four months' duration, and only three times a week." Now either Dr. Elliotson thereby meant to imply, that the courses he had enumerated were all at the London University of the duration he described as "absolutely necessary," and that elsewhere they were not so; or else what he did mean is not intelligible from his words. Then we are farther told that courses of a certain shorter duration must be "very superficial," and leave the hearer but a "smatterer;" so that to acquire the requisite degree of knowledge, he must "draw from other sources of information." This, to our simple apprehension, is a sweeping sentence of condemnation passed on all the medical schools in England, and means, as distinctly as it can with any show of modesty be expressed — the pupil who goes any where except to the London University will be taught according to an inferior plan, and which will leave him "but a smatterer."

In the article which has given so much offence to the learned Professor, we answered this attack upon the other schools; and the inferences we drew were as follow:—

"It is impossible for us to read these statements without perceiving that the learned author is not fully aware of the state of the other medical schools, else would he not have passed upon them this general charge of inferiority, without one qualifying expression, or one redeeming exception. There are, however, two objections which may be made to the Doctor's positions; namely, first, that the "plan" is really by no means so different in the other principal schools as his exclusive language would lead the public to suppose; and secondly, where any difference exists, it is far from being so "very conspicuous" on which side the superiority lies."

Here, then, are the points at issue,— *and be it remembered that Dr. Elliotson is the aggressor: — he* charged all the medical schools in England, without exception, with inferiority; founding the alledged superiority of his own on the existence of a "plan," which he describes: — *we* again assert, that the plan is not so different from that pursued at certain other schools as his language would lead the public to suppose; and that where there is a difference, it is matter of reasonable doubt on which side the superiority lies.

In proceeding to discuss these questions, we shall, first, in courtesy, give

to Dr. Elliotson the full benefit of his reply to our former article, requesting only that our readers will fix their minds upon the real subject of discussion as above stated, and discard, at least for the present, the irrelevant matter with which the Doctor, in his warmth, has encumbered the statement of his case:—

To the Editor of the Medical Gazette.

Sir,

Nothing would distress me more than to have made a misrepresentation, especially if to the disadvantage of others.

(1.) In your last number [Nov. 3d] you evidently accuse me of misrepresentation, in saying that the difference between the mode of instruction in the University of London and in other London medical schools, is, that our courses last six months, and are delivered almost every day in the week, while in the others two courses are given in the same period, and are delivered but three times a week. If I was in error, the account of the prospectuses printed in the *Lancet* is incorrect, and all to whom I have spoken on the subject are misinformed.

(2.) I request you to acquaint me whether at St. Thomas's, St. Bartholomew's, the London, Guy's, St. George's, King's College, &c. the lectures on the practice of medicine, on chemistry, on materia medica, &c. are given more frequently than three times a week; and whether each course lasts six or seven months. I request you to specify the London schools in which the courses on these subjects consist of as many lectures as at the London University, and in which the total number of lectures (not repetitions of lectures) on medical subjects, approaches to the number delivered in the University; and to specify, also, the nearness of the approach.

(3.) You accuse me of error in regard to the surgical course. Now I did not allude especially to the length of any single course, but to the general plan of our school; and allow me to inform you, that Mr. Professor Cooper frequently lectured four and five times a week, and that his course consisted of above a hundred lectures.

(4.) You accuse me of error in stating that another superiority of our plan consists in occasional examinations. I beg to inform you, that our examinations are not occasional, but systematic and frequent—upon the subject of every lecture, and conducted with the same care and regularity as the lectures themselves. I request you to mention the other London school in which there is the same number and systematic regularity of examinations of the students attending *every* class, and where the inducement to submit to these examinations is made so powerful.

(5.) You misrepresent me when you tell your readers, that I state it as a superiority of our school that we illustrate by specimens, &c. My argument was, that, as every lecture is illustrated, there must be more illustration in our extended course than there can be in short courses.

(6.) If you found the Edinburgh lectures on materia medica an infliction, I pity from my heart the sufferings you must have endured for six long dreary months. To me the course of Dr. Home was a daily delight. From no lectures did I derive more solid information and pleasure; from few, so much: and I must say that, were I to deliver lectures on materia medica, I should find six months not a day too much for giving my pupils all the information they ought to possess, not merely on the poor list of drugs in the London Pharmacopœia, within which your ideas of a course on materia medica must be limited, but upon all other excellent medicines—upon all that relates to the operation of many, as poisons—upon diet—upon exercise—upon mineral waters—upon baths—upon climates—and whatever else is employed remedially,—or, in the words of my Address, "upon materia medica and pharmacy, and all remedial means."

(7.) If students have ever requested a short course on anatomy and physiology, instead of an extended one, I lament it. The coarse anatomy and physiology that are sufficient for operative surgery, may be taught in three or four months. But I defy any one to teach minute and philosophical anatomy and physiology, such as a man of education and science would desire, in less than almost daily lectures for six months. How you must lament such a request from students is proved by what you said on October the 20th, at page 92:—"There is one step that ought to be taken in time—and the sooner the better, for the sake of our anatomical character: the measure we allude to is the necessary one of establishing courses of a fitting length. Nobody will misunderstand us on this

head: our protest is directed against the inconceivably absurd regulation of countenancing *three months'* courses. Who that has ever handled a scalpel and forceps has not been at once convinced of its absurdity?"

(8.) I am anxious that you should remember, that I contended for no superiority on the part of our teachers; but merely for the superiority of the *Edinburgh plan* which had been adopted at the University. That this plan is superior, appears proved by the unexampled success of the school,—by the number of new students this year being actually above double the number of new students last year. We, the professors, are conscious of being not a whit superior to other teachers. Our success, therefore, must be ascribed to our plan.

(9.) In concluding, I trust you will perceive that any one whose intellect could draw inferences so erroneous, and whose moral feelings could allow him to make assumptions so unjust, cannot be depended upon for the statements and reasonings of his lectures, and that therefore it cannot conduce to the character of your Gazette to continue them,—though they have doubled your sale. Neither will it be any thing more than you will approve, if one, "to whom the diffidence which ever attaches to true merit" (you say) "must be familiar, and who no doubt can appreciate the reluctance with which those who are devoted to the pursuits of science obtrude themselves and their pretensions on the notice of the public," and who, you well know, repeatedly entreated you not to publish his lectures, declines, with becoming modesty, to assist in giving himself farther publicity by continuing to correct the copy of his lectures taken by your short-hand writer.

I remain, &c.

JOHN ELLIOTSON.

37, Conduit-Street,
Nov. 6, 1832.

[The following addition to the above has been forwarded to us by one of our publishers: it is cut out of a note,—not addressed to the Editor.]

(4. *bis.*) I never asserted that examinations are instituted solely at the University, but argued, that where they are instituted, they will be more numerous if the courses are long. My words were:—"The utility of frequent examinations is doubled by a full course of lectures. There must necessarily be double the number of examinations on the subjects of the course, so that the student is examined on a far larger number of topics, and far more deeply and minutely in each, because the examinations will be commensurate with the lectures."

Thursday morning.

We shall answer the paragraphs of the above letter *seriatim.*

1. We did not accuse Dr. Elliotson of misrepresentation, or any where make use of that expression: we did but state our conviction, "that the learned author was not fully aware of the state of the other medical schools:" and we may now add, that the source from whence he tells us his information was derived fully accounts for this ignorance. It is quite notorious that the *Lancet* has long been engaged in endeavouring to write the other schools *down*, and the University *up;* and we cannot but express our astonishment that Dr. Elliotson should for one moment have thought of trusting to such authority.

2. The whole gist of the letter lies in the second paragraph; in which Dr. Elliotson demands a categorical answer as to whether the number of lectures constituting a course at other schools, equals, or even approaches, to that in the London University? We answer thus:—Anatomy is given in an extended course, which is continued during the whole season—above seven months—at the schools of St. Thomas's and Aldersgate-Street, and was given last year in the same manner at Guy's; the plan having there been changed this season at the request of the pupils,—a fact we added in a postscript, not, as Dr. Elliotson would erroneously imply, for the purpose of expressing an opinion, but merely to record the fact, and to avoid the slightest appearance of over statement. At St. Thomas's—Dr. Elliotson's own hospital—the anatomy is given on what ap-

pears to us an excellent plan—namely, in one extended course of eight months' duration; six months being devoted to lectures without repetition, and two months to going over all the most important parts a second time. Surgery is given in extended courses at St. Bartholomew's, Guy's, St. George's, and King's College. The practice of physic is given in one extended course at King's College, at St. George's, and at the London Hospital. Chemistry also is given in one extended course at King's College and the London Hospital. The relative proportion of lectures at the above places, as compared to those at the London University, on the corresponding subject, varies, but the average is as a course delivered three times a week for seven months and a half, to a course delivered four times a week for six months. On anatomy, the number of lectures at Aldersgate-Street and at St. Thomas's greatly exceeds that at the London University, being in the one as five in the week to four, in the other as six in the week to four, and in both those schools the courses are continued for a longer period.

We must here remark in addition, that the questions which we have answered above are disingenuously put in Dr. Elliotson's letter; first, because they do not tally with the corresponding part of his "Address," which, as will be seen from the extract above quoted, included *anatomy* and *surgery;* and secondly, because he inserts chemistry, of which we said nothing (although we have here answered on that point also), and materia medica, concerning which we not only admitted that it was not spun out to six months any where in England, except at the London University, but argued that it was not judicious that it should be so: thus he blinks an important part of the question in the first instance, and then calls upon us to say where that exists which we stated neither was nor ought to be.

3. The third paragraph is very remarkable. Dr. Elliotson says, that he "did not allude especially to the length of any single course," and that we therefore accuse him wrongfully of being in error with regard to the surgery. Now, Dr. Elliotson's words are, "a course of lectures of six months' duration, *and of almost every day in the week*, upon the practice of medicine, *the practice of surgery*," &c.: and we ask any candid man to say whether the impression necessarily conveyed by this language was not, that the course of lectures on surgery was delivered at the London University *almost every day in the week*. But it is added, in explanation, that Mr. Cooper frequently lectured four and five times a week. Dr. Elliotson may rest assured, that if this had occurred *frequently*, the Council, with all their "Faculties" about them, would not have stated in their prospectus that the lectures were only delivered on "Monday, Wednesday, and Thursday." We have no doubt that the simple fact amounts to this—that when he is going over the operations, and perhaps also towards the end of the season, Mr. Cooper finds it necessary to give additional lectures, to get his course completed within the specified time,—just as almost invariably occurs at other schools. But it is not with regard to the surgical course alone that Dr. Elliotson's language is so loose as to mislead: the fact is, that none of the lectures are delivered so frequently as his expressions would warrant us in inferring. Who, for example, on reading that "a course of lectures of six months' duration, *and of almost every day in the week*," was absolutely necessary, would be prepared to find not only that one of the principal courses (surgery) is delivered only three times a week, but that, systematically,

none of the medical professors lecture more than four times in the week! Yet such is the matter of fact; for no business is done on Saturday, and the examinations are substituted once a week *for* lectures, not given in addition to them, as elsewhere, thus leaving for the lectures almost three days a week less than is declared to be "absolutely necessary."

4. In the next place, the learned lecturer takes umbrage at our calling the examinations "occasional," which he states are "frequent and systematic." Be it so hereafter; but in the Address he himself says they take place "every week or ten days," which we submit was not improperly designated by being called "occasional." We believe that there is no school in London in which examinations are not now given in connexion with most of the courses; but we are not able to speak so precisely on this point as the others, because the examinations are not always set forth in the prospectuses, even of those schools where we have ascertained that they are systematically given. It will be seen, however, that the Doctor makes the word *every* emphatic; and he will be gratified to learn that, at the great rival school, King's College, examinations are regularly and "systematically" given in *every* course! The last question in the paragraph—namely, where is the inducement to submit to these examinations made so powerful?—is triumphantly put; and the Doctor justly regards it as unanswerable, for they are made preliminary to a diploma, with a degree in the reversion. Well then may the Doctor ask, where else this is done? Where else indeed is there to be found an instance of a joint-stock company having the presumption to assume the name, and pretend to be able to exercise the privileges, of a University? This may do as a bait for pupils, but as for us—"old birds are not easily caught with chaff."

5. With regard to the illustration of lectures by specimens, Dr. Elliotson's original words are—"and when it is considered that these lectures are abundantly illustrated with specimens, drawings, engravings, models, preparations, experiments, and operations, the superior advantage of an ample course of lectures over one so short that no subject can be fully treated, and some must be almost or entirely passed over—so short as rather to indicate to the student what he has to learn, than teach it him—must be evident." Now we certainly thought that Dr. Elliotson, by informing us that "*these* lectures" were abundantly illustrated, while others were so short that no subject could be fully treated, meant to claim a superiority for the plan of illustration; but he says not; and the sentence is so confusedly expressed, that it may possibly admit of his interpretation as readily as our's; and the question is so unimportant that we care not a jot which is given to it.

6. As to what follows, about the value of Dr. Home's lectures, and the length to which a course on materia medica ought to extend, they are matters of opinion merely: we spoke from experience of what takes place in Edinburgh, (and we might have added Dublin,) when we said that to spin out the course for six months requires the introduction of subjects foreign to its proper business; and Dr. Elliotson, in his enumeration, is fain to include what belongs to two other courses—namely, poisons, which are in the province of the teacher of forensic medicine, and pharmacy, which belongs to the chemist.

7. We perfectly agree with what follows about anatomy. The quotation from a former leader of our's on the subject, however, might indeed have been to the point, if we had argued first in favour of long courses, and then in favour of short ones; but we had previously and very distinctly given our

opinion in favour of the former; and, in the article which Dr. Elliotson answers, we merely shewed that a difference of opinion existed among the lecturers with regard to this point. But the extract is wholly irrelevant to the present argument — the question not being what Dr. Elliotson or we approve, but whether there be, or be not, any other school in England, besides the London University, where an extended course is given.

8. The Edinburgh plan, which is here spoken of as if it were identical with that of the London University, is by no means the same, inasmuch as the courses there consist of many more lectures—to the exclusion of examinations, which constitute an important part of the London system; so that the difference between it and the system adopted at the London University, is actually greater than between that of the latter and the other metropolitan schools.

9. The last paragraph can only be looked upon as an ebullition of temper. We no where made any, the slightest, insinuation against Dr. Elliotson's honour or morality; nor is there a single passage in our leader, except the concluding one, at which any reasonable man, however sensitive, could possibly take umbrage: it is that in which we alluded to the diffidence of men of science, and the reluctance with which they usually obtrude themselves upon the public; an allusion which, considering that circumstances rendered it open to be interpreted ironically, was perhaps rather too provoking. By the by, even here the Doctor affords a little specimen of that sort of inaccuracy which has led to the present discussion: he represents us as saying that he must be familiar with the diffidence which ever attaches to *true* merit. The "*true*" is not our's: and his *interpolation* gives the sentence a degree of acrimony which it had not in the original, and which we therefore disclaim.

Dr. Elliotson would imply that we have dealt unhandsomely by him in publishing his lectures: how far he is warranted in that imputation the subjoined documents will shew. The learned Professor also informs us that they have doubled our sale. That our publishing his clinical lectures doubled his practice, we have his own authority for affirming*; but the counterpart of the story is not correct. Our circulation has progressively reached its present high standard under the combined effect of the contributions of many of the most eminent professional men in the kingdom;—nor do we hesitate to add Dr. Elliotson to the list of our valuable contributors: had we not thought well of his lectures, we should not have inserted them, but that they doubled the effect of what had been done by all those distinguished men who have enrolled themselves among our correspondents, or made such a change as in any degree to warrant his assumption, is wholly unfounded; and we can only say that whoever so imposed upon the learned professor must have been practising upon what he knew to be his weak side†.

Such, then, is our answer to Dr. Elliotson: how far he was justifiable in his sweeping denunciation of all the schools, provincial and metropolitan, except his own—and how far we were warranted in venturing to assert that the learned Professor was not fully aware of the actual state of those institutions (for

* In his introductory lecture last year, Dr. Elliotson having stated that his practice had been improved by the publication of his clinical lectures, used these words:—"Last year the Lancet published them all: the MEDICAL GAZETTE followed its example, and my practice has now doubled a third time."

† We perceive that the Doctor states his authority to have been the "Gazette printer." We repeat our explanation, *whoever* his informant may have been, and refer him to the publishers as alone capable of judging on such a point.

so far only did our imputation extend)—we leave it for others to decide. As the matter now stands, he has made his attack, and we have answered—he has had his reply, and we our rejoinder. To carry on the discussion in the tone which it has assumed, would neither be very edifying nor instructive to our readers; but were it otherwise, as Dr. Elliotson has adopted a step so unusual on such occasions, as that of answering in one periodical an article which had appeared exclusively in another—a periodical, too, in which he well knew that his side of the question alone would ever be set forth; as he has addressed our readers against ourselves on the wrapper of the Gazette; as he has even thought fit to carry this discussion into the lecture-room, and submit his grievances to the arbitration of his pupils in an ex-parte statement, where argument was abandoned to attribute motives to his opponents—we say, that under such circumstances it is in vain to look for any thing like a cool and dispassionate investigation of the points at issue: the learned Professor will therefore excuse us for requesting, that, if he has aught farther to adduce, he may confine himself to the new channels he has opened for communicating with the public; for here, as regards the pages of this journal, the controversy must close.

Before we conclude, there is one point more to which we must advert—a point which we understand was referred to by Dr. Elliotson, in his appeal to his class. It would appear that he regarded the sketch in the "Chapter on Introductories," with which we commenced the present volume, as a caricature of himself and his address. If so, he is mistaken; it was planned before the opening of the session, and was intended only as a general satire on the system of egotism and puffing too frequently adopted on such occasions. The allusion to degrees was intended for the University indeed, but not for the Professor, and was borrowed from a former article of our own, published long ago (vol. vi. p. 379.) If the tenor of his address brought it more close than that of most other lecturers to our imaginary "Introductory," it is to be attributed to his having, more than others, fallen into the errors which we wished to expose. Thus much we say in justice to ourselves, because, as a matter of taste, we would not have it supposed that we purposed either to caricature any individual or to parody any particular lecture: indeed it bears internal evidence of being intended as of general application.

We take leave of Dr. Elliotson, then: not without some regret, because our journal has been, and will continue for some time to be, indebted to him for a certain share of its usefulness and popularity, and for this we thank him. But the truth is, the Doctor has long been the pet of the Lancet, and is as sensitive and easily offended as a spoilt child. We have already sacrificed much to satisfy him with regard to his Lectures—a complete course of which was laid aside after we had incurred the expense of having it taken down; we have been obliged to act in contradiction to our promises to our readers, by his arbitrary and unaccommodating interference, after he had given us a *carte blanche* to do with his lectures as we chose. We were most anxious to keep faith with our readers, and to go on with the lectures without him; and we did not understand that yielding to his wishes, against our own interest, by postponing the publication to suit his convenience in correcting the press, was to be considered as a tacit engagement not to criticise any thing he did, or even to point out the grossest mistakes into which he might fall on other subjects; had we viewed it in this light, we should not for one moment have dreamt of complying with such terms.

We cannot sacrifice the independence of our journal, or offer up the kind of incense so liberally bestowed by our contemporary upon the idol of the day —now Lawrence, now Wardrop, and now Elliotson, to be lauded to the echo, while it serves the purpose of the editor, and then cast into oblivion as profound as if they had ceased to exist. We respect Dr. Elliotson's attainments; but to have passed over, without any notice, the mistaken view which he took of the other medical schools, and to have made no allusion to the tone of grandiloquence which he has assumed on several recent public occasions, would have been to abandon one of the legitimate and most useful purposes of our journal;—and we submit, that in exercising so difficult and ungracious a task towards Dr. Elliotson, we neither did it prematurely nor harshly.

To the fair and legitimate objects of the London University, we have, in repeated articles, proved ourselves no luke-warm friends;—to what we regard as a system of puffing and putting forth unfounded claims, we are, and shall continue to be, determined but not uncandid opponents. To those hostile to the institution, indeed, nothing could be more calculated to afford gratification than the measureless imprudence on the part of the learned Professor of Medicine, in carrying his dispute with any periodical, however influ ntial, into his class-room. The narrow escape from entire ruin which the school had but two years ago, in consequence of suffering affairs not connected with their proper business to be discussed by the pupils in the medical theatre, ought to have b en sufficient to guard even the most irritated against such an indiscretion We are the less disposed, however, to dwell upon it, because, from the steps already taken by the medical professors, we have reason to believe that there is little risk of its repetition. It speaks strongly in favour of our view of the matter, for us to be able to state, that the "Faculty of Medicine" at the London University have come to the determination that henceforth no opening "address" shall be permitted to be delivered until it has been laid before them, in order that the nature of its contents may be previously ascertained.

In conclusion, we would not be understood to allow the claim of any of our medical schools, as at present arranged, to unqualified commendation; and were it otherwise, we protest against the principle of hyperbolical eulogy and gratulation, as injurious to those to whom it is addressed—not stimulating them to exertion by the honourable motive of a generous emulation, but rather encouraging the busy vulgar to become conceited, and leading the indolent arrogantly to repose in an assumed superiority.

DR. ELLIOTSON'S LECTURES.

As Dr. Elliotson, in the letter which is given in a preceding page, has intimated a wish that we should discontinue the publication of his Lectures; as he has implied that he has been unhandsomely treated with regard to them, and has expressly stated that he "repeatedly entreated" us not to publish them, we feel called upon to enter into the following plain statement of the facts.

In Aug. 1830, the Doctor's permission was asked for the publication of his course, to be begun in the October following. Here is his reply:—

"Dr. Elliotson presents his compliments to the Editor of the Medical Gazette, and while he feels much flattered by the desire expressed, fears that his lectures are even yet too imperfect to be either very creditable to himself or useful to any publication.

"As, however, he never objects to the publication of any lecture or public case of his own, *he trusts the Editor will use his own pleasure, without considering it at all necessary to enter into any terms upon the subject.*

"He regrets to say that his MS. ex-

tends only to three-fifths of his lectures at present, and even to that extent is merely notes, and written too badly to be legible to any one but himself."

The lectures were in consequence advertised, and a most able short-hand writer employed to report them, at two guineas per lecture. Dr. Elliotson, however, having expressed a strong desire that their publication should be delayed, in order to afford him time to improve them, they were abruptly discontinued, after only one had appeared; but from an understanding (which subsequently proved to be ill-founded) that Dr. Elliotson purposed to correct and amend those very lectures, at his leisure, the short-hand writer continued his office, and took down the entire course, amounting to sixty-eight lectures. It is to this course alone that Dr. Elliotson can by possibility refer, as having "repeatedly entreated" us not to publish it; and in doing so, he has forgotten to add, both that his request was complied with, and complied with at a very considerable pecuniary sacrifice.

Last year, before the commencement of his course, an application was made to Dr. Elliotson on the subject of the lectures which had been taken down the previous season. Upon this Dr. Elliotson declared that he had never intended to correct those lectures for publication. Finding that some misconception had occurred with regard to the course reported, (for this we do not throw any blame on Dr. Elliotson, further than for having in the first instance given his unconditional assent,) we wrote to Dr. E., to ask whether, if we had his lectures taken over again, (meaning the course he was then about to deliver,) he would have any objection to their being published; and if he had not, whether he would choose to correct the press. He immediately gave his consent to the former proposition, but declined looking over the proofs, implying that it was not necessary; for he went on to state that he had corrected the proofs of his *clinical* lectures, "knowing in how slovenly a way he was obliged to deliver those (the clinical) lectures, from want of preparation." The note, however, in which Dr. E. declined correcting the press, was followed next day by the subjoined:—

"Dr. Elliotson presents his compliments to the Editor and Proprietors of the London Medical Gazette, and, as it is impossible for him not to acknowledge the high compliment paid to him by their incurring the expense of a short-hand writer for his present long course of lectures, and, as he feels it right to express his regret equally with those gentlemen that the slightest difference should have occurred, he begs to say that he will correct the press if but one lecture is published a week, and the proofs (not the MS.) are sent him on Fridays, and allowed to remain with him till the Monday."

Thus, then, the publication of Dr. Elliotson's course proceeded. Well; the summer came; when what was our surprise and annoyance to find that, notwithstanding our repeated announcements of our purpose of continuing the lectures without interruption to the conclusion, and notwithstanding the rigid fulfilment of our part of the above contract, we were forced in the most unceremonious and unexpected manner to suspend their publication. Dr. Elliotson now stated his desire that the course should be divided into three parts, one of which was to be begun each October, *during three successive years*,—thus extending his lectures into six volumes of the Gazette!! We earnestly remonstrated against the discontinuance of the lectures, but were cut short by the following peremptory refusal:—

—— "The Editor must (may) follow his own inclinations; but Dr. Elliotson has made up his mind to correct no more till October."

We then stated that we were committed to the public, and should go on with the lectures, without troubling him with the proof-sheets; upon which Dr. E. intimated his determination, if we did so, to take every means of stating that they were incorrect: nay, regardless of the pecuniary sacrifice we had made with respect to the first course, that the lectures might not be published in a form which he disliked—and heedless of the further and very large sum expended on the reports of his extended course, taken afresh last winter—he went so far as to threaten that he would announce that he intended to publish the lectures himself. We were weak enough to listen to this; and, anxious as we were to keep faith with the public, and doubly anxious though we were to go on, now that we were fully acquainted with

the system of "correction" applied to the lectures, we yet agreed to suspend the publication till October rather than suffer an open and violent explosion to take place on the part of Dr. Elliotson. We therefore inserted in the Gazette a notice praying the indulgence of our readers for the step which we had taken, and without imputing the least blame to Dr. Elliotson. Our correspondence was then wound up with the following polite note from that gentleman, in allusion to the announcement which we finally made:—

"Dr. Elliotson begs to express his best thanks for the gentlemanlike course adopted by the Editor of the Medical Gazette, in regard to the notice to subscribers."

So much for the facts.

DEATH OF PROFESSOR SCARPA.

One more is added to the number of illustrious men who have been taken from us in the course of the present year. Antonio Scarpa died at Pavia, on the 31st ultimo, of a disease of the bladder, in the 86th year of his age. During his illness, he received every attention from his numerous medical friends, some of whom had formerly been his pupils. This eminent professor was called to the chair of Anatomy at the early age of twenty-two; so that he held the appointment during the extraordinary period of sixty-three years!

ASSASSINATION OF M. DELPECH.

This deplorable event, which took place at Montpellier on the 29th ult., has created the most intense and painful interest relative to the facts. Demptos, the murderer, had been a patient of M. Delpech's some time before: he was treated for varicocele, and it would seem that the cure was attended with circumstances that rendered it imprudent for him to form a matrimonial engagement. It is further stated, that M. Delpech having been consulted by a family into which Demptos wished to marry, gave them some intimation of his patient's condition: Demptos met M. D. at the theatre the night before the fatal deed, and it is thought that he demanded from M. Delpech a retractation of what had been said to the family. However, on the 29th, the assassin stationed himself in the balcony of the house where he lodged, and watched the approach of M. Delpech's cabriolet. It came: when with one shot from a double-barrelled gun he killed the servant, and with the other the master. He then retired into the house, and blew out his own brains with a pistol. M. Delpech expired in a few minutes. His obsequies were performed on the 31st, amid the general lamentation of the people of Montpellier. Orations were pronounced over his tomb by MM. Duges, Boyer, and Trinquier.

M. Delpech was in his sixtieth year. He was a chevalier of the legion of honour, professor of clinical surgery to the faculty of Montpellier, surgeon-in-chief to the principal hospital, and a member of numerous learned societies throughout Europe.

On examination of his body, it was found that the ball had entered just above the nipple of the left breast: after fracturing a rib, it passed through the upper part of the lung, tore the cross of the aorta, divided the apex of the right lung, and came out at the shoulder of that side, after a fracture of the humerus. From morbid appearances discovered in the lungs, it is supposed that M. Delpech could not, in the ordinary course of nature, have lived many years.

ST. GEORGE'S HOSPITAL.

Contusion—Hysteria, simulating severe Injury.

Ellen Sedgwick, æt. 26, married, admitted Sept. 23, 1832. She fell from a quay, from a height of several feet, upon the gravel bed of the river below. The accident occurred about 9 P.M. and she was brought to the hospital about half-past one, screaming and wholly insensible, and unable to stand, and making so much noise, apparently from violent pain, as to alarm the whole house. From her manner, it was at first supposed she must have injured the spine; a great deal of contusion being also perceived upon the left side, along the hip and about the shoulder. She recovered her senses in some measure when left quiet in bed.

24th.—She has continued to have the appearance of suffering extreme pain; her countenance being pale and expressive of great anxiety, and her hair and cap thrown about and disheveled. She is constantly turning in bed, apparently from pain, and is half insensible; lying with her eyes shut, and with difficulty roused to answer ques-

tions in a half whisper. She has incessant vomiting of dark-green fluid, which is sometimes mixed with blood, and she shrinks upon being examined about the injured parts, or on the abdomen, as if there was excessive tenderness. She is able to move her legs, but has made no water since the accident, and, in fact, passed none for twenty-eight hours.

All this looked sufficiently alarming, and might easily be supposed to have been connected with severe injury; but, upon examination, it became quite clear that her real injury was trifling contusion only of the side, and that she was suffering from hysteria; for it was found, on inquiry, that she had been subject to a variety of hysterical symptoms—that she often had pain in the side and spitting of blood, and there was habitually an excited state of the uterine functions. In fact, she was only just recovering from what had been considered as a severe illness, for which bleeding and antiphlogistic means had been employed pretty largely, and she had been repeatedly bled for the hæmoptysis, as in former similar attacks. The patient had been dining out for the first time since her illness, and had probably indulged in good things enough to produce all her bilious vomiting.

Accordingly the sickness and all her other symptoms quickly subsided by the use of a smart purgative, &c. and she left the hospital in a few days, with only a little stiffness from her bruises; receiving, however, a caution from Mr. Hawkins, not to be so fond of bleeding for the future, when the hysterical pain or hæmoptysis should occur.

MEDICO-CHIRURGICAL SOCIETY.

Tuesday, Nov. 13, 1832.

W. Lawrence, Esq. in the Chair.

This, which was the first meeting of the season, was very numerously attended. The Secretary read a paper from the pen of Dr. Bright, entitled "*Cases and Observations connected with Diseases of the Pancreas and Duodenum.*"

The chief object of the author, in this paper, was to direct the attention of the Society to the consideration of a peculiar matter of the nature of adipocere, which occasionally passes from the intestines; and, without wishing to assert that there was any necessary connexion between this symptom and disease of the pancreas or duodenum, he shewed that a scirrhous state of the head of the pancreas, and fungoid ulceration of the duodenum, had existed in the only three cases in which an opportunity had been afforded him of examination after death. He, however, at the same time adduced some other cases, where similar states of disease, though not precisely the same, had been found in these parts; and in which no such fatty evacuation had been observed. He offered it, therefore, as a question, whether this peculiar substance were to be considered as a vitiated secretion from natural structures, or as a discharge from the diseased and ulcerated parts; or as the product of the defective digestion of alimentary matter, depending on the imperfect supply or irregular admixture of the biliary and pancreatic or other secretions, or the perverted and impeded action of the duodenum?

The paper concluded with a few general remarks on the diagnosis in diseases of the pancreas, accompanied with an observation, that it appeared possible the fatty excretion of which he had been speaking might prove rather an indication of the morbid action attendant upon the carcinomatous state, than a diagnostic mark of the organ affected.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Nov.* 13, 1832.

Abscess	4	Hooping-Cough	11
Age and Debility	54	Hydrophobia	1
Apoplexy	7	Inflammation	45
Asthma	16	Bowels & Stomach	2
Cancer	2	Brain	3
Childbirth	7	Lungs and Pleura	2
Cholera	7	Insanity	4
Consumption	70	Liver, Diseases of the	7
Constipation of the Bowels	3	Measles	10
Convulsions	26	Miscarriage	1
Croup	1	Mortification	3
Dentition or Teething	10	Paralysis	3
Dropsy	9	Rheumatism	1
Dropsy on the Brain	15	Small-Pox	25
Dropsy on the Chest	3	Spasms	1
Fever	12	Thrush	2
Fever, Scarlet	16	Unknown Causes	1
Typhus	1	Stillborn	14
Heart, Diseases of	1		

Increase of Burials, as compared with the preceding week . . . 85

METEOROLOGICAL JOURNAL.

November 1832.	Thermometer.	Barometer.
Thursday . 8	from 36 to 47	29 99 to 29 86
Friday. . . 9	37 43	29 84 29 80
Saturday . 10	28 47	29 68 29 56
Sunday . . 11	36 47	29 50 29 56
Monday . . 12	31 48	29 64 29 67
Tuesday . 13	32 43	29 72 Stat.
Wednesday 14	31 53	29 63 29 69

Wind variable, S. W. prevailing.
Except the 11th, cloudy, with frequent rain.
Rain fallen, ·575 of an inch.

Charles Henry Adams.

NOTICE.

We are much obliged to Mr. B. Estlin for his letter, but can make no use of it for want of liberty to give his correspondent's name.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 24, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

PUSTULÆ.

We now proceed to another order, in which the secretion that takes place under the cuticle is pus. Now you will find in this order several very important diseases: there is one, for the most part of a chronic nature—*impetigo*; there is another, like that I have just spoken of, only it is contagious—*porrigo*; then there is another, called *ecthyma*; and there are also *cow-pock*, *chicken-pock*, and *small-pox*. Thus you see that, except in the formation of pus, there is no agreement among these diseases: some are acute, and some are chronic; some are simple diseases, and some are contagious; some of these contagions diseases occur but once during life, and others occur frequently. Porrigo may occur over and over again; but small-pox, as a general rule, does not occur more than once.

Impetigo.

The first disease of the order pustulæ, of which I will speak, is called *impetigo*. I speak of it first, because it is closely connected with eczema. Eczema, which is for the most part a chronic disease, is characterized by small watery vesicles, and frequently has, instead of clear lymph, a fluid almost puriform; sometimes it is altogether puriform; and, in this latter case, we call it impetigo. The two diseases run completely into each other. Neither eczema nor impetigo are in the least contagious: you may touch a person labouring under them, or inoculate with the fluid, and no disease will arise from it; at least nothing more than irritation.

Species.—This disease will occur sometimes in circumscribed patches, just as you see in the case of herpes, and then it is called *I. figurata*; and frequently there is an inflammation around, just as in herpes. Now and then the affection is extended very much over the surface, and is called *I. sparsa*. Now and then there is a thick scab, and then it is called *I. scabida*. The affected part looks like the bark of a tree, only that you see it is not diseased cuticle, but a real scab formed of dry pus. Now and then there is so much inflammation around that it is called *I. erysipelatodes*. Now and then there is such irritation that it is denominated *I. rodens*. It is only worth while to remember that it may occur in clusters; that it may occur with scabs, with a great deal of inflammation, and with ulceration: I would not have you trouble yourselves about the particular expressions. Now and then, I mentioned that the fluid is here and there watery, not purulent, and then it is called *eczema impetiginodes*; and if you choose, because there is pus in other parts, you will be justified in calling it *impetigo eczematodes*. These are the same diseases, only according to the severity of the irritation you will have pus or water.

Varieties of Pustules.—Now it is right you should know before we speak more of pustular diseases, that pustules are divided into four kinds, according to their size and figure. If a pustule be conically pointed and small, it is called *achor*; if on the other hand it be small, but flat, it is called *psydracium*; if it be larger, and have a sort of honeycomb appearance, it is called *favus*; but if it be a fat, large, well fed pustule, with an inflammatory base around, it is called *phlyzacium*.

Now in the disease that I am speaking of, the pustules are small, just as the vesicles are small in herpes: they are of that kind which are called psydracia. It is of some use to remember this variety of pustules, because one disease has one species of pustule, and another a different kind. When the itch has pustules, they are of that description called phlyzacia. [The lecturer illustrated the appearance of the various kinds of pustules by a reference to the title-plate of Dr. Bateman's work on Cutaneous Diseases.] The names given to these pustules are very hard words, and it would have been well had some others been devised, but we must suffer through our forefathers. It is of use to remember the appearance of the pustules in this disease, because in porrigo it is sometimes difficult to distinguish them from these, and the difference in the pustules is the principal means of diagnosis.

This disease, which is easily recognized, on account of its being a pustular affection, and being characterized by the formation of pus in small flat pustules, occurs particularly on the extremities. You will continually see both men and women with this disease on the front of their legs, sometimes running all around, and sometimes upon the arm. If it be not properly treated, it will sometimes last for a very considerable time. Sometimes there is a great degree of inflammation attending it—a great degree of heat and smarting, and yet the patient, although he may be married, and consequently have a bed-fellow, does not communicate the disease to his wife. It will last month after month, and sometimes even for years.

Treatment.—The best mode of treating the disease, and the one that I have adopted, has been to regard it as an inflammation—taking blood from the arm, applying leeches around the inflamed part, applying cold water as long as that was agreeable, and then exchanging it for warm, and exhibiting mercury. This is an affection in which I am sure that a moderate use of mercury is necessary. All this, however, will be of no use, if the patient do not limit his diet. If you do not cut off wine and beer, and in some cases meat, you will not find the disease go away. It is a disease which is exceedingly obstinate, if it be not well treated. If you adopt the plan I have laid down, although you may not eradicate the disease, yet you will lessen it to a very great degree. The chlorides are sometimes useful, and likewise the yellow wash, but frequently I have seen them irritate the part, and, altogether, the best local treatment is the application of some absorbent powder, such as calamine or oxyde of zinc, and the constant application of cold or warm water. In the case of the leg, it is indispensably necessary that the patient should keep it as much as possible in a recumbent posture; just as he would do in any other inflammation of the lower parts of the body. In the way of medicine, I am quite sure that mercury, exhibited very gently, is exceedingly serviceable.

In that form of the disease which is the link between impetigo and eczema, the treatment would be precisely the same. You will frequently see eczema of this kind behind the ears, running over the face and down the neck — sometimes attended with a discharge of water, and sometimes with a discharge of pus: in fact, it may be either eczema or impetigo. When there is merely eczema, you have a great deal of scurf upon the part, so that when the secretion is stopped the patient looks almost well; and then, when the part begins to run again, you have the neck looking moist and nasty, and quite a different appearance. Whether it is eczema or impetigo, I believe antiphlogistic treatment, with the moderate exhibition of mercury, and the application of an absorbent powder, answers far better than any thing else.

Impetigo cannot be mistaken for any thing else except eczema, and they run very much into each other.

It is a common disease; you cannot go into a hospital without seeing cases of it. You might almost as well give different names to rheumatism, if it ran down one shoulder, or occurred in both shoulders, or in one shoulder and one knee, as give different names to many of these cutaneous affections. It is very well to mention that they may occur in this way or that way, but to give them distinct names is quite absurd. In plate xxxviii. of Bateman, you will see a representation of the disease called porrigo, which is nothing more than eczema; and the same may be said of the representation of psoriasis in plate ix. fig. 2. If there be a watery discharge it is called eczema; if it be matter it is called porrigo. Psoriasis, eczema, and porrigo, run into each other.

Ecthyma.

I now proceed to speak of another disease which also is not contagious, and is characterized by pustules called *phlyzacia*, the large, round, well-fed pustules, with an inflamed base; this is a disease which very frequently takes place in a bad habit of body. The disease which I last spoke of (impetigo), takes place occasionally in a cachectic state of the system, but frequently it takes place in persons who are in other respects very well. The disease which I now speak of, ecthyma, is one which commonly occurs after smallpox, measles, and scarlet fever, and now

and then after syphilis; occasionally, I believe, it is itself syphilitic. It is characterized by pustules which are all distinct. In impetigo the pustules cluster; and when they are aggregated they sometimes form clumps or clusters, and now and then they occur over a great extent, so that sometimes you have clumps, if I may so speak, and sometimes diffused patches; but in ecthyma, of which I am now going to speak, the pustules are all pretty distinct, and sometimes very large. You will at once see by the plates the difference between this disease and that of which I spoke last. If you were to look at a patient, without knowing any thing of his history, you might think that he had the small-pox. You will continually see this affection in patients in the venereal wards, it having come on in consequence of taking mercury. The pustules, you observe, are all distinct and round; they are large, circular, and full of matter; not flat on the top, but globular. I have seen cases exactly like small-pox; and indeed I once knew a case sent to the hospital for small-pox, merely in consequence of the resemblance of the pustules. Now and then you have the pustules remarkably large. When I say they are full, I mean they are distended. Whether they be large or not, the discharge concretes into a dark-coloured scab. I recollect having had this disease when a child; for I have had a taste of most diseases. I remember being very scabby for many months, so that I was quite ashamed to be taken out for a walk. It is a disease which lasts a considerable time. Persons who say they have merely had gonorrhœa frequently have an eruption exactly of this description. It is very easily recognized; in the first place you see that there are pustules, therefore the affection belongs to the order pustulæ; you also see that they are phlyzacia, that all of them are distinct, and that some of them run into scabs. For the most part they are not very numerous, but when they are small they may be so. In impetigo they are circular, and not so distended, and have little flat tops. Sometimes, in impetigo, they will congregate into one large mass; but in ecthyma the scabs are all distinct, though they may be large.

Varieties.—One of the varieties of this disease is called *E. vulgare*, and it certainly gives a person a very vulgar appearance; but if it be a little darker, it is called *E. lavidum.* (If lepra be dark, it is called *L. nigricans*; and it is a pity that the same adjective is not employed here.) If it occur in children, it is called *E. infantile.* We might as well apply a separate epithet to measles, accordingly as the affection occurred in infants or adults; but you see that this fondness for subdivision runs throughout Willan's arrangement. I mentioned that the disease generally occurs in a bad habit of body; and if it take place in a very bad habit, it is called *E. cachecticum.*

It will now and then occur (and you will recollect that this is the case with almost all cutaneous diseases,) with a sharp inflammation, and may last for a short time, just like herpes, or some other inflammations which produce mere serum, or which cause no secretion at all, but constitute a mere redness. They begin with inflammation of the skin, and feverishness; but the result of this disease will be suppuration. For the most part, however, ecthyma is a chronic affection, and lasts a considerable time, the patient being very much out of health.

Treatment.—Under these circumstances, the most eligible treatment is to strengthen the patient in the best mode you can. Allow him wine, porter, meat, and fresh air, every day, and the warm bath; and if there be strength enough, I know that the employment of the cold bath is very good. I would use the cold shower bath in cutaneous diseases, when the patient's strength was able to bear it. Very frequently the disease is syphilitic; and although the body is feeble, you find it necessary to give mercury, as well as to employ tonic medicines. Because you give mercury, it is no reason why you should not strengthen the patient as much as you can. It is frequently a good practice to allow wine, porter, and meat in abundance, and give tonics—wine and bark—while you employ mercury. Sometimes you may alternate them.

Rupia.

There is a disease very much like ecthyma, and indeed it appears to me to be exactly the same; but it is placed by Bateman in the order vesiculæ, merely because the disease is serous instead of pustular; and Rayer places it, because the vesicles are large, in the order bullæ. They occur under the same circumstances, the secretion soon becomes purulent, and, after a time, there are the same large black scabs; and no one could then tell whether the disease was rupia or not. For the sake of consistency it may be necessary to make two diseases of these; but I am satisfied that rupia is nothing more than ecthyma—that ecthyma and rupia are varieties of the same affection. All I wish you to remember is, that ecthyma sometimes begins with serum, and that it soon becomes thick and turbid. There is another reason for making the two the same. In rupia there is frequently a scab,

which becomes conical, exactly the shape of those shell-fish which stick to the rocks, and that form of it is called *R. prominens.* Now in ecthyma there is frequently the same occurrence; the scab will assume exactly the same appearance; and the treatment of the two diseases is exactly the same. I cannot but think it trifling to separate them in this way. Although Rayer finds fault with Willan for subdividing these affections, yet he is over minute himself. However, I will shew you what is meant by rupia (exhibiting two plates). The affection will occur in little children, particularly if they have been thrown out of health by measles or small-pox; and sometimes it will even occur after cow-pock. You will observe that the vesicles are circular, with inflammation around, and they leave a black scab. They occur distinct too, just like the pustules of ecthyma, and you find they are globular, only that the contents are watery. Where the disease has been purulent from the beginning, I have seen dark scabs. Rupia, too, is as frequently syphilitic as ecthyma, and just as frequently requires mercury.

Treatment.—When this affection occurs in adults, they require support; and now and then you will have to give mercury. With respect to local applications, I have never seen them do any good. You should keep the parts clean; and when the scales come off, it is well to use a dressing of oxide of zinc, or ung. hydrargyri.

I would put ecthyma and rupia together, just as I would put lichen and strophulus, erythema and roseola; and just as I mentioned, I would make no distinction between the order of vesiculæ and bullæ. I would make some one word to signify all the diseases, from the size of a millet-seed to that of a hen's egg. There is a man in St. Thomas's Hospital now, with a syphilitic complaint, who has one of these pustules on his arm. It is a very common affection.

Varieties.—There are two kinds of rupia—*R. simplex* and *R. prominens*; but it is quite enough to recollect the word rupia.

Porrigo.

The next disease that I will mention, and which is also a chronic affection, is, however, of a contagious character. The two preceding diseases, impetigo and ecthyma, together with rupia, are perfectly free from contagion; but there is another, a chronic disease, which occurs particularly in the head, called *porrigo*, which is exceedingly contagious.

In porrigo the pustules are different from what they are in those other two diseases. In impetigo they are little pustules, and flat; in ecthyma they are large globular pustules—phlyzacia; but in porrigo, or scald head, they are small, with pointed tops, or large and flat—that is, they are either favi or acores. If you look at the scald head of a child, when there are pustules, you will find them exceedingly small, with pointed tops—therefore they are acores; or large and flat—therefore they are favi.

The disease is only contagious, not infectious. It is commonly caught by children sleeping in the same bed, rubbing their heads upon the same pillow, or wearing the same night-cap. Frequently it is caught at school, by children putting on each other's hats or caps. I have no doubt that many diseases which occur in the head are called porrigo that are not. I think I have seen enough to justify the opinion that many cases of eczema are called porrigo. But this disease, though it usually affects the head, may occur in various parts of the body: however, the head is by far the most common seat of it.

Varieties.—It sometimes occurs in distinct patches—studs of it—and it is then called *P. scutulata.* Now and then it occurs with a great deal of inflammation, and in distinct pustules, not clustering together so much; and these being favi, it is called *P. favosa.* Sometimes it has dry laminated scabs, of a yellow-whitish colour, containing a white sealy powder; and, from their resemblance to lupin-seeds, it has been called *P. lupinosa.* In this form of the affection the pustules are often very dry; the patches are full of hard grains, which are found to contain a great deal of lime; an earthy secretion takes place. You will see the representation of the common form in this plate (exhibiting it). They are not little globular pustules, but large and flat, and therefore they are called favi. When you see an eruption occurring in the head, of a pustular kind, lasting some time, you may be almost sure it is porrigo; but if you ascertain that there are small pustules (acores), or that they are large and flat (favi), then you may be sure of the nature of the disease. It is said to occur in other parts of the body, but I do not recollect seeing it. Impetigo, eczema, and ecthyma, are common enough on the extremities; but porrigo is much more particularly found on the head. It is one of the most contagious of cutaneous diseases. Drinking out of the same mug, or giving a kiss (if any one could be tempted to do so), I should think would communicate the disease. If a man had been married to such a female as this (exhibiting a plate) for twenty years, and his wife was very ill, certainly he might be tempted to give her a kiss; but not otherwise.

Duration.—Porrigo takes place far more frequently in children than in others; and it very often cures itself, when it is thought to be cured by medical means. It lasts for a certain time, and gradually declines. Children have it for a great number of years, and then as they grow older it ceases. There are diseases which are common to infancy, which gradually disappear as the subjects of them grow older, and scald head is one of them; but I have seen persons labouring under it who had attained their 20th or 25th year, and who said that they had had it all their lives.

You find a variety mentioned by Bateman under the name of *P. furfurans*, where there are no pustules, but you find there laminated scabs. I believe this is nothing more than eczema, and I do not think it at all contagious.

Treatment.—Now as to the treatment of this disease, it is one of the most obstinate that you can take in hand. You often find great inflammation, so that on approaching your hand to the patient's head you will feel great heat, and you should certainly premise your treatment by antiphlogistic measures, by taking blood from the neighbourhood of the head, and by applying cold water. These things are certainly useful, and they appear to be indicated by common sense; but they are only useful to a limited extent, and you will, as I just now said, find the affection very obstinate. It is sometimes of great service to give mercury. I may mention that Plummer's pill first obtained its credit by curing a disease of this description. Dr. Plummer, Sen. of Edinburgh, states in the Edinburgh Essays, that he had a case of scald head, for which he gave some common form of mercury, but the patient was no better. He then gave it mixed with a little guaiacum and antimony, and the patient presently got well. This pill was much employed by him afterwards, and others also used it, till at last it became well established, and *Plummer's* pill is now as well known as *Dover's* powders. I much doubt whether it has any efficacy beyond an equal proportion of calomel; at any rate I do not think that a grain of guaiacum can make any difference in a pill; and as to antimony, I believe, unless it produces nausea, it is not worth the name of medicine. I have made comparative trials with calomel and Plummer's pill, and I can say that I never found the latter at all superior to the former. I think it impossible to conceive that a grain of guaiacum can make itself known in the constitution. However, mercury is often useful, and also sarsaparilla, and things of that description.

As to external remedies, besides antiphlogistic measures, astringents are very useful—oxide of zinc and calamine. If there be but little inflammation, you find tar ointment, united with that of nitrate of mercury, serviceable; and sometimes an ointment of the red oxide of mercury. These stimulating applications are often exceedingly useful. I have seen cases get well under the use of cocculus indicus. It is used to destroy vermin in the heads of children; and if you put a drachm to an ounce of grease, you have a stimulating ointment, which is often beneficial. Sulphur, too, has been employed: a wash of the sulphuret of potass is sometimes found advantageous in the disease. But among external applications, when there is no great inflammation present, tar and citrine ointment are among the best. I need scarcely say that the head should be closely shaved, and kept very clean.

Porrigo Decalvans.—Now this disease will sometimes occur without an eruption, so that we have an affection classed with those which are pustular, and in which, nevertheless, there are no pustules; but this inconsistency we cannot avoid. The hair will sometimes drop off here and there in patches, leaving the surface smooth; and this disease is said to be contagious. It is a very common affection, and is called *P. decalvans.* I believe it is very common in the West Indies, and I have seen it in children who have come from thence. It is said to spread in schools, just like the other forms of porrigo, from the children wearing each other's caps.

There is a doubt as to whether this should be called porrigo: the skin is smooth, and I am sure in many cases this is the entire disease. Here is baldness without any reference to pustules, or vesicles, or an inflammatory affection. Sometimes half the head will be bared in this way, and sometimes the whole head. I had a little patient last year whose head was becoming perfectly smooth all over: I could do nothing with her. (The case is described in the Medical Gazette, vol. vii. p. 639.)

Treatment.—Stimulating applications are among the best. I should recommend you to use red oxide of mercury, and others of a similar description; in fact, treat it as you would do the other forms of porrigo. You must keep the head well shaved all round, and very clean, and by applying stimulating applications the hair will at last come on. It is said that there is no doubt as to its being contagious, but I have not seen it so. It is by no means uncommon; but like the other forms of porrigo, it will cease after a time.

I need not say that in the various other forms of porrigo, when there is a scab, in order to employ the ointment with effect,

you should put plenty on; and when you have softened the scabs, you must have them taken off. You should, however, have them softened as much as possible at first, and for this purpose a poultice is sometimes necessary.

To shew you how very contagious these diseases are, I may mention that I recollect a barber who had a child with a scald head, and he kept a razor specially for shaving it. One day by mistake he shaved himself with it, and although he had washed and stropped the razor well, and like a true barber put it into hot water first, yet in consequence of using it to his own beard, the disease came out upon his chin about a week afterwards. I saw it distinctly, and he told me the history of the case. Small circular pustules came out.

You cannot too strongly impress upon the minds of people, the necessity of a child's dress being kept isolated in this affection, lest the disease should spread.

These, gentlemen, may be said to be all the chronic pustular diseases; and those which I mean next to speak of are acute, and occur but once during life. They are diseases which we see every day; namely, chicken-pock, cow-pock, and small-pox. It is now believed by a great many, that the two latter of these affections are one and the same; and some go farther, and think that even the chicken-pock is only a modified form of it. However that may be, these diseases are all exceedingly similar, so far as they are pustular, so far as they are all highly contagious, so far as they are acute diseases, and for the most part occur but once during life. I believe, however, as the hour is nearly expired, it will be better to begin the consideration of these at the next lecture, because the particulars of these various diseases are so numerous, that confusion will arise from descanting on too many at once.

LECTURES

ON

DISEASES OF THE EYE;

Delivered at the Birmingham Eye Infirmary,

By Richard Middlemore, Esq.

DISEASES OF THE CONJUNCTIVA, CONNECTED WITH CONSTITUTIONAL DISTURBANCES.

It will be necessary for you to investigate most particularly the circumstances of each individual case, if you mean to practise your profession with correct views and with a due share of reputation. You will sometimes find that an obvious disorder of the digestive organs is the cause of the continuance of inflammation; and if you attend to the diet and habits of the patient, and keep the bowels properly acting, by the use of blue pill and colocynth, or some suitable purgative medicine, you will have the satisfaction of finding an improvement in the state of the eye along with that of the alimentary canal; in short, the cure will be completed without the aid of any local application whatever. You may perhaps discover, in your investigation of a case, that the attack immediately succeeded the healing of an ulcer to which the patient had been subject for many years, and you will not fail to take advantage of this discovery, by placing an issue in the arm, or substituting some more eligible mode of employing counter-irritation, or more desirable situation for that purpose.

If a patient were to present himself to your notice with acute inflammation of the conjunctiva, and you found him of a full plethoric habit, and if he were to tell you that he was in the habit of living after the reputed habit of our city aldermen; and if, on inquiry, you discovered that he was subject to such attacks, and that occasionally, after any unusual exertion, the vessels of the conjunctiva gave way, or, to use the familar phrase, "the eyes became bloodshot;" you would at once see the propriety of warning him of the danger such a state of things pointed out, and of the necessity of lowering the general fulness of the habit, as a measure not only necessary for the subduction of the inflammation of the eye, but also as one absolutely required, in order to place him out of the very imminent danger of suffering from an attack of apoplexy, or rupture of blood-vessels in some important situation.

Presence of hydatids, tumors, &c.

In alluding to the causes of inflammation of the conjunctiva, I mentioned tumors at the edges of the eye-lids, an inverted state of the tarsal cartilage, inversion of the eye-lashes, growths from beneath the conjunctiva, &c. Now should this inflammation appear to arise from, and be maintained by, a small tumor at the edge of the eye-lid, it must be extirpated as soon as the acute symptoms have been somewhat subdued by the remedies previously mentioned; if from inversion of the border of the tarsal cartilage, the operation to be afterwards described must be had recourse to, for the purpose of correcting this defect; if from an inverted position of only one or two of the ciliæ, which is not rectified after they have been several times extracted, their bulbs must be dissected out; or if there be a general

inversion of the eye-lashes, the edge of the tarsus containing the whole of the cavities for the bulbs of the ciliæ must be removed by an incision throughout its whole length, taking care, of course, not to injure the punctum. If the inflammation of the conjunctiva be occasioned by growths from its surface, they must be cut away; or if from tumors beneath it, they also must be excised. I remember examining the eye of a lady who had frequently suffered from relapses of inflammation of the conjunctiva, and on discovering a small elevation of that membrane near to the cornea, I divided it along the most prominent part of its surface, and there immediately escaped a small hydatid; the wound soon healed, produced no injurious cicatrix, and the operation afforded the patient an immunity from these annoying attacks of inflammation, to which, from this cause, she had been previously very subject.

Irritation from the presence of foreign bodies—Removal.

It would be drawing too largely on your time to enumerate all the cases of a like kind it has fallen to my lot to witness: I shall content myself, therefore, with thus directing your attention to the multifarious sources of mechanical irritation, of which the eye is so acutely susceptible, from the peculiar, though necessary, delicacy of its organization. I must, however, request your attention, for a few moments, to a description of the various modes of removing one frequent source of irritation; namely, the presence of foreign bodies upon, within, or beneath the conjunctiva. Sometimes persons will call upon you in extreme torture, in consequence of a minute particle of sand, dust, or metal, having been suddenly insinuated beneath the lids, or, as it is popularly termed, "getting into the eye:" and, if you ask them to open the eye, they will tell you the attempt occasions an intense degree of anguish: this is not, however, always the case, for, in some instances, foreign substances remain within or beneath the conjunctiva without appearing to provoke any uneasy feeling. They may derive an adventitious covering, or be covered with the smooth conjunctiva, and thus be prevented from giving rise to any irritation; but, generally speaking, they produce considerable pain and irritation, until they are removed by art, or become detached by the process of sloughing. The friction of a delicately smooth and highly susceptible membrane, not naturally possessing the slightest inequality of surface, but most accurately adapted to the size and figure of the part upon which it is intended to move, upon a sharp angular body, must be supposed to occasion great suffering,—a suffering, however, of a salutary nature, inasmuch as it excites attention to its removal, by which those evil consequences—those disorganizing actions attending its long continued presence, are prevented from taking place.

The irritating substance, whatever may be its nature, will almost always be extremely minute, and it is generally situated at the reflected portion of the conjunctiva—that part of it where it passes from the lid to be reflected upon the globe. Now you will not find it, when so situated, by merely separating the eye-lids with the fingers; it will be necessary, in order to obtain a view of it sufficiently distinct to enable you to remove it, to evert the upper eye-lid: for this purpose you draw down the skin of the superior palpebra, pass a probe along the frontal margin of the tarsal cartilage, and then suddenly turn it upwards upon the probe, by means of the eye-lashes and surrounding integuments. You thus expose the whole under surface of the upper eye-lid, and obtain a clear view of any substance which may be lodged beneath it. If it be not impacted in the loose membrane, it will be generally washed towards the inner canthus by the elevation of the part which confined it, and the profuse lachrymal secretion, which, under such circumstances, always takes place: should this not happen, it may be readily detached by the grooved end of the curvette, or any similarly formed instrument. However, before you have recourse to the eversion of the lid, it would be right to examine the eye very carefully; for it is possible that the irritating substance may be lodged at any other part of its surface: for this purpose you would separate the lids as widely as possible, and carefully inspect the surface of the eye. Having done this, you may direct the patient to look first upwards, then downwards, and to either side, and if by these means you do not detect the object of your research, you would of course adopt the method previously mentioned: you would evert the upper eye-lid.

We will now suppose that a sharp fragment of metal, or some hard angular substance, has been forced into the conjunctiva, and may be seen projecting from it; or, having transfixed that membrane, has passed beneath it, at a distance from the point at which it entered. In the first of these supposed cases, you would, without hesitation, grasp it with a pair of forceps, and extract it, or raise it from its situation by the aid of some moderately pointed instrument; or, if this could not be readily accomplished, in consequence of the contraction of the conjunctiva around the foreign body, from the enlargement of the vessels, or the deposition of inflammatory

secretions, you would no doubt enlarge the opening in the conjunctiva, and then you would experience no difficulty in removing the foreign body. In the latter case—that is, where the foreign body has passed beneath the conjunctiva at a distance from the spot at which it entered—you would divide that membrane at the part where it was most raised by the foreign body, and withdraw it, as in the former case. But in many cases you would not judge this mode of procedure expedient, inasmuch as, when a foreign body is so situated, it will not generally, from the circumstance of its obtaining a smooth covering, produce much pain, but may cause the patient much suffering, and the operator much trouble to remove it, on account of the loose texture of the conjunctiva admitting of that extent of motion which causes any opening you may make in it to change its situation in relation to the foreign body; but, presuming the particle to be fixed in the cornea —to be merely imbedded in its substance, you would separate the lids, and having requested the patient to look in that direction which allows you to discern most distinctly the object you are desirous of removing, fix the eye by firmly pressing the finger on either side of it, (this is best accomplished by allowing the index and middle fingers to project beyond the tarsal margin of the lower eye-lid,) and raise the foreign body from its situation by means of some pointed instrument. But it may happen that the cornea is transfixed,—the foreign body has not merely divided its outer layers, but passed through its entire texture; you should not, in this case, think of removing it immediately, lest the iris should become prolapsed, the aqueous humour become discharged, and, as an almost necessary consequence, vision more or less seriously impaired: on the contrary, you must allow it to be discharged, or at all events loosened, by sloughing, thus permitting deposition to take place around that part of it directed towards the optic nerve, by which the opening in the cornea would be closed, and the evil consequences connected with the loss of the aqueous humour avoided. It often happens that after metallic substances have been removed, an appearance of their presence still remains, owing to the oxydation of a part of them, which has become adherent to the cornea. You will be careful to discriminate this appearance, and do not be solicitous to detach the brown spot of the cornea, for it will be almost always cleared away by a natural process, and any interference on your part will be absolutely useless, and may be very injurious.

There are many substances which exert a chemical influence upon the textures of the eye, and not only influence them, but alter their qualities; lime, or mortar, renders the conjunctiva pulpy, and the cornea densely opaque, and thus completely destroys vision; invariably, it may be said, when they are applied in large quantities, and permitted to remain in contact with them for any great length of time. If you were called to a case in which a quantity of mortar had been applied to the eye, soon after the accident had occurred, you would at once attempt the removal of every part of it, by means of a probe, or the blunt end of a curvette, and having done this, you would proceed to inject beneath the lids, so as to direct a forcible stream of it against the part to which the mortar is adherent, and this you would do so long as any appreciable portion of it remained: you would then drop a little sweet oil upon the surface of the eye; and lastly, employ the ordinary means for the prevention or subduction of inflammation, or for the removal of any other effects the injury may have caused. Unfortunately, when lime, in its concentrated state, or any other strong caustic substance, come in contact with the eye, they are so rapidly destructive in their effects that we have only to treat the inflammation they excite, with a view to prevent its extension to the parts behind, or to the opposite organ: in scarcely any instance can we preserve the sight of the eye, when substances of a strongly caustic nature have been allowed to remain in contact with its surface for any length of time.

The means, then, of subduing simple acute inflammation of the conjunctiva, or rather the principles to be acted upon with a view to effect this object, in cases where the inflammation is severe, and does not arise from any outward source of mechanical irritation, are, first, to lessen the general fulness of the system, and the power of the circulation; secondly, to diminish the vascular plenitude of the inflamed part; thirdly, to protect the eye from the influence of vivid light; fourthly, to rectify any disordered state of the health, and particularly any derangement of the alimentary canal, that may exist; fifthly, to employ counter-irritation in the neighbourhood of the disease; and sixthly, to remove heat by the local employment of various collyria, or relieve pain by means of anodyne and soothing applications.

Bloodletting.

It has been asked,—which is the best situation whence to abstract blood in such cases, and in what manner is it most desirable to remove it? We will endeavour to reply to these questions.

It was formerly the practice to bleed in

the foot, for the removal of inflammation situated at the upper part of the body, on the principle of revulsion; and many persons at the present day, who entertain an opinion that inflammation of the eyes frequently depends on suppressed discharges, are in the habit of harassing the part which has ceased to discharge as usual, on the supervention of ophthalmia, believing that to be, what they term, the most natural mode of cure. You will find such persons directing the application of leeches to the anus, if the eyes are inflamed, and an habitual hæmorrhoidal discharge is suspended; to the nose, if the customary epistaxis has ceased to be as frequent and considerable as usual; to the labia, if the menses are suppressed; and to the neighbourhood of old ulcers, if they have healed, or if the discharge from their surface has diminished in quantity. Such are the means employed by those surgeons who believe that the inflamed state of the eye depends on these various causes, and is best relieved by restoring the absent or deficient discharge, or by instituting some artificial drain from the part whence such discharge usually or naturally proceeds. If you act upon such pathological notions, do not let your attention be withdrawn from the at least equally necessary and more active part of the treatment.

Having stated that one of the chief points to be secured, in the treatment of acute ophthalmic inflammation, is to lessen the fulness of the vascular system, and diminish the power of the circulation, you will imagine that it cannot be of much importance, as regards the subduction of the disease, from what situation blood be removed for this purpose. There are, however, many reasons why bleeding in the arm is the more desirable mode of withdrawing blood, when we require a large quantity. If you open the jugular vein, you greatly annoy the patient by the constrained position in which it is necessary to place him during the operation, and until the bleeding orifice is closed; and frequently you cannot obtain the quantity it is desirable to procure. If you open the temporal artery, it is probable, also, you may be disappointed, or, on the contrary, you may find it difficult to restrain the hæmorrhage, unless you employ tight bandages, or some mode of compressing that vessel which will be incompatible to the feelings, and heating to the head of your patient; besides, it is remarked that after the temporal artery has been opened, for the relief of acute inflammation of the eye, the neighbouring arterial branches have assumed a hæmorrhagic action, such as is noticed in other situations after the current of blood has been suddenly and abruptly prevented from pursuing its direct course. There are circumstances which may render it advisable to abstract the quantity of blood you may require by means of cupping: for instance, a patient may be unusually fat, the veins in the arm may be extremely small and obscure, or, as is sometimes the case, he may have an insuperable objection to permit the opening of a vein: generally speaking, however, cupping is the best means of secondary bleeding —and, at a certain stage of the disease, combines, in its effects, the influence of depletion and counter-irritation. You will not discover many objections to bleeding from the arm, when it becomes necessary to remove blood, for the purpose of relieving inflammation of the eye: it is convenient for the patient and the surgeon; it is an operation easily performed; it occasions very little pain; the hæmorrhage can be readily controlled, without a necessity for uncomfortable bandaging; and you may obtain from a proper orifice any quantity of blood you may deem it requisite to abstract. Dr. Vetch, who strongly advises one large bleeding to the production of syncope, in all cases of acute inflammation of the eye, says, "the salutary effect of syncope I can only ascribe to the laxity of the vessels, rendering them unable to resume their former tone and state of excitement; and it is only as far as we hold this specific effect in contemplation, that venesection is to be regarded as a principal remedy in the treatment of ophthalmia. The strength and fibre of the patient may be reduced by abstinence and bloodletting to the lowest standard, without producing any material benefit, or insuring the organ against the destructive consequence of the further progress of inflammation." Although I do not conceive the opinions contained in the preceding paragraph to be absolutely correct, I have thought it right to present you with the opinions of a gentleman who had considerable experience in diseases of the eye, on this important part of the treatment of ophthalmic affections.

Having made an impression on the system by general bleeding, you may perhaps consider it necessary to apply leeches, for the removal of what may be termed a secondary degree of inflammation (subacute): a dozen leeches may be placed just beneath the tarsal border of the lower eyelid, and in this way you may obtain a considerable quantity of blood. There are, however, certain objections to the use of leeches in this situation, which it is proper to mention:—they occasion an exposition of the inflamed eye to light, unless applied with more care than is customarily employed by those whose proper business it is to apply them; they also give rise to an unpleasant degree of swelling and ecchymosis of the lids, particularly if the patient pos-

sesses an irritable skin, or unusually great susceptibility of constitution; and they sometimes cause, in children particularly, a troublesome hæmorrhage, which seriously alarms the patient and his friends.

There are surgeons who profess to produce great advantage from scarifying the inflamed conjunctiva, (I am not now speaking of chemosis): they divide the numerous large vessels you may discover on everting the lids, by repeated incisions with a lancet; and of course you may in this way induce a pretty copious discharge of blood; but, as might be imagined, these incisions, by destroying the smoothness of the mucous surface, as also by the direct and immediate injury they inflict, give rise to great pain and uneasiness, and, in the majority of instances, produce an extent of secondary inconvenience more than equivalent to the immediate relief to be obtained from them. It is not certainly a very consistent mode of diminishing inflammation of a part so delicately formed and peculiarly circumstanced as the interior of the eyelids, in reference to the freedom and frequency of their movements upon the eyeball. This practice is, however, sanctioned by many excellent surgeons, and among others by Professor Beer and the late Mr. Ware.

It was formerly rather a favourite practice to rub the everted surface of the eyelids with "barley boards," with a view of lessening their vascularity, by abstracting a large quantity of blood from the part immediately inflamed: you will not be surprised to learn that this barbarous mode of scarifying the conjunctiva has been discontinued.

It must be understood that no directions you can receive from books or lectures will enable you to decide upon the quantity of blood it may be necessary to withdraw, in every case of acute inflammation of the textures of the eye; there must be a demand, a very great demand, on your own judgment: I cannot tell you that the loss of so many ounces of blood will be necessary to subdue a certain degree of inflammation of the conjunctiva, and that the abstraction of so many more or less number of ounces will be required to remove inflammation of the sclerotica, and so on, with regard to the inflammation of the other textures of the eye. However, the following directions comprehend the rules which regulate my own practice:—you must be guided by the effects of bleeding upon the constitution, as well as by its influence upon the eye; you must bleed repeatedly in a very short space of time, if symptoms are severe; for, as I may again remark, unless you abridge the duration of acute inflammation—unless you check its progress with promptitude, interstitial deposition may take place, and you may experience the disappointment, and your patient may sustain the injury, of recovering the form of the eye perhaps, but with loss of the transparency of its pellucid textures, after having cheerfully submitted to that treatment, which, if carried a slight degree farther, would have perfectly preserved both its figure and its transparency.

You will find it necessary, in order to complete the intentions comprised in this division of the treatment, to administer, at the commencement of the attack, an ample dose of calomel and jalap, and to maintain free secretions from the intestines by the aid of saline purgatives; and you may also have occasion to prescribe, in robust habits especially, nauseating doses of tartarized antimony, to produce that depression of the circulating system, favourable in the subsidence of inflammatory action, and also such other remedies as you may consider best calculated to promote the exhaling function of the skin; and of course it will be absolutely indispensable to lower the diet, and restrict your patient to a mild, and almost fluid, sustenance.

You were told that an exclusion of light from the eye, and an immunity from its ordinary action, were necessary aids to our treatment. It is an admitted principle, that in the treatment of an acute inflammatory affection of any organ, its function should, as far as possible, be dispensed with; and I need not tell you in what manner this object is best accomplished, as respects the organ of vision. Now as the retina is always more or less affected in every acute inflammation of the textures of the eye, you would of course deem it necessary to protect the eye, when inflamed, from the stimulus of light—more or less completely, as the inflammation may be acute or otherwise, or as the part affected may be more or less near in its situation, or related in its function, to the retina; and as the movements of the eyelids occasion pain, and the actions of the muscles of the globe, by moving or compressing it, give rise to great uneasiness, these motions should be prevented; and this is generally sufficiently accomplished by the suspension of a fold of linen before the affected part. Of course attention to these measures becomes important in proportion as the inflammation is severe, and the texture in which it is situated deep-seated: the remedies employed for the cure of iritis, retinitis, and choroiditis, are much assisted by the absolute exclusion of light, while it is only necessary to protect the eye from its more brilliant rays, when the inflammation is situated in the conjunctiva and the sclerotica.

It is perhaps needless to say any thing respecting the necessity of rectifying any disorder of the alimentary canal which may be discovered in a case of this

kind: you will remember how highly important it is not to overlook so necessary a means of aiding the efficacy of your other remedies: do not let a neglect on this point lead to the failure of an otherwise judiciously regulated plan of treatment; and allow me to say, that whilst you are omitting to attend to the state of the stomach and bowels, where such attention is required, you are allowing that condition of things to remain which has most probably caused, and will maintain and aggravate, the malady you are so solicitous to relieve and remove.

Counter-irritation.

We now proceed to the consideration of Counter-Irritation, and as my experience in the management of affections of the eye has caused me to place great reliance on its utility, I shall solicit your attention for a short time to my remarks on this very useful and interesting part of the treatment of ophthalmic diseases. We shall first speak of the best mode of employing counter-irritation; secondly, endeavour to demonstrate the most judicious time for its employment; and, lastly, point out its most appropriate situation.

The most usual modes of effecting counter-irritation are, by irritating the skin by various stimulating liniments and unguents; by impairing or destroying its vitality by the aid of moxa, and various caustic substances; or, by inserting some foreign substance into a wound made with a surgical instrument, as is exemplified in the seton and issue.

The advantages connected with the use of blisters are—the speed with which they produce their effect, their convenience of application, and the quick subsidence of their effects, when no longer required to remain, on the application of any mild ointment. If, however, the patient possess an irritable skin, or be subject to attacks of erysipelatous inflammation—if it be desirable to maintain counter-irritation for a long time, or if former experience has proved that blisters are likely to affect the urinary organs—you would, in such cases, adopt some other mode of effecting your object.

There are many surgeons who are extremely partial to the mode of irritating the skin by frictions with liniments and ointments, but the effects of such applications are exceedingly uncertain; in many cases they will produce no effect whatever, while in other instances they will excite the most intense inflammation, and even superficial sloughing; besides, they are generally a long time before they produce their effect: your patient may rub for many days before he produces any useful effect upon the skin.

In the course of my practice I have very frequently effected great benefit in the cases under consideration, by the aid of setons and issues, and as they are easily made, and formed without occasioning much pain—as they are conveniently dressed, and are perfectly manageable as to the increase or diminution of their size, and as they combine a moderate degree of counter-irritation, with a salutary amount of discharge—I have not seen advantages in the more recent discoveries to alter my opinion of their utility, or to induce me to prefer them, for the cure of this class of diseases, to remedies whose value has been decidedly ascertained.

You will imagine that a remedy for a disease, like advice needlessly given, or too perseveringly obtruded, may be out of season, and in fact there are few remedies so greatly mismanaged, as regards the time of their application, as counter-irritants; persons will often come to you with their eyes most acutely inflamed, with a blister upon the forehead or temple, or even upon the eye-lids, and they will tell you, with a foolish face of astonishment and chagrin, that the blister you ordered them on a former occasion, when their eyes were inflamed, cured them, but that now it has increased their sufferings. Undoubtedly much depends on selecting the appropriate period for their employment, and it will be remembered that in acute inflammation of the eye they are never to be used as a first application, and are never to be placed very near to the affected organ until the inflammation has been considerably reduced. You may prescribe blisters (presuming the inflammation of the eye to be of an acute character) after ample venesection has been premised, and you may repeat them, if the acute symptoms are merely diminished; or if it be desirable, either from the lingering nature of the disease, or an obvious tendency to a relapse, you may form an issue in the arm or temple, or insert a seton at the back of the neck. But on this subject I shall speak more fully when considering strumous disease of the eyes.

With regard to the situation in which it may be most desirable to employ counter-irritants, you are aware that it is usual to employ a blister at the back of the neck, or behind each of the ears, after bleeding has been premised, and that it is desirable afterwards to place them nearer to the seat of the disease. You may, in fact, put one over the eye-brow, on one or both sides, as you may have one or both organs affected, or if you prefer it, upon the temples; or, if the secondary set of symptoms evince a disposition to be lingering in their duration, a more permanent form of counter-irritation, such as an issue in the arm, may be necessary. This is indeed a most convenient

situation for the purpose; the issue does not, or scarcely at all, disfigure the arm, and is so conveniently managed by patients that they rarely complain of the trouble of dressing it; and it may be added, so great and so evident are the benefits conferred by a small issue of this description, not only upon the eye but also upon the general health, that they will be frequently as reluctant to have them healed as they had formerly been averse to permit their formation. As it will be necessary for me to advert to this subject occasionally, whenever it may be requisite to mention the adaptation of remedies to particular forms of disease, I shall not extend my observations by pointing out in detail the description of case suited to each particular remedy of this class, but content myself with thus directing your attention to the subject in this general manner, in the hope of impressing upon your minds the high value of this class of remedies.

Collyria.

We proceed, lastly, to speak of those local applications which are intended to abstract heat from the inflamed part, or allay irritation and soothe pain; and here let me not be understood to advise any one of the collyria, and other applications to be presently recommended, to be persevered in to the exclusion of any other from which the patient experiences a greater amount of relief: you know the intention they are designed to fulfil, and you know also that if they are painful on their first application, and are not succeeded by relief, they cannot be serviceable, and therefore ought not to be continued. You are too well aware of the varied susceptibilities and peculiarities of different individuals to expect that any one application will be universal in its adaptation. You will generally find the common goulard water, used warm or cold, as may be most comforting to the patient's feelings, serviceable on the first accession of inflammation, and afterwards, as the symptoms decline, a weak solution of the sulphate of zinc may be advantageously substituted; or, if the pain be severe, it may be necessary to foment the eyes frequently with warm water, a strong decoction of poppies, or an aqueous solution of opium; but I again repeat, that should any of these applications appear to be injurious, they must be changed for some other, or used in a different manner; for instance, you may find on inquiry that the goulard water has been applied when quite cold, and has aggravated the sensation of heat and pain in the eye it was meant to relieve, and if you direct it to be warmed and then used, it will, in many instances, answer the intended purpose most completely.

There are various agents by the assistance of which these applications are allowed to operate upon the eye, and it is astonishing with what pertinacity some practitioners will cling to their own favourite plan, to the utter exclusion of every other: some will prefer bathing the eye with a sponge, or a fold of soft linen, and others use what is termed the eye-glass—a vessel adapted to the shape of the orbit, which when filled with the collyrium is inverted, and placed upon the eye, so that its contents are permitted to dwell upon the surface of that organ. Any of these modes will answer the purpose very well, provided that no active friction be employed. We will not contend for straws.

ON HYBERNATION.

By Marshall Hall, M.D.
F.R.S.E. M.R.I. &c. &c.

[Concluded from page 211.]

2. *Of the Irritability.*

The single fact of a power of sustaining the privation of air, without loss of life, leads alone to the inference that the irritability is greatly augmented in the state of hybernation. This inference flows from the law so fully stated in my former paper, and the fact is one of its most remarkable illustrations and confirmations.

It might have been inferred from these premises, that the beat of the heart would continue longer after decapitation in the state of hybernation, than in the state of activity in the same animal; an inference at once most singular and correct.

This view receives the fullest confirmation from the following remarkable experiment: On March the 9th, soon after midnight, I took a hedgehog which had been in a state of uninterrupted lethargy during 150 hours, and divided the spinal marrow just below the occiput; I then removed the brain and destroyed the whole spinal marrow as gently as possible. The action of the heart continued vigorous during four hours, when, seeing no prospect of a termination to the experiment, I resolved to envelop the animal in a wet cloth, and leave it until early in the morning. At 7 o'clock A.M. the beat of both sides of the heart still continued. They still continued to

move at 10 A.M., each auricle and each ventricle contracting quite distinctly. At half-after 11 A.M. all were equally motionless; yet all equally contracted on being stimulated by the point of a penknife. At noon the two ventricles were alike unmoved on being irritated as before; but both auricles contracted. Both auricles and ventricles were shortly afterwards inirritable.

This experiment is the most extraordinary of those which have been performed upon the mammalia. It proves several interesting and important points: 1. That the irritability of the heart is augmented in continued lethargy in an extraordinary degree. 2. That the irritability of the left side of the heart is then little, if at all, less irritable than the right,—that it is, in fact, veno-contractile. 3. That, in this condition of the animal system, the action of the heart continues for a considerable period independently of the brain and spinal marrow.

On April the 20th, at six o'clock in the evening, the temperature of the atmosphere being 53°, a comparative experiment was made upon a hedgehog in its state of activity: the spinal marrow was simply divided at the occiput; the beat of the right ventricle continued upwards of two hours, that of the left ventricle ceased almost immediately; the left auricle ceased to beat in less than a quarter of an hour; the right auricle also ceased to beat long before the right ventricle.

3. *Of the Sensibility.*

All the writers upon the subject of hybernation agree in stating that the sensibility is greatly impaired; and it is impossible to commit a greater mistake.

The slightest touch applied to one of the spines of the hedgehog immediately rouses it to draw that deep inspiration of which I have spoken. The merest shake induces a few respirations in the bat. The least disturbance, in fact, is felt, as is obvious from its effect in inducing motion in the animal.

It is from the misconception on this point that the error has arisen, that the respiration is not absolutely suspended in hybernation. This function has been so readily excited, through the medium of an unimpaired sensibility, that the event has been considered as appertaining to the state of hybernation.

In fact, the sensibility is in nearly the same condition in hybernation as in ordinary sleep.

It must appear extraordinary, that with an unimpaired sensibility there can co-exist a suspended respiration. Why is not this suspension of respiration painful in the hybernating, as in other animals? And why is not the animal roused, by this pain, from its slumbers, if its sensibility be only slightly impaired?

But we should first ask, what are the precise seat and source of that pain which is felt during the suspension of respiration? These are, I think, demonstrably, the heart, and an impeded circulation through this organ. If, therefore, the circulation through the heart be not obstructed, there will be no painful sensation. Now is it precisely the peculiar property of hybernation, that the circulation through the heart is *not* interrupted, although the respiration be suspended. This topic is reserved, however, for a subsequent part of this paper. It is simply stated in this place as a fact, to shew that the painful feelings supposed to arise from suspended respiration in hybernation, do not exist; and that the difficulty of supposing a suspended state of the respiration with an unimpaired sensibility, is, in this manner, entirely removed.

The sensorial functions, on the other hand, are nearly suspended. This is proved by the suspension of respiration, which is immediately renewed for a time, on exciting the animal. It is further proved by the fact, that although the animal coils itself up when touched, it immediately relaxes into the former position; whereas, when it is awake, the impression of an external object induces a state of contraction and immobility which is continued for some time,—probably as long as the sense of fear continues. When the hedgehog, coiled up in its state of activity, is thrown into water, it immediately relaxes itself, from fear, and betakes itself to swimming; in the state of lethargy, on the other hand, no fear appears to be excited under such circumstances, and the animal would probably remain still and quiet for a very considerable period, if its sensibility were not acted upon by the contact of the water.

4. *Of the Muscular Motility.*

The motility of the muscles, in true

hybernation, is, like the sensibility, unimpaired. Those physiologists who have asserted the contrary, have, as will be shewn shortly, mistaken the phenomena of torpor from cold, for those of true hybernation.

If the hedgehog, in a state of the most perfect lethargy, uncomplicated with torpor, be touched, its respiration is resumed, and it coils itself up more forcibly than before. The dormouse, in similar circumstances, unfolds itself; and the bat moves variously. Not the slightest stiffness is observed. The hedgehog, when roused, walks about, and does not stagger, as has been asserted. The bat speedily takes to the wing, and flies about with great activity, although exhaustion and death may subsequently result from the experiment. The phenomena are similar to those of awaking from natural sleep. Insensibility, impaired motility, stiffness, lameness, &c. belong to torpor, and not to true hybernation.

5. *Of the Circulation.*

The wing of the bat affords an admirable opportunity of observing the condition of the circulation during hybernation. But it requires peculiar management. If the animal be taken from its cage, and the wing extended under the microscope, it is roused by the operation, and its respiratory and other movements are so excited, that all accurate observation of the condition of the circulation in the minute vessels is completely frustrated. Still greater caution is required in this case, than even in the observation of the respiration and temperature.

After some fruitless trials, I at length succeeded perfectly in obtaining a view of the minute circulation undisturbed. Having placed the animal in its state of hybernation, in a little box of mahogany, I gently drew out its wing through a crevice made in the side of the box; I fixed the tip of the extended wing between portions of cork; I then attached the box and the cork to a piece of plate-glass; and, lastly, I left the animal in this situation, in a cold atmosphere, to resume its lethargy.

I could now quietly convey the animal ready prepared, and place it in the field of the microscope without disturbing its slumbers, and observe the condition of the circulation.

In this manner I have ascertained, that, although the respiration be suspended, the circulation continues uninterruptedly. It is slow in the minute arteries and veins; the beat of the heart is regular, and generally about twenty-eight times in the minute.

We might be disposed to view the condition of the circulation in the state of hybernation as being reptile, or analogous to that of the batrachian tribes. But when we reflect that the respiration is nearly, if not totally, suspended, and that the blood is venous, we must view the condition of the circulation as in a lower condition still, and, as it were, sub-reptile. It may, indeed, be rather compared to that state of the circulation which is observed in the frog from which the brain and spinal marrow have been removed by minute portions at distant intervals.

In fact, in the midst of a suspended respiration, and an improved condition of some other functions, one vital property is augmented. This is the irritability, and especially the irritability of the left side of the heart. The left side of the heart, which is, in the hybernating animal, in its state of activity, as in all the other mammalia, only arterio-contractile, becomes veno-contractile.

This phenomenon is one of the most remarkable presented to me in the whole animal kingdom. It forms the single exception to the most general rule, amongst animals which possess a double heart. It accounts for the possibility of immersion in water or a noxious gas, without drowning or asphyxia; and it accounts for the possibility of a suspended respiration, without the feeling of oppression or pain, although sensation be unimpaired. It is, in a word, this peculiar phenomenon, which, conjoined with the peculiar effect of sleep in inducing diminished respiration in hybernating animals, constitutes the susceptibility and capability of taking on the hybernating state. On the other hand, as the rapid circulation of a highly arterialized blood in the brain and spinal marrow of birds probably conduces to their activity, the slow circulation of a venous blood doubtless contributes to the lethargy of the hybernating animal.

6. *Of the Digestion.*

There is much difference in the powers of digestion, and in the fact of omitting to take food, in the hybernation of different animals. The bat, being insectivorous, would awake in vain; no

food could be found: the hedgehog might obtain snails or worms, if the ground were not very hard from frost: the dormouse would find less difficulty in meeting with grain and fruits. We accordingly observe a remarkable difference in the habits of awaking from their lethargy or hybernation, in these different animals.

I have observed no disposition to awake at all in the bat, except from external warmth or excitement. If the temperature be about 40° or 45°, the hedgehog, on the other hand, awakes, after various intervals of two, three, or four days passed in lethargy, to take food; and again returns to its state of hybernation. The dormouse, under similar circumstances, awakes daily.

Proportionate to the disposition to awake and take food, is the state of the functions of the stomach, bowels, and kidneys. The dormouse and the hedgehog pass the fæces and urine in abundance during their intervals of activity. The bat is scarcely observed to have any excretions during its continued lethargy.

In the dormouse and the hedgehog, the sense of hunger appears to arouse the animal from its hybernation, whilst the food taken conduces to a return of the state of lethargy. It has already been observed, that there are alternations between activity and lethargy in this animal, with the taking of food, in temperatures about 40° or 45°. Nevertheless, abstinence doubtless conduces to hybernation, by rendering the system more susceptible of the influence of cold, in inducing sleep and the loss of temperature. The hedgehog, which awakes from its hybernation, and does not eat, returns to its lethargy sooner than the one which is allowed food.

III. Of Torpor from Cold.

It is highly important, and essential to the present investigation, to distinguish that kind of torpor which may be produced by cold in any animal, from true hybernation, which is a property peculiar to a few species. The former is attended by a benumbed state of the sentient nerves, and a stiffened condition of the muscles; it is the direct and immediate effect of cold, and even in the hybernating animal is of an injurious and fatal tendency; in the latter, the sensibility and motility are unimpaired, the phenomena are produced through the medium of sleep; and the effect and object are the preservation of life.

Striking as these differences are, it is certain that the distinction has not always been made by former observers. In all the experiments which have been made, with artificial temperatures especially, it is obvious that this distinction has been neglected.

True hybernation is induced by temperatures only moderately low. All hybernating animals avoid exposure to extreme cold. They seek some secure retreat, make themselves nests or burrows, or congregate in clusters, and, if the season prove unusually severe, or if their retreat be not well chosen, and they be exposed in consequence to excessive cold, many become benumbed, stiffen, and die.

In our experiments upon hybernation we should imitate nature's operations.

To induce true hybernation, it is quite necessary to avoid extreme cold; otherwise we produce the benumbed and stiffened condition to which the term torpor or torpidity may be appropriated. I have even observed that methods which secure moderation in temperature, lead to hybernation: hedgehogs supplied with hay or straw, and dormice, supplied with cotton wool, make themselves nests, and become lethargic; when others, to which these materials are denied, and which are consequently more exposed to the cold, remain in a state of activity. In these cases, warmth or moderated cold, actually concur to produce hybernation.

When we read of insensibility, of a stiffened state of the muscles, and of a cessation of the circulation, as obtaining in hybernation, we may be certain that a state of torpor has been mistaken for that condition. The actually hybernating animal exposed to continued severe cold, is, as M. Saissy correctly observes, first roused from this state of ease and preservation, into a painful activity, and then plunged into a fatal torpor.

IV. Of Reviviscence.

Not the least interesting of the phenomena connected with hybernation, are those of reviviscence. Hybernation induces a state of irritability of the left side of the heart, which, with high respiration and an arterialized blood, would be incompatible with life. Respiration

suddenly restored, and permanently excited, is therefore as destructive as its privation in other circumstances.

All those bats which were sent to me from distant parts of the country died. The continued excitement from the motion of the coach, keeping them in a state of respiration, the animal perished. One bat had, on its arrival, been roused so as to fly about. Being left quiet, it relapsed into a state of hybernation. The excitement being again repeated the next day, it again flew about the room: on the succeeding day it was found dead.

It is in accordance with this law that we observe hybernating animals adopting various measures to secure themselves from frequent sources of disturbance and excitement. They choose sheltered situations, as caverns, burrows, &c., secure from the rapid changes and the inclemencies of the weather and season. Many form themselves nests; others congregate together. The hedgehog and the dormouse roll themselves up into a ball. The common bat suspends itself by the claws of its hinder feet, with its head dependent, generally in clusters; the horse-shoe bat, (ferrum equinum,) spreads its wings so as to embrace and protect its fellows.

All these circumstances are obviously designed to prevent disturbed hybernation.

In the depth of caverns, and other situations sheltered from changes of temperature in the atmosphere, the calls of hunger are probably the principal cause of revivisecence in the spring. The other causes of revivisecence are the return of warmth and external excitements: it is interesting to observe and trace the gradual return of respiration in the former case, and of the temperature of the animal in the latter.

If the hybernating hedgehog be touched even very gently, it draws a deep breath, and then continues to breathe for a short time. If this excitement be repeated, the animal is permanently roused, and its temperature raised. If the temperature of the atmosphere be augmented, the respiration is gradually excited, and the animal is gradually restored to its state of activity.

If a hybernating animal be excited in a very cold atmosphere, its temperature rises variously, and then falls. A bat was perfectly lethargic in a temperature of 36°. A fine thermometer, with a cylindrical bulb, was introduced into its stomach; it rose to 39°. One hour afterwards, the animal not being further disturbed, the respiration was rapid, and the temperature in the stomach 95°. Shortly afterwards the temperature was 90°. The minute circulation was pretty good, and pulsatory in the arteries, the heart beating from twenty-eight to thirty-six times in the minute.

In another bat, in an atmosphere of the temperature of 36°, the thermometer in the stomach rose to 39°. The animal being continually excited, the temperature rose to 65°, but speedily fell to 60.

The animal excited and revived in this manner, is in a state of exhaustion and inanition. It is incapable of maintaining its temperature, if exposed to cold, and will die unless it repass into the state of hybernation. It may be compared to the state of the mouse deprived of food in the following experiment of Mr. Hunter. "A mouse was put into a cold atmosphere of 13° for an hour, and then the thermometer was introduced as before; but the animal had lost heat, for the quicksilver at the diaphragm was carried only to 83°, in the pelvis to 78°."

"In order to determine whether an animal that is awakened has the same powers, with respect to preserving heat and cold, as one that is vigorous and strong, I weakened a mouse by fasting, and then introduced the bulb of the thermometer into its belly; the bulb being at the diaphragm, the quicksilver rose to 97°; in the pelvis to 95°, being two degrees colder than the strong mouse: the mouse being put into an atmosphere as cold as the other, and the thermometer again introduced, the quicksilver stood at 79° at the diaphragm, and at 74° in the pelvis.

"In this experiment, the heat at the diaphragm was diminished 18°, in the pelvis 21°.

"This greater diminution of heat in the second than in the first, we may suppose proportional to the decreased power of the animal, arising from want of food*."

But extreme cold alone, by a painful effect induced on the sentient nerves, rouses the hybernating animal from its lethargy, as has been remarked already, and is illustrated by the following experiments of Hunter. "Having brought a

* Animal Economy, pp. 114, 115.

healthy dormouse, which had been asleep from the coldness of the atmosphere, into a room in which there was a fire, (the atmosphere at 64°,) I introduced the thermometer into its belly, nearly at the middle, between the thorax and pubis, and the quicksilver rose to 74° or 75°; turning the bulb towards the diaphragm, it rose to 80°; and when I applied it to the liver, it rose to 81½.

" The mouse being placed in an atmosphere at 20°, and left there half an hour, when taken out was very lively, even much more so than when put in. Introducing the thermometer into the lower part of the belly, the quicksilver rose to 91°; and upon turning it up to the liver, to 93°.

" The animal being replaced in the cold atmosphere at 30°, for an hour, the thermometer was again introduced into the belly: at the liver it rose to 93°; in the pelvis to 92°; the mouse continuing very lively.

" It was again put back into an atmosphere cooled to 19°, and left there an hour: the thermometer at the diaphragm was 87°; in the pelvis 83°; but the animal was now less lively.

" Having been put into its cage, the thermometer being placed at the diaphragm, in two hours afterwards, was at 93° *".

In these experiments the animals appear to have been roused partly by the state of the wound in the abdomen, but chiefly by the extreme cold. They can scarcely, however, be considered as experiments upon hybernation, however interesting they may be in reference to reviviscence from that state.

The fact of the fatal influence of excited respiration during the augmented irritability of hybernation, contrasted with the similar effect of suspended respiration, during the diminished irritability of the state of activity, will illustrate many of the causes, kinds, and phenomena of death. Do not these resolve themselves, in fact, into irritability insufficiently or excessively excited?

Recapitulation.

The object of this paper has been to treat of the singular phenomena of hybernation, and especially to point out the remarkable application of the law stated in my former paper, to the active and lethargic states of the hybernating animal.

1. The natural sleep of the hybernating animal differs greatly, yet only in degree, from the sleep of any other animal.

2. This sleep passes insensibly into the state of true hybernation, which is more profound, as the blood loses its arterial character; for,

3. In hybernation, the respiration and the evolution of heat are nearly suspended.

4. The irritability is, at the same time, singularly augmented; and the animal bears proportionately the privation of air.

5. The nervous sensibility and the muscular motility are unimpaired.

6. There is the singular phenomenon of this unimpaired sensibility, and the capability of bearing the privation of air without pain; a fact which receives an interesting and perfect explanation from the additional fact of the augmented irritability or veno-contractility of the left side of the heart.

7. There is an important distinction between true hybernation and torpor from cold, not attended to by physiologists.

8. Severe cold, like all other causes of pain, rouses the hybernating animal from its lethargy; and, if continued, induces the state of torpor.

In conclusion, one of the most general effects of sleep, is to impair the respiration, and with that function, the evolution of animal temperature. The impaired state of the respiration, induces a less arterial condition of the blood, which then becomes unfit for stimulating the heart; accumulation of the blood takes place in the pulmonary veins and left auricle: a sense of oppression is induced, and the animal is either roused to draw a deep sigh, or awakes altogether.

Such are the phenomena in animals in which the heart has not the faculty of taking on an augmented state of irritability, with this lessened degree of stimulus. But in those animals which do possess this faculty, a property which constitutes the power of hybernation, the heart continues the circulation of the blood more slowly indeed, but not less perfectly, although its arterial character be diminished and its stimulant property impaired. No repletion of the pulmonary veins and of the left auricle, no sense of oppression is induced, and the animal is not roused; the respiration

* Animal Œconomy, pp. 111, 112.

continues low, the temperature falls, and the animal can bear, for a short period, the abstraction of atmospheric air.

All the phenomena of hybernation originate, then, in the susceptibility of augmented irritability. The state of sleep, which may be viewed as the first stage of hybernation, induces an impaired degree of respiration. This would soon be attended with pain, if the irritability of the heart were not at the same time augmented, so as to carry on the circulation of a less arterial blood, and the animal would draw a deep sigh—would augment its respiration, or awake. Occasional sighs are, indeed, observed in the sleep of all animals, except the hybernating. In these, the circulation goes on uninterruptedly, with a diminished respiration, by the means of an augmented irritability. There is no stagnation of the blood at the heart, consequently no uneasiness; and the animal becomes more and more lethargic, as the circulation of a venous blood is more complete. This lethargy is eventually interrupted by circumstances which break ordinary sleep, as external stimuli, or the calls of appetite.

Moderate cold disposes to sleep,—to lethargy. But severer cold induces a different condition of the system,—that of torpor. Sleep is the *medium* between such moderate cold and the phenomena of hybernation; torpor is the *immediate* effect of the severer degrees of cold.

This investigation naturally leads to that of the comparative conditions of the respiration and of the irritability, in the pupa and perfect states of some species of the insect tribes. There is much reason to suppose that these states are respectively similar to those of lethargy and activity in the hybernating animal.

CASE OF SUBCLAVIAN ANEURISM.

By W. P. Nichols, Esq.
Lecturer on Anatomy, and Senior Surgeon to the Guardian's Dispensary, Norwich.

To the Editor of the Medical Gazette.

Sir,

Early in April last I was consulted by Miss Newman, a young lady, æt. 21, who resided in the vicinity of Norwich, respecting a pulsating tumor in her neck, which made its appearance immediately after she had subjected her left arm to severe and unusual exertion in saving herself from a fall.

On examination, I found a tumor, the size of a hen's egg, situated in the left side, occupying the triangular space which is bounded below by the clavicle; on the inner side, by the clavicular portion of the mastoid muscle; and on the outer side, by the anterior fibres of the trapezius: evidently the result of some injury done to the subclavian artery in that part of the canal which stretches from the edge of the scalenus muscle towards the axilla, before it has passed under the clavicle. Indeed, so near the edge of the scalenus was the injury, that I was not able to compress the vessel with my thumb between that muscle and the tumor.

The aneurismal nature of the swelling being very evident, I did not think it desirable at that time to apprize the patient of the formidable character of the tumor; but, directing her to remain quiet, I gave her some aperient medicine, promising to see her again in a few days; when I explained to her fully her situation, and the mode of treatment which I proposed to adopt. She assented, and the operation of securing the vessel above the aneurism was performed in the following manner.

April 30th, 11 A.M.—The patient was placed, in an horizontal position, on a table about three feet in height, having her head hanging over the end, and supported by an assistant. The integuments being drawn down, an incision was then made through the skin and platysma myoides, along the clavicle, three inches in length, from the outer fibres of the clavicular portion of the sterno-cleido-mastoideus outwards: another incision was carried from the inner point of the former one upwards, along the clavicular portion of the sterno-cleido-mastoideus, for four inches; this incision passed between the fasciculi of the platysma myoides, which in this case were remarkably large. The triangular flap formed by the two incisions, was dissected back, carrying with it, imbedded in its substance, the external jugular vein, as far as the tumor would allow of its being done; and a little dissection now brought into view the omo-hyoideus at the upper part, passing obliquely upwards to its insertion. This muscle was divided, and a small artery passing across the wound, immediately

below it, was secured. The deep fascia of the neck was here exposed, having on the inner side the middle scalenus beautifully distinct, and passing to its insertion into the tubercle of the rib. By slightly rotating the head, the different direction of its fibres from those of the sterno-cleido-mastoideus became remarkably apparent; shewing how important, at this stage of the operation, it is that this muscle should be your guide. The fascia was then cautiously divided along the outer edge of the scalenus, and the transverse artery of the neck drawn upwards by a blunt hook, whilst the large vein which accompanies it, but which crosses the wound considerably lower down, was secured by two silk ligatures, and divided. This enabled me to pass my finger along the scalenus to the tubercle of the rib, and to compress the artery where it leaves the chest about half an inch above that process. The space, however, between the aneurismal tumor and the scalenus was so small that it was thought advisable to divide a few of its fibres, in order the more readily and securely to tie the vessel. This having been done, a strong blunt aneurismal needle, armed with a silk ligature, was very readily passed under the artery from below, and its blunt extremity having been pressed upwards, I cut through the cellular tissue upon it, and thus passed the instrument without detaching the vessel from its connexions. The ligature was tied with great ease, and the tumor immediately subsided. All pulsation ceased from that time; the edges of the wound were brought together by means of a suture and some adhesive plaister, and the patient returned to her bed. She bore the operation with remarkable firmness throughout.

April 30th, 4 P.M.—Pulse 70; skin hot and dry, and very restless.

Træ. Opii, gtt. xxx.

9 P.M.—In profuse perspiration; pulse 96; slept soundly at intervals.

May 1st, 8 A.M.—Pain abated; slept soundly for several hours.

9 P.M.—Pulse 90; mind tranquil.

Træ. Opii, gtt. xxx.

2d, 8 A.M.—Pulse 96; generally better.

10 P.M.—Pulse the same; altogether easier.

Pil. Aperient. ij.

3d, 9 A.M.—Pulse 80; complains of want of sleep, and feverish; the bowels have not been relieved.

10 P.M.—Bowels relieved.

4th, 9 A.M.—Pulse during night 100, but towards morning 90. Wound dressed; to all appearance likely to heal by first intention; much lymph thrown out, and general appearance of the wound healthy. Skin moist; healthy tongue, and every symptom denoting improvement. Bowels relieved copiously.

Omit. Tra. Opii.

5th, 10 A.M.—Pulse 96; rested well; tongue clean; skin moist; bowels rather relaxed.

Træ. Catechu, gtt. xv. Vespere.

6th, 10 A.M.—Pulse 84; continues improving in every respect; bowels regular.

7th, 11 A.M.—Pulse 80; skin cool; wound dressed, looking healthy; bowels quiet; doing well.

8th, 9 A.M.—In every respect the same.

9th, 11 A.M.—Wound dressed, upper portion healing by first intention; pulse 86.

10th, 9 A.M.—Wound looking well; discharge copious.

11th, 10 A.M.—Bowels regular; pulse 80. Two of the ligatures came away today.

13th, 10 A.M.—The pulse in the radial artery returned.

15th, 9 A.M.—Complains of slight pain and numbness in the wound; pulse 75; bowels regular.

16th, 10 A.M.—Pain gone; improving.

20th.—Ligature came away.

23d.—Cured.

November.—Up to the present time the patient has enjoyed perfectly good health, and feels no inconvenience resulting from the operation.

I have transmitted the preceding case of subclavian aneurism for insertion in your valuable journal, not because I consider that the propriety of performing the operation has not been set at rest by the successful result of former cases, but because, at the present moment, their number is so small that additional ones are desirable, to shew that it is not so fearful an operation as the instances of success, compared with those of fatal termination, might at first induce us to suppose.

There are also, in the favourable cases

which have been recorded, very few, if any, in which some unpleasant occurrences have not taken place during their progress towards a cure, and which additional experience will not in some degree obviate.

In this case, the circumstances which I consider of importance are these:

The position of the patient, who was placed horizontally, with the head (as described) hanging over the end of the table; which position contributed very materially to facilitate the different steps of the operation. The space is thus completely exposed, the light falls fully on the part where it is of the most importance, and the operator is not confused by the presence of any accumulation of blood at the bottom of the wound.

The turning back of the jugular vein imbedded in the flap; thus placing it beyond the chance of injury at the time of, or subsequently to, the operation.

The practicability of performing this operation without detaching the sterno-cleido-mastoid muscle from its clavicular origin, although the tumor was situated above the clavicle.

The drawing upwards of the transverse artery, and thus leaving it undivided; by which this vessel (becoming enlarged as the circulation in the extremity grows more free) becomes one of the principal trunks in subsequently supplying blood to the limb.

That no unfavourable symptoms were produced by the division of, and tying, the accompanying vein (which, in this instance, could not be avoided).

Lastly, the passing the aneurismal needle under the vessel, without separating it from its connexions, which may be readily effected; and of tying it beneath the outer fibres of the scalenus: which fact appears to me valuable, inasmuch as it proves that the very short distance between the ligature and the thyroid axis affords sufficient space for the formation of a coagulum, and the consequent obliteration of the arterial tube.

I received much and valuable assistance from Dr. Wright, Dr. Lubbock, and Mr. Norgate; to whom I beg leave thus publicly to express my thanks.

I am, sir,
Your obedient servant,
W. P. Nichols.

Norwich, Surry Street,
Nov. 5, 1832.

PERFORATION OF THE STOMACH FROM ULCERATION.

To the Editor of the Medical Gazette.

Sir,

If you think with me that the following case is worthy of publication, it is at your service.

I have the honour to be, sir,
Your obedient servant,
James Hurd.

Cleeve Cottage,
Yatton, near Bristol, Nov. 6, 1832.

Feb. 25, 1832.—In the afternoon I was called to attend Robert Venn, gardener, æt. 60, a temperate and industrious man, who had for many years suffered from ulcerated legs, which were still discharging: he had also for a great number of years complained of occasionally dyspeptic symptoms, which had latterly been more constant and severe, yet he had not at any time ceased to follow his avocation. The bowels were habitually disposed to constipation. From the 22d instant he had experienced frequent rigors, and had lost all desire for food: on the evening of the 23d he took two laxative pills, which moved the bowels once on the following morning, since which time they had not been evacuated. On rising to-day, the 25th, he complained of being more indisposed, but had no particular symptom, excepting the shivering, which was now more frequent. He left home as usual; but at 11 o'clock, A.M. whilst labouring in the garden, he was suddenly seized with excruciating pains in the abdomen, which had continued unabated up to the time of my visiting him, at a quarter past six, P.M.

The skin moderately warm, but he complains of being cold: pulse natural, beating 88; tongue not at all changed from its usual rather coated state; no vomiting, nor nausea; the abdominal muscles as rigid as a board, which prevents my ascertaining any thing by pressure, which neither diminishes nor aggravates the pain; the viscera occupy but very little space,—to use his own words, "my bowels are gone into my back."

The treatment being adopted in ignorance of the real nature of the case, it may suffice briefly to state what it was. Bleed-

ing to ℥xij. (the blood buffed slightly,) calomel, opium, castor oil, fomentations, and domestic enemata: healthy, constipated fæces were brought off by the latter, and he soon expressed himself as much easier, though the abdomen continued as rigid as before. To continue the fomentations, and take at short intervals a mixture of Magnes. Sulph. Træ. Opii, et Aq. Menth. Pip. with pills of Calomel and Antimony. In the morning, about six, he was observed to change much in appearance: a few hours later the pulse 120, weak, but not tremulous; the senses perfect; great calmness; respiration performed without any apparent assistance from the abdominal muscles or the diaphragm, and consequently a short and laborious heaving of the chest; tongue dry and brown; neither hiccup, sickness, nor nausea; the abdomen still hard and painful, the *very reverse of tumefaction*, whether from flatulency or fluid; the bowels have not acted since last mentioned; cornea lucida filmy almost to opacity; the voice lost in a whisper; facies hippocratica.

He died at noon.

Autopsy, 24 hours after death.—The abdomen *very tumid*, and yielding as from fluid within. The right lung congested, and its pleura pulmonalis firmly adherent to the pleura costalis. The omentum covered anteriorly with that kind of yellow deposit termed by Lobstein, kirronosis: a large quantity of turbid fluid in the cavity of the abdomen, resembling in colour the omental deposit. The intestines generally inflamed. The liver and spleen corrugated, and externally of a pale ash colour, but apparently healthy within. The gall-bladder distended with very fluid bile, but it could not be pressed through the cystic duct, which was found to be impervious; but bile was regularly secreted, and passed the hepatic and common ducts. The stomach superiorly, between its small curvative and pyloric orifice, presented an ulcer, which readily admitted the fore finger: this was surrounded by a thick fleshy circle, which did not quite approach the edges of the ulcer, but formed a complete ring beyond it; and from the outer margin of this circle extended a patch of membrane-like substance, some of which was easily rubbed off, leaving the peritoneal coat healthy; but for the most part this deposit or adventitious membrane, for it seemed organized, could not be detached. There was considerable ossification of the abdominal vessels, which, perhaps, as well as the dyspeptic symptoms, influenced the ulcers of the legs, which had resisted the most careful means of cure.

This is another striking instance of the great disparity often found to exist between derangement of function and morbid change of structure. How frequently do we find dyspepties, from only trifling improprieties of diet, suffering acutely, and incapable of exertion; whilst in this case, the man, though often complaining, never ceased to labour even to the day prior to his death!

A few circumstances seem worthy of remark:—1st, That from the moment I first saw the patient up to the period of my leaving him *in articulo mortis*, the abdomen seemed reduced by spasm to a mere handful; but on exposing him for the after-examination, tumidity was particularly striking: it gave, in fact, the appearance of ascites. Knowing the incompressible nature of fluid, how is this to be explained? 2dly, What was this fluid? an effusion consequent to inflammation? and how long had it been present? 3dly, At what period was the ulceration completed? at the time of the accession of pain?

The stomach is in the possession of Mr. Richard Smith, Bristol.

P.S. A young unmarried woman, daughter of the person whose case is related above, is often suffering acutely from pain in the stomach, with a presentiment that it will end like her father's.

CASE OF EXTRAORDINARY CONSTIPATION.

[*Communicated to Mr. Key, and read before the Hunterian Society.*]

My dear Sir,

As I feel confident you will not be uninterested in any peculiarity which may present itself in medicine or surgery, more especially when emanating from and occurring under the immediate eye of one of your own pupils, I take the liberty to send you an account of a protracted

case of habitual constipation, which, perhaps, has been more singular than any to be found in the annals of medicine, and from that circumstance rather than from its intrinsic danger, worthy of being known to the profession, and placed within its records.

My patient, Mary Belmore, aged 73, the wife of a labouring man, requested my advice for "an obstinate costiveness," as she termed it, and gave me the history of her complaint, nearly in the following manner:—

At about 24 or 25 she could not command a daily motion without the assistance of some purgative medicine, which she generally bought at the druggist's, either jalap, rhubarb, or aloes, but even these in the course of time lost their virtue, "unless she took," as she expresses herself, "as much as would poison a dozen ordinary men:" from two days the interval gradually increased, though unaccompanied with any very unpleasant symptoms, except flatulence and occasional dull heavy pain on the right side, (I suppose the head of the colon from her description, and pointing to the spot,) and flying pains from the flatulence, until it became a month; and for the last five years, once in two months, not regular to two or three days. Even before my advice was solicited, a medical practitioner here, just antecedent to the last obstruction, had attended her for the complaint, which had not then been relieved for four months and eight days: she told me that he had been successful in purging her, and that she "must have parted with at least a bushel;" but that she would sooner die than undergo again what she suffered from the effect of the medicine, and that unless I could do something for her, which would act speedily and easily, she would not take any thing: this was about a month after the purged motions, and she has had several since, though not at regular intervals. I sent her a box of pills of calomel, ext. colocynth. ol. croton, and cloves; but whether from the trouble of taking them, or their nauseousness, she neglected their use, and as she had comparatively little or no pain from her complaint, week succeeded week, and month to month, until full *seven months* had passed over without the least discharge from the bowels. Some weeks before her death she had a fall, and hurt her right side (no doubt, particularly the head of the colon,) of which she had complained ever since, the pain gradually getting worse and worse, so that she could not bear the least pressure, and at length was obliged to keep her bed. She died in a few days under the most excruciating pain in the head of the colon from inflammation, which terminated in gangrene of one spot about the size of a crown, from which the feces had escaped, and were found amongst the intestines on the right side.

The friends gave me liberty to inspect the body after death. Its size was like that of a half hogshead, and as protuberant as that of a dropsical person, as hard as a drum, with the skin as tense as it seemed possible to draw it, and quite polished. I made a longitudinal incision from the ensiform cartilage to the pubes, and a cross one from side to side: the muscles were quite absorbed, and the skin and peritoneum perfectly transparent, and each as thin as a wafer, so that they might almost be torn like paper.

The spectacle which presented itself was very singular, but consistent with what might have been expected: the sigmoid flexure of the colon was so much enlarged with flatus at its upper part as to become quite displaced from the left side; but taking its curve as usual on the left side above, the upper part lay completely across the abdomen, like the transverse arch, but upon that part: when it had got to the right side, it again curved towards the left ileum, or rather to the middle of the pubes, and terminated in the enlarged rectum at the bone of the sacrum. Its upper part, which crossed the abdomen, was so distended with flatus as to be nine inches in diameter; and the lower part, which descended to the rectum, and was filled with pultaceous feces, was about ten inches and a half, but where it joined the rectum six inches. Nothing could be seen on first opening the abdomen but this portion of the intestine; a small part of the ileum, where it joins the head of the colon; the enlarged head of colon and the anterior part of the enlarged rectum, the latter seen only because of its enlargement. The rectum was six inches in diameter above, gradually getting smaller towards the anus, which would not more than admit the thumb, though immediately above, it completely filled

the cavity of the pelvis. The head of the colon was about nine inches in diameter, and it, as well as the transverse arch, was filled (I ought to say crammed) with fæces of moderate consistence, having only a few scybala, not sufficient to have produced irritation as a cause of the prevailing inflammation. The stomach, though an immense cul-de-sac, and appearing as if it had been much distended, was more than half empty, and the duodenum, jejunum, and ileum quite so, and their coats perfectly healthy, only thickened in their muscular and mucous structures, as were also the large intestines. The fæces were not inordinately offensive, considering the length of time they had remained in the bowels, nor, excepting the rectum, were they near so concrete as might be expected; but in this gut they were literally as hard as wood, and would require the chisel or hammer to break them in pieces.

Her appetite had always been tolerably good, nor did she refrain from any common diet that presented itself, though generally she lived on fat pork and vegetables.—With much respect,

Your's most sincerely,

S. STANILAND.

September 17, 1832,
West-Street, Fareham, Hants.

IMITATIVE EPILEPSY.

To the Editor of the Medical Gazette.

SIR,

THE following cases of imitative epilepsy were recently brought to my recollection. Should they possess sufficient interest, you will perhaps afford them a place in your journal.

Feb. 1829.—Nathaniel Webb, a labourer in a neighbouring village, about forty years of age, was seized five months since with epilepsy, as it appeared, from grief at the loss of his wife, as well as anxiety at having been left with a numerous and dependent family. The paroxysms became frequent, exceedingly violent, and probably maniacal; and a strong healthy young man (Shell) was hired to look after him. At the end of seven weeks this person, who had kept his station night and day, became himself epileptic in a very high degree. An acquaintance of his (Newman), of equally robust make, but some years older than himself, occasionally visited the parties. In a fortnight from his first visit he also was seized with similarly violent attacks. On the 10th of February, 1829, they both applied at the hospital for relief; but, though coming from the same place, and on the same errand, they avoided each other with the utmost caution—one arriving about an hour after his friend.

I spare you their cases in detail, which, except from the singularity of their origin, were altogether without interest. The treatment consisted of cupping and purgation, and they were soon well. It is believed that Webb, the man originally affected, also recovered.

So stood the case up to September 1829, when Webb came to the hospital for advice about another complaint, never making the most remote allusion to his epilepsy. When pressed, however, he said that he was not cured, but that he was occasionally attacked by the fits, and that both Newman and Shell had suffered a relapse, but that the latter had had no attack since July. This man (Webb), whose complaints were trifling, soon became irregular in his attendance; and I was unable to get a sight of either of the younger men, or to procure what I conceived to be a true history as to particulars, though I had not the slightest doubt as to the leading facts.

Feb. 24, 1832.—A patient, from Box, applying at the hospital this day, reminded me of the above statement. He says that both the young men are now well, but speaks less positively of Webb. He confirms the whole of their account.

Many cases resembling the above have probably been recorded, but the only one which occurs to my recollection at present is the following, alluded to by Baglivi, who says, (lib. i. cap. 14.) "Vidimus, anno 1690, in Dalmatia juvenem gravissimis correptum convulsionibus, propterea quod inspexerat solummodo alium juvenem, dum epilepsia humi contorquebatur."

Finally, Mr. Editor, I feel bound to apologize for occasionally troubling you with these unadorned and any thing but elaborate cases: but what they might gain in polish they might possibly

lose in accurary; or, more probably, if much *filing* were necessary, be passed by altogether. One word fixed on at the moment is, according to Gray's phraseology, "worth a cart load of recollections;" and in reports of this sort, it has always struck me that the less of lucubration that accompanied them the better. Without connexion, and without pretence, they may yet aspire to a certain degree of consideration, so long as they are under the guidance of nature and of truth.

"The Jews," it is well said, "were commanded to build their altar with stones unhewn and untouched by any tool; and, in like manner, the best materials for natural knowledge are the plain facts themselves, just as they come from nature: he who pretends to new model and polish them, in order to their being adapted more perfectly to his system, has utterly polluted them, and made them unfit for the altar of truth."

I am, sir,
Obediently yours,
C. H. HARDY, M.D.

Bath, Nov. 1832.

PROCESS FOR OBTAINING CONIA.

To the Editor of the Medical Gazette.

SIR,

A process was published in the last edition of Dr. Ure's Dictionary, for the preparation of a peculiar alkaloid from conium maculatum (copied from a Continental journal); upon the repetition of which I was unsuccessful in obtaining it. This induced me to carefully repeat the experiment, and I find that no conia can in this manner be procured; but by the following process it may be prepared with great ease, and in a state of purity.

Digest the fresh leaves of conium maculatum in alcohol, and set aside for some days and strain the mixture; boil the alcoholic tincture for a few minutes, and when cold filter. By this operation a solution is obtained of malate of conia with extractive and some salts; decolourise with animal carbon, again filter, and add to the clear liquor a solution of carbonate of soda. A precipitate of carbonate of conia will fall, which must be dried and dissolved in acetic acid; ammonia will now throw down conia quite pure.

Conia, as thus obtained, is a powder perfectly white, slightly soluble in water, and very soluble in alcohol and æther. It turns red litimus paper blue, and combines with acids, forming in some cases crystalline compounds, in others gummy masses. When heated with nitric acid, a brownish-yellow solution is formed, and, by evaporation, oxalic acid is obtained. When dilute nitric acid is used, a nitrate is obtained in fine needles.

When attempting to prepare conia according to the German process, after obtaining the spirituous extract and adding water and protoxide of lead, a lamp heat was applied: a dense, fœtid, suffocating vapour was given off, smelling intensely strong of hemlock, and producing a violent sensation of asphyxia; while, on the surface of the fluid, there appeared films of an oily matter. This operation was repeated in an alembic, and the vapours were condensed in a cool receiver. I thus obtained a volatile oil, very inflammable, and smelling powerfully of hemlock.

By proximate analysis, I find the leaves of conium maculatum to consist of, 1. Malate of conia; 2. A fœtid volatile oil; 3. Chlorophylle; 4. Resin; 5. Fœculin; 6. Albumen; 7. Lignin; 8. Acetates of potass and ammonia; 9. Malate of lime. The ashes contained traces of, 1. Chloride of sodium; 2. Protoxide of iron; 3. Magnesia; 4. Lime.

I am, sir,
Yours obediently,
GOLDING BIRD.

44, Seymour-Street, Euston-Square,
November 2, 1832.

NEW VAGINA SPECULUM.

To the Editor of the Medical Gazette.

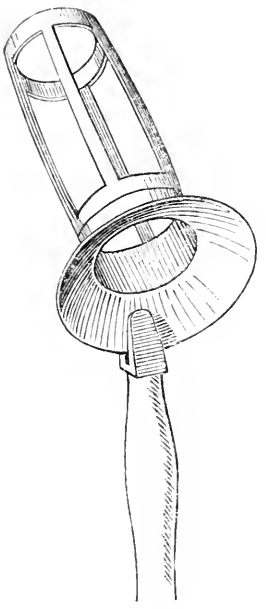
SIR,

I send inclosed a sketch of a vagina speculum which I have had constructed, and used with much success. It is made of pewter, and possesses the very important advantages of cheapness and efficacy, giving a perfectly unincumbered view of the sides of the vagina, as well as the os tincæ. It is also very va-

luable in examinations of the rectum, where a side view alone is requisite. If any of your readers should feel inclined to give it a trial, they may procure the instrument, of different sizes, at Mr. Thompson's, surgical instrument maker, Windmill-Street.

I am, sir,
Your obedient servant,
J. Thos. Elliot.

49, George-Street, Portman-Square,
Nov. 13, 1832.



MR. MAYO ON THE USE OF IODINE IN SYPHILIS.

To the Editor of the Medical Gazette.

Sir,

It is difficult to understand upon what principle remedies are thought to be more efficacious at their first introduction to professional notice, than they are found to be afterwards; but of the fact there is no doubt, and therefore it is with considerable misgivings that I venture to express a conviction of the utility of iodine in a particular class of cases, of which I will give examples.

It is, indeed, well known, that the outward and inward use of this remedy will in many instances reduce the size of a bronchocele: of this I have had, in common with others, repeated experience in my private and hospital practice. Iodine has likewise been supposed to have a corrective influence in strumous diseases: I cannot say that my own observations corroborate this opinion. In one case only of this description that I recollect did it appear to be beneficial. A patient, about twenty-five years of age, had an enlarged lymphatic gland, or mass of glands, in the neck, which certainly has been reduced to a third of its size, and is likely to be entirely dispersed during the exhibition of iodine. The gentleman, to whose case I refer, I attended with Mr. North: he had previously been seen by Sir Astley Cooper and by Mr. Brodie. The tumor happened to be placed on the carotid artery, and it was upon the patient's mind that it might be an aneurism.

The disorders in which I wish to point out the efficacy of iodine, are the consequences of syphilis; emaciation of the frame, with ulcers of the skin; ulcerated throat; inflammation of the bones or periosteum—occurring in patients to whom mercury has been given. The two first cases which I shall narrate, have been already noticed in the hospital reports in the London Medical and Physical Journal.

I. Ino. O'Shaughnessy was admitted into the Middlesex Hospital in January 1830, having contracted the preceding autumn chancre with bubo, for which he took mercury, followed by ulcerated throat and leprous eruption. At his admission there were several large leprous spots on his limbs and body; a very large superficial ulcer on the instep; another on the shoulder. Sarsaparilla, with liquor potassæ, was now given, and under the use of this medicine, and of various local applications, the ulcer on the instep healed. But the malady gained ground. The limbs were covered with lepra alphoides. Several of the spots of lepra became tubercular, and in place of the thickened white patch of desquamating cuticle, a crust formed with an ulcer below it. There were many of these ulcers on the limbs and body: the forehead and face were covered with them. The lips, the ala of the nose, the eyebrows, were equally involved in ulcerated blotches. The patient suffered from burning heat of the body

and face, and the ulceration of the lips produced profuse ptyalism. The bones were not affected; but there was pain on moving the joints of the legs, and a small depôt of serous fluid formed in the calf of the right leg. A variety of remedies were used in succession. Sarsaparilla, combined first with liquor arsenicalis, then with the oxymuriate of mercury; the decoctum smilacis asperæ; the blue pill, so as slightly to touch the gums; bark, with the nitric and muriatic acids; the strong nitric acid—a drachm a-day. All these remedies in their turn were of a slight but temporary benefit, and produced for a short time a seeming improvement, (after which the patient fell back,) with the exception of the blue pill and the nitric acid. Both of these were discontinued in ten days after their first use, no amendment, but an aggravation of the symptoms, having ensued.

At this period (December 1830,) M. Magendie, who accidentally saw the case, recommended me to try iodine with my patient, which I accordingly prescribed. The effect of the remedy after a few days' use was very striking; the skin became less red and heated, several of the crusts separated, and the ulcers put on a healthy appearance. In a month the patient had made a great amendment. But now the improvement ceased; I therefore discontinued the use of the remedy; when the patient became worse, and the cutaneous disease increased. After a fortnight he resumed the medicine, with equal temporary success. In another month a second period occurred in which the disease was stationary. He then discontinued it, to resume its use again in a fortnight. Through these means, in five months he recovered his strength and health; but at intervals a few blotches still reappear upon the face, upon which he has recourse to iodine with success.

II. John Saxon, ætat. 31, was admitted with symptoms which followed a venereal sore and a course of mercury. In 1828, the scalp upon the forehead became at two points puffy and tender, but not discoloured: it soon became red and broke, and then for many months the face was disfigured in the following manner:—Two or three ulcers formed on the forehead, eyebrows, and bridge of the nose, round which the skin was red and thickened; and these spread, after healing at the point where they began, over a fresh surface. With this patient every remedy enumerated in the preceding case was tried; every change seemed temporarily useful; and after each amendment the patient fell back. I prescribed iodine in this case at the same time that O'Shaughnessy commenced it. In this case the amendment was more rapid, was uninterrupted, and the patient has been several months perfectly well.

III. A young gentleman, ætat. 25, returned from India last summer, with a constitution broken by syphilis and mercury. The soft palate had been nearly destroyed, but its remains adhered to the back of the pharynx, leaving a larger opening than common in such cases towards the nostrils. The surface of the pharynx seen at this opening had been ulcerated, and was not yet healed. Upon the right of the forehead, and on the left cheek, there was puffiness and tenderness of the periosteum. One testis had suppurated, but had healed. The other was greatly enlarged, and although the skin had not broken, it threatened to run the same course as that first affected.

This state of things had followed upon primary venereal sores, leading to ulcerated sore throat and leprous blotches upon the skin, for which the patient had taken more than one course of mercury in the course of the two preceding years. During the first two months after his return, this patient took in succession sarsaparilla with liquor potassæ, sarsaparilla with Plummer's pill, quinine with sulphuric acid. These means produced no beneficial result. He became more extenuated, with night sweats and loss of appetite. The tender spot on the forehead became red, and then dropped into a circular ulcer of the size of a sixpence. The testis suppurated, and threw out a large scrofulous fungus. At this period, and when the patient was certainly becoming worse, I prescribed iodine. He has continued to take it to the present time. Shortly after beginning it, a visible improvement took place in his health, and in succession the tenderness of the cheek bone went away, the ulcer upon the forehead healed, the fungus of the testis shrunk, and he is now completely recovered.

IV. Thomas Summers, æt. 29, was

admitted into the Middlesex Hospital on the 18th of September last. The end of the nose was swollen and red, and the inner border of both nostrils, together with the lower edge of the septum nasi, were ulcerated. He complained of pains in his limbs, and both tibiæ were tender and slightly swollen for the extent of several inches.

Upon inquiring into his history, the patient stated that he had been during the last five years once in St. Thomas's hospital, and once in the Lock; on the first occasion for chancre, with eruption on the skin, on the second for an ulcer at the roof of the mouth, with pains in the shin bones. In both instances he took mercury, and recovered. The account which he gave of his present illness was, that three or four months ago the lower edge of the right nostril became inflamed and ulcerated, and that the affection has been gradually extending itself. He had taken mercurial pills before he came into the hospital, and his gums were a little swollen and red: I therefore ordered this remedy to be continued. But as I observed after a few days that the patient did not improve, I substituted for ten grains of blue pill in the twenty-four hours, the decoction of sarsaparilla with liquor potassæ. The patient improved on this change, but in no great degree, and then the complaint seemed stationary. On the 22d of October I prescribed iodine; in a week he was visibly better. The ulcers of the nose have now entirely healed, the redness is gone, and the nodes have disappeared.

V. John Palmer, æt. 39, was admitted into the Middlesex Hospital, Oct. 12, 1832. Having previously twice had primary venereal affections, which had got well with mercury, three months before his admission he contracted another ulcer upon the penis. This healed under the use of a few mercurial pills, which he obtained at a dispensary.

What he now laboured under was ulceration of both tonsils, the right being principally affected. Upon the calf of the left leg were two painful phagedenic ulcers; one an inch in diameter, the other two inches. He swallowed with great pain and difficulty, his tongue was furred, and he had no appetite. He had taken some pills before his admission, and the gums appeared slightly touched with mercury.

From the 12th to the 22d of October, during which he used, as an application to the throat, first the gargarisma aeruginis, and afterwards fumigation with cinnabar, he became gradually worse. The ulcerated throat assumed an ashen hue, threatening to slough: I then prescribed a gargle containing chloride of lime and iodine. The patient in two days was sensibly better, and in three weeks, being well enough, and having urgent business, he left the hospital, his throat being quite healed, and the ulcers upon the legs having put on a healthy character.

The form in which I gave iodine in the preceding cases was the following:

℞ Iodini gr. ss. ad gr. j. ad gr. iss.; Hydriodatis potassæ ʒss., Syr. papaveris ʒss.; Aquæ. menth. ʒviij. ad ʒx.

I am disposed to believe that the iodine was of service in these cases, and that the recovery of my patients was more than an accident; and I anticipate that this medicine will form an useful tonic and alterative, by the side of sarsaparilla, combined with alkalies, or with the mineral acids, when used in constitutions worn out with syphilis and syphiloid disease, and where mercury is contraindicated. In giving iodine it is necessary carefully to watch its effects, and to discontinue it temporarily, resuming its use afterwards in smaller doses, if it produce pain and heat in the stomach, or sickness and purging.

Your obedient servant,
HERBERT MAYO.

19, George-Street, Hanover-Square,
Nov. 22, 1832.

OBSERVATIONS ON SOME OF THE REMEDIES PROPOSED IN CHOLERA.

EFFICACY OF SUGAR OF LEAD*.

With regard to cholera, it seems now in the highest degree desirable to arrange the vast mass of evidence contained in the numerous journals of the day, so as to discriminate all the circumstances of those cases which have been benefited by a particular remedy,

* The following paper is from the pen of a highly respectable practitioner, at a watering-place which cholera visited, though its existence there was not generally admitted. He desires his name to be concealed, and we only attach initials; but our readers may trust to the facts.—E. G.

and thus reconcile the apparently opposite modes of treatment, by pointing out that condition of the disease in which each may be successfully adopted. We can have no premised right to believe one who tells us he cures a very large proportion of his patients by calomel, opium, and other stimulants, in preference to another who affirms himself perfectly successful with salines. If their cases are equally well authenticated, he is as worthy of belief who debars his patients from all fluids, as he who drenches their stomachs with cold water—he who gives kino, and he who administers croton oil; or we must disbelieve all. As the supposition, that our profession contains so many men willing to give gratuitously false evidence, is absurd, we must attempt to account for the recorded success of such opposite methods of cure.

We are told of cases in India where the person, apparently in health the minute before, suddenly became cold, pulseless, and dropped down dead; the poison acting, it is probable, in a concentrated dose, and imitating the effect of the Upas antiar, and strong infusion of tobacco, by paralysing the heart. In doses more dilute it has a proportionably less influence on the heart, and causes vomiting, purging, suppression of the urinary secretion, and of the secretion of the liver, or it prevents its passage into the duodenum. All these symptoms are subject to the modification of local causes, and individual constitutions, which may give predominance to one over the others,—as we know that persons of a relaxed habit are more liable to the diarrhœa of cholera, while in some districts purging, and in some vomiting, is regarded as the chief symptom. These effects of the poison aid its deadly action, by becoming of themselves sufficient causes of destruction to the patient. Spasm may be so violent as to exhaust the nervous energy; the peculiar vomiting and purging may render the blood unfit to maintain life, by depriving it of its salts and water, even though the ultimate cause of the disease be thrown out of the system by these means; and we too frequently observe the deleterious effects of charging the system with bile, urea, or their elements, when the secretions of the kidney or liver are suppressed or detained. In a word, any of the effects of the poison may be the immediate cause of death, according as each predominates. Surely, then, a person writhing in the agony of a violent spasm, without saline purging, should be treated differently from one lying prostrate devoid of pain, but with insensible draining of serum. Would it not be absurd to give a patient a mustard emetic, whose already irritable stomach was discharging copiously a component of the blood highly necessary to life; or to give nothing but croton oil to one purging salt and water in abundance, and already cold and pulseless, where, if the remedy should reproduce the secretion of bile, the blood is left in a state unfit for circulation? Would any one think of debarring a patient from water who could keep it on his stomach, or allow the action of vomiting to exhaust one whose stomach would not retain a drop? Yet all these opposite modes of treatment might have been suited to the cases to which their inventors first applied them. The mustard emetic may in some cases have succeeded, by rousing the action of the heart, when the poison was paralysing that organ; and provided the blood was but slightly deteriorated from loss of its serum, these patients might recover. Croton oil may serve to excite the biliary secretion, or relieve a loaded stomach, as in the case of the gentleman who recommends it; but either of these remedies I should be cautious in exhibiting in cases with purging. Bleeding, mustard poultices, and small doses of calomel and opium, may be useful in the spasmodic form of the complaint; and cold water may be both allowable and useful where there is purging, if it do not excite an exhausting irritability of the stomach. But will any of these remedies restore to the blood the salts of which it has been deprived by the vomiting and purging? We must, therefore, receive accounts of any universal remedy, for all stages and symptoms of cholera, with suspicion.

In my own practice I at first used calomel, opium, and mustard poultices, then small and frequent doses of calomel and opium, in combination with the saline treatment, and had certainly more success with the latter plan. But I soon found that the treatment must vary with the circumstances of the case. On analysing the evacuation according to the directions of Dr. O'Shaughnessy, I found one patient was passing salt at

the rate of a drachm in the hour, while the stomach would not retain the stronger saline medicine. In short, the purging was draining the system much faster than the saline fluid could be replaced; and my task, like that of the Danaides, was useless. It seemed to be the first indication to arrest this purging. I tried catechu, kino, and the usual astringents, but the stomach would retain nothing of any bulk. In this emergency I met a patient who, a short time before, had had painter's colic, and given me infinite trouble to open his bowels; and it occurred to me, that if I could induce a temporary attack of that disease in one of my patients, and thus correct the prominent and fatal symptom, I might be able to cure her. I therefore administered some acetate of lead directly. This has been prescribed by Dupuytren, but not in a manner sufficiently impressive for me to have had recourse to it had it not been for this case of painter's colic: I then used it on his authority. My patient took 7 grains, in repeated doses, in a few hours, and I had the satisfaction to find the purging stopped and the stomach (either from the action of the lead or not) become quiet. In other respects she was no better; the voice was a whisper, and the coldness and lividity of the skin, the restlessness and suppression of urine, continued. I now gave Dr. Stevens's saline mixture in large doses, with plenty of cold toast-water. All was retained, there was no further purging, and I had the inexpressible gratification to find her convalescent; in short, she recovered without the consecutive fever. This was on the 20th of July. I have since had several similar cases, quite as successful. In some, where vomiting was the most urgent symptom, I have at first forbidden the use of fluids, and given carbonate of ammonia, in doses of 5 grs. made into pills with crumb of bread; then effervescing powders, with oil of peppermint and a small quantity of water; and, when the stomach was quiet, plenty of toast water, &c.

I must also mention another method which occurred to me in the case of an infant at the breast, whose mother was one of the patients treated with lead and salines. It was a marked case. The child, which I had seen the day before plump and healthy, was cold and shrivelled, and had vomited and purged a large quantity of the peculiar rice-water fluid. I immersed it in a strong hot solution of salt for half an hour, and, on taking it out, it was quite red and amazingly plump. It retained its mother's saline mixture on its stomach, and got well without any other medicine. I have since, in all cases where the introduction of salt into the system seemed indicated, used frictions of strong hot brine over the abdomen and chest, instead of the mustard poultice. This child passed, after its recovery, the most fœtid motions possible.

I have seen several recover under calomel and opium, but these were cases in which cramp was the worst symptom; and this, although it appears most alarming, is in reality far less formidable than the passive purging which people seem most inclined to make light of. As far as my observation goes, I have seen none recover after such purging as that of the woman abovementioned, except under the saline treatment, modified as I have explained.

Of course I should hold salt and water inadmissible in a case with violent cramp, a full pulse, and no purging, even were I sure that it was the spasm of cholera; but I should rely on a small bleeding, a mustard emetic, and a dose of calomel—as my experience in such cases would warrant me.

I attended an old man in whom the cramp was excessive; he had no vomiting or purging, but his bowels had been relaxed the day before. He was bled to twelve ounces, took several doses of calomel and opium, and was fomented with the hot brine. He was now relieved, having a natural stool the day after, and appearing quite well, with the exception of soreness in his limbs. At six the next morning purging came on, and at ten, when I happened to call, (for they did not send, though I met three messengers when he had cramp,) he said his bowels had been acted on at least thirty times, and the fluid was beginning to run from them without his knowledge; his skin was getting blue and cold, and his pulse was very feeble. I immediately supplied him with four pills, each containing two grains of acetate of lead, one of which he was to take directly, and one every quarter of an hour after, if the purging continued. He took three, did not vomit, swallowed a pint of Dr. Stevens's mixture in a few hours, and recovered without the consecutive fever, although an habitual

drunkard. This case requires no comment.

I do not remember to have seen this consecutive fever, as it is termed, except after severe serous vomiting and purging, and when the salt was not replaced. If this observation be confirmed, it will complete the chain of evidence that the consecutive fever is not a necessary consequence of the first cause of the disease, but of some of its effects.

I have, of course, had unsuccessful cases. Altogether, without reckoning the lighter though well-marked cases, but only those which became collapsed, I have treated thirty-one; out of which ten died, and twenty-one recovered. Of the ten which terminated fatally, two died before the remedies could be administered, and four before I adopted the views I have endeavoured to explain to you. I have injected the veins four times: once successfully in a very desperate case, when the patient was all but dead; once fairly without success; and in the other two the patients were drunkards and had taken opium, so that they should not be received into the account. I do not hesitate in saying that the proportion of deaths would have been very different but for the saline treatment; without it, the lead, ammonia, &c. I feel certain would have been of little use to those who recovered; and, for one, I give my full quota of the thanks which I think are due from the profession to Dr. Stevens, for calling its attention to the absence of salt from the blood in cholera, and opening a new field of investigation to others.

In order, then, to rescue the treatment of this disease from the empiricism which more or less hangs about it, it is highly desirable to class the symptoms, as much as possible, with reference to their causes, that the precise circumstances may be distinguished in which benefit can reasonably be expected from this or that proposed mode of cure.

To effect this, a more complete chemical physiology of the blood is requisite, or we shall in vain attempt to grasp the subject: for instance, were it known, by direct analysis, if any and what gases exist in healthy arterial blood, chemistry might throw light, by a similar analysis, on the pathology of arterial blood in cholera; which, I believe, has not yet been examined.

I have uniformly observed, as in the case of the child, that if, under any treatment, the patients recovered, in some period of their convalescence they have passed stools of an unusually offensive character: would it not be well, as the serous secretions have been examined, to question these also, with a view to discover whether the peculiar ultimate cause of the disease be not thus eliminated from the system?

Small animals might be exposed to their influence in closed vessels, and many other experiments of promise might be suggested. Could we make it probable that, by any of our analyses, we had detected the poison itself, we might endeavour to get a direct antidote to it, as we neutralize the effect of hydrocyanic acid by ammonia, and that of the acetate of lead by the alkaline carbonates. At least we could ascertain whether any of the remedies hitherto recommended possessed a just claim to the title of antidotes.

H. G.

GRAPHIC DESCRIPTION OF CHOLERA IN 1786.

To the Editor of the Medical Gazette.

Sir,

If beautifully concise and correct description have any charms for you, I have no doubt you will endeavour to find room in your journal for the following account of cholera, extracted from the preface of the fourth fasciculus of Retzius' "Observationes Botanicæ," published at Leipsic in 1786. It is an extract of a letter from König, an Indian traveller and botanist, to his friend in Germany.

Your obedient servant,

M.

London, Nov. 1832.

Scripsit (König) in ultimis litteris, die 16 Octobris, 1782, Tranquebariæ datis.—"Nuper iterum morti proximus fui; morbo enim diro, quem dysenteria apoplectica appellare fas est, tenebar, quo me mortuum jam in urbe rumor spargebat. Sanitatem redidit clementissimus Deus. Integer tamen mensis ante perfectam restitutionem transiit. Morbi cursus hic est: diarrhœa corripitur æger cum elastica quasi excrementorum ejectione, dein sequuntur ejusmodi dejec-

tiones, quæ nihil nisi humorem lymphaticum clarum continent. Manus mox frigent cum pedibus; manuum musculi contrahuntur, et hæ æque ac facies flavidum glutinosum mucum transudant. Pulmones angustantur; vox ranca vix adstantibus percipienda; alii timore perculuntur, alii indolentes videntur; pulsus in omnibus extremitatibus deficit, et tantum ad arteriam carotidem observatur quamvis irregularis. Nonnulli jam vomunt, ungues lividi fiunt, et diri spasmi brachia et suras corripiunt cum clamore ægroti. Hæc mors sequitur sine insigni convulsivo motu. Cursum hunc sequitur morbus qui sæpe intra semihoram terminatur, nonnunquam sex ad octo horarum spatio absolvitur. Qui remediis sublevantur idoneis ad nyethemi spatium illum protrahere possunt; pauci sibi relicti convalescunt. Hunc ego morbum periculosissimum vici et sospes prolixe descripsi."

CHOLERA SPREADING BY CONTAGION.

To the Editor of the Medical Gazette.

Sir,

The following statement relative to the effects of contagion in cholera may be relied on. The town had been visited by the disease, but for fifteen days not a single case ensued, when, on the 17th September, the body of a man named Waldron, who died of cholera near Dublin, was brought for interment, and delayed for a couple of hours, the coffin being meantime removed into the chapel. Three of the men who carried it were seized with cholera, and are dead; the first was attacked on the 19th, and the others within the week. The wife of one of the men was severely attacked, but is now recovering; two boys who got into the hearse to play are both dead; and the sister of one, who attended him, and washed his clothes, also fell a victim to the disease.

Since the return of this disease there have been thirteen cases, and eleven deaths. As yet, all who have been attacked since Sunday, 17th September, were either the relatives or friends of the deceased, or assisted at his funeral.

I am, sir,

Yours very respectfully,

W. S. M'Evoy,

Surgeon, Balbriggan and Skerries Dispensary.

Co. Dublin, Oct. 5, 1832.

STUDY OF ANATOMY—VALUE OF EXTENDED COURSES.

To the Editor of the Medical Gazette.

"Res mere anatomicæ frigidæ sunt et jejunæ."
Weitbrecht.

Sir,

It was with much pleasure I noticed that you had devoted a portion of your columns to the advocacy of the advantages resulting from the practice of giving extended courses of lectures on those branches of medical science which, from their great practical utility, are entitled to the fullest consideration.

Among these branches anatomy and physiology stand pre-eminent, and confessedly demand from the student a large share of attention. In Scotland, in Ireland, in the various celebrated continental schools, and in those of America (so far as I am informed), these subjects are treated of in courses of six months' duration (an hour being the period of time allotted to each lecture); but in the schools of this city, and of the provincial towns of England, a little more than three months is deemed sufficient time to devote to them. It may not, therefore, be unreasonable to question the utility of a system so limited in its adoption.

The great evil of "three months' courses" appears to me to arise from the necessity which they inflict upon the teacher, of passing over in a superficial manner many very important parts of anatomy; he is compelled to generalize to a considerable extent in his descriptions, and to adopt a style so loosely popular, that the student is apt to imbibe notions vague and without precision. This general, or, as it has been called, "coarse" kind of descriptive anatomy, almost necessarily engenders a degree of inaccuracy, which, though perhaps not sufficient to be practically injurious, ought to be scrupulously avoided; it likewise induces the additional evil of leading the student to attach but a minor degree of importance to minute anatomical investigations. Such a minute knowledge, he thinks, he never will have occasion for in practice, and unless he has reason to expect that he will be called on to exhibit it at an examination for his diploma, he sees no benefit likely to result from the possession of it. Yet I much fear, that the *secret* history of medicine could reveal not a few fatal consequences of the neglect of acquiring

this knowledge. The records of medical biography, as well as daily observation, fully indicate to us how much the example (even more than the precept) of the teacher has to do with forming the taste, and directing the pursuits, of the pupil. But for the guidance and direction of an able and scientific brother, the genius of a Hunter had been lost to medical science; and there are many living instances to attest how much was effected by the example of that Hunter. Under the presiding influence of Desault the master-spirit of Bichat was fostered, till it shone forth with that effulgence which is still reflected by the many illustrious pupils of his school. The inference I would derive from this fact is obvious; it is greatly in favour of the adoption of the system which allows an extended period for the minute and philosophical treatment of anatomy and physiology. The student estimates the importance of these sciences, or portions of them, by the degree of attention bestowed on them, and time devoted to them, by his teacher; and in his own cultivation of them instinctively imitates his example.

These remarks I would offer with diffidence to your numerous readers, more especially to those who are engaged in teaching anatomy. They are the result of consideration, and of a strong conviction in favour of the system which I would advocate; but are submitted in that spirit which prompts me to conclude in the words of the poet—

"——— si quid novisti rectius istis
Candidus imperti; si non, his utere mecum."

I have the honour to be,
Your obedient servant,
R. B. Todd.

5, Hart-Street, Bloomsbury,
Nov. 19, 1832.

REGISTRY OF APOTHECARIES.

To the Editor of the Medical Gazette.

Sir,

Will you be so obliging as to publish in your valuable journal the following letter to the Court of Examiners of the Apothecaries' Company?

Yours respectfully,
An Old Subscriber.

To the Court of Examiners of the Apothecaries' Company.

Gentlemen,—I beg leave to suggest to you the importance of allowing apothecaries who were in practice previously to August the 15th, 1815, to be registered at the Hall, allowing such registration to be valid evidence of their being legally authorised to practise and to take apprentices. I was a member of the Royal College of Surgeons, and in general practice for myself, in 1814, and until after the 15th of August, 1815; soon after which I moved, and am now upwards of a hundred miles from the place in which I commenced practice. It would be very inconvenient for me to produce legal evidence of my qualification every time I took an apprentice. The same difficulty would present itself in the attempt to recover by legal process a professional debt; and without some such arrangement, the legality of indentures under certain circumstances, as the death of a practitioner, or his removal to a distant country, could not be ascertained by you. It would be an act of justice to the profession, and would guard you against many impositions which are too frequently practised.

I have the honour to be, gentlemen,
An Apothecary of the
Olden Time.

London, Nov. 12, 1832.

CEREBRAL COMPRESSION.

To the Editor of the Medical Gazette.

Sir,

I send you the following case of sero-sanguineous cerebral compression, considering it important both in a pathological and medico-legal point of view.

I remain
Your obedient servant,
R. R. Robinson,
Surgeon to the London Dispensary.

Cooper's Row, Oct. 1.

June 15th, 1832.—A young man, between 22 and 23 years of age, of strumous constitution, and who for the last two years has been labouring under thoracic disease, of which he has only lately got the better, quarrelled with his brother last evening, by whom he was struck on the head; after which he fell, and in falling again struck his head against the wall: he was not stunned, nor did he feel unwell afterwards: even this morning he seemed quite as usual; called upon me about ten concern-

ing his mother, whom I was at the time attending, but made no complaint; about an hour afterwards he turned pale, cold, and sick; fell down suddenly, and was senseless for a quarter of an hour. When I saw him between two and three he was lying in a state of stupor, though when spoken to he answered questions correctly; had headache; pupil dilated, but contracted on exposure to light; unable to sit up in bed; skin cold; has vomited large quantities of bile; and has just had a motion, passed (according to his mother's account) involuntarily; pulse small and feeble.

V. S. ℥viij. syncope. Hirud. viij. temporibus. Lotio frigida capiti adraso. Cal. gr. v. Pulv. Jalapæ gr. xx. statim.

8 P.M.—Blood drawn from arm free from buff; leeches have bled freely; head relieved; large quantities of yellow bile vomited; heart's action regular; tongue clean and moist; thirst urgent; pulse soft; skin warm.

Mist. Effervescent. quartis horis. Repetatur lotio.

16th, 2 P.M.—A little sleep; delirious through the night; quite sensible now; constantly vomiting large quantities of bile; pupil contracts upon exposure to light, of which there is a slight intolerance; one motion; feels a weakness of left arm, (complained of numbness and pain in this arm a fortnight before the accident, of which I was not informed until a day or two before his death); pulse regular, soft, 84; tongue clean; one motion; hair has not been taken off.

Repetatur lotio capiti.

8 P. M.—Much as before; rather more pain of head.

Hirud. x. temporibus. Cal. gr. ij. Ant. Tart. gr. ¼ 3a quaque horâ. Repetat. lotio.

17th.—Little change.

Applicentur hirud. xij. temporibus.

18th.—No motion; urine free; skin hot and dry; pulse bounding, 73.

V. S. ad ℥xx. partial syncope; head immediately relieved.

Cal. gr. iij. statim. Magn. Sulph. ℥ij. Ess. Menth. P. gtt. iij. quartis horis. Applicetur glacies capiti.

11 P.M.—The first portion of blood drawn from the arm, about ℥xviij. not at all buffy; the remainder (℥iij.), in second cup, completely so; crassamentum flat; head was for a time relieved, but about half-past seven he was reported to have had a fit. He was cupped upon the neck to ℥iv. and before the operation was finished, his recollection and sensibility returned.

Repetantur pilulæ, lotio, et hirud.

19th.—Symptoms somewhat mitigated.

Repetantur hirudines viij. Cal. gr. ij. ter die. Mist. Salinæ ℥iss. 6tis horis.

24th.—Continued to sink gradually, having headache, convulsions, and paralysis of left arm. He died about eleven this day.

DISSECTION.—Muscles exceedingly rigid.

Head.—Scalp quite pale; bones of the cranium curiously united at the sutures, in some parts overlapping each other, so as to form tuberosities, with corresponding depressions. Dura mater very firmly adherent to the skull, and very much congested: that portion covering the right hemisphere much more prominent than the other; of a dull yellow brown colour, not possessing, as the other side did, its original silvery hue. This was found to be owing to blood extravasated underneath it, over the whole upper surface of the right hemisphere, partly solid, partly fluid, by which this hemisphere was much compressed. Some of the coagula adhered very firmly to the interior of the dura mater. The blood (in all ℥ij.) appeared to have proceeded from a vessel of the arachnoid or pia mater, ramifying over the posterior and upper part of the right hemisphere, which was slightly lacerated in this situation, and contracted around it; while all the other vessels were very much congested with blood. The whole surface of the right hemisphere had a deep red tinge, which was easily wiped off; but upon cutting it, there were more numerous red points than on the opposite. Structure of the brain rather soft. Upon opening the left ventricle there was a copious flow of transparent serum, altogether amounting to full four ounces, which upon farther examination was found to have flowed from a cavity nearly as big as the clenched hand, formed of both ventricles extended, and united into one by the obliteration of the septum lucidum, and which had the appearance of long standing disease. Some serous fluid tinged with blood in the base of the brain and serum copiously flowed from the theca vertebralis upon holding down the head.

Thorax.—Some appearance of old disease, probably unconnected with the cause of death.

Abdomen.—The liver and both kidneys (the left decidedly more so than the right) congested; mesenteric glands enlarged, and some of them hard. All the other abdominal viscera healthy.

REMARKS.—Upon perusing this case, attention seems naturally directed, 1st, to the state of the brain, in which I think three diseased actions may be recognized.

Hydrocephalus Internus, which had probably been existing some time, and which it is reasonable to suppose might have owed its origin to the congestion which must have taken place not only in the brain, but in every other organ, from the impeded circulation, the result of the thoracic disease. That fluid existed in the brain prior to the accident I am led to believe, from the numbness of the left arm, experienced a fortnight before the accident; from the conversion of the two ventricles into one, by the slow process of extension, and not by laceration; and from the absence of distinct marks of inflammatory action.

Concussion, which might have increased the quantity of fluid already existing, might have still further stretched and disturbed the cerebral substance, and might have bruised, but I do not think it ruptured, the vessel, that ultimately bled; the symptoms of which, temporary insensibility, convulsions, sickness, &c. did not show themselves till the following morning, and then came on very suddenly.

Compression, from extravasation of blood, which did not, I think, begin till the fourth day, as the sickness stopped, and the symptoms of compression increased from that time, and which, though perhaps retarded by the means employed, gradually extended itself over the whole of the right hemisphere, producing frequent convulsions, strabismus, palsy of the left arm, coma, stertorous breathing, involuntary discharge of fæces, and death.

2dly, To the opinion which should be given at the coroner's inquest.

Here two questions occur, first, what was the cause of death? This can be easily answered; as, I presume, most persons would agree that death was in this case produced by paralysis of the respiratory muscles, caused chiefly, if not entirely, by the blood extravasated on the brain.

Secondly, to what was the rupture of the bloodvessel owing? This, to my mind, is not so satisfactorily answered, as there were three causes capable, either separately or combinedly, of producing it in a brain already diseased, namely, the blow, the fall, and the vomiting, with which for three days he was incessantly troubled.

ANALYSES & NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

On the Influence of Physical Agents on Life. By W. F. EDWARDS, M.D. F.R.S. &c. Translated from the French, by DR. HODGKIN and DR. FISHER. With an Appendix and large Additions. Highley.

NOTHING surprises us more than that the able work of Dr. Edwards should have so long remained untranslated; that mere nationality, if no better motive prompted, should not have put in a claim for the honour of having such a work in our language—the native language of the author. That Dr. Edwards himself did not publish it in English, may be very well attributed to the homage which it may be supposed he felt himself bound to pay that nation which so liberally encouraged and rewarded his scientific labours: but he has afforded, we perceive, his sanction and assistance to the present translators, and has supplied them with some additional matter.

The history of the original work is, perhaps, not generally known: it was composed in various successive papers, which were presented to the Academy of Sciences, as subjects for the prize founded for the promotion of experimental physiology, and many of them were crowned with the highest honours. The papers were thus given to the public in several volumes of the *Annales de Physique et de Chimie*, between the years 1817 and 1823, and eventually appeared, in a collected form, in the year 1824. How highly the work has been appreciated by physiologists, since its valuable contents have been diffused among them, we need scarcely say: suffice it that it has thrown light on many of the most obscure inquiries, and has imparted a new impulse to many of the most difficult and retarded pursuits of the student of the animal economy. To those who are entering on such pursuits, and, indeed, to the general inquirer into the economy of nature, we cannot point out a surer source of satisfaction than they will enjoy in the perusal of this volume. The subjects which it embraces are of a wide range, and of the most interesting description. The effects of physical agents operating on almost the whole of animated nature are beautifully made out, and stated with the modesty and clearness which characterize the productions of the true philosopher. In the first part, we have an account of the influence of those agents on the batrachian tribe; in the second, their effects on reptiles and fishes; in the third, on warm-blooded animals; and the fourth part is

devoted to the consideration of the phenomena attending man and the vertebral animals when exposed to those influences. We wish our limits would allow us to give some ample extracts which we marked out; but the following, which is of practical application, and relating to a matter of vital interest, is all that we have room for.

"Very important considerations result from the difference of constitution at different periods of life. If the attentions which children require in climates and seasons little favourable to the preservation of their existence were generally understood and put in practice, it would considerably reduce one of the most powerful sources of mortality affecting that age in our climate. It is not confined to children whom the misery of their parents cannot guard from the rigor of the weather, but it operates to a great extent, without being either perceived or suspected, in families enjoying affluence, and in which it is believed that the necessary precautions are taken; because, cold being relative, it is difficult from our own feelings to judge of its effects on others, and because it does not always manifest itself by determinate and uniform sensations. They do not feel the cold, but they have an uneasiness or an indisposition which arises from it; their constitution becomes deteriorated by passing through the alternations of health and disease, and they sink under the action of an unknown cause. It is the more likely to be unknown, because the injurious effects of cold do not always manifest themselves during or immediately after its application. The changes are at first insensible; they increase by the repetition of the impression, or by its long duration; and the constitution is altered without the effect being suspected.

"There is a general precaution which would tend to prevent these effects, and which it is sufficient here merely to point out. It is to watch the changes which may come on during health at the decline of the year, and in the course of the cold season; and, however little it may be liable to derangement, to preserve heat by warmer clothing. If the clothing is adapted to the wants of the individual, it will contribute powerfully to guard him from the alterations dependent on the influence of the season: he will enjoy at the same time the advantage of being exposed to the open air in conditions of the atmosphere which would not injure his health.

"In countries where the cold is excessive, the feelings so strongly impress upon the inhabitants the necessity of guarding their children against it, that the particular care which they take renders this cause of mortality, perhaps, less in them than it is in temperate countries. It is sufficient, then, to feel this necessity, in order to find suitable means to meet it. These means are referable to several heads:—1. The modifications of the air, to adapt it to the system. 2. The preservation of the natural heat by clothing. 3. The changes to be produced in the constitution of the individual, in order to increase his power of developing heat, so as to extend the limits of the atmospheric variations to which he may be exposed without danger.

"People are frequently dissuaded from the use of warm clothing, and the external application of heat under the form of baths, by the idea that they may induce delicacy and greater sensibility to cold. This opinion is undoubtedly founded upon very general experience, and I think that the observations I have made on this subject do not weaken it: but other facts, equally well attested, tend to circumscribe it within just limits, and shew us that when the system does not develop sufficient heat, the means which we have just pointed out contribute to increase the power of producing it.

"Although the want of it is actually felt, the use of warm clothing is often declined, from the wish to reserve it for an advanced age: but it frequently happens that this precaution is the cause of preventing that age from being attained. The employment of the warm-bath is dreaded because water enervates; but this effect is obviated by reducing the duration of the bath, and thus making the application of heat predominate."

On turning to the original, we observe that the preceding passages are considerably condensed in the translation; and the same liberty is confessedly taken all through the work: but, to do Dr. Hodgkin justice, the substance is scrupulously preserved. We cannot but regret, however, that the tables are omitted, for they are the proofs—the data—upon which the reasoning is founded, and might very well have been printed in a compact form, for the benefit of the English student: the volume is

fully dear enough, without obliging him to purchase the French copy also. But to make amends, there is an ample Appendix, containing a number of valuable papers by Dr. Edwards, Dr. Hodgkin, Mr. Luke Howard, and others: there are also some interesting notes. On the whole, we are delighted to see the book in the mother tongue, and, it gives us much pleasure to be able to add, in a shape which we can strongly recommend.

A Brief Outline of the History and Progress of Cholera at Hull; with some Remarks on the Pathology and Treatment of the Disease. By James Alderson, M.D. &c.

We notice this brochure chiefly on account of two very well-executed engravings, representing the state of the stomach and bowels in cholera. The dark and congested state of the inner surface of the stomach, the head of the colon and ileum, are well delineated. The enlarged glands in the transverse arch of the colon are also shewn. No attempt is made at a systematic description of the disease, and there is no pretension displayed with regard to treatment. The work is what it professes to be—"a brief outline," and on this subject those are now the only readable productions.

The Madness and Folly of Religion: a Sermon delivered to Medical Students, at Maze Pond, Borough, on Sunday Morning, Nov. 11, 1832. By the Rev. T. Binney, of the Weigh-House*.

Our readers—the most fastidious of them, need not be afraid; we are not going to preach—it is not our vocation, nor would we lightly wield our pen on sacred subjects. A friend sent us the brochure, whose title heads this article, asking us to read it: we have done so, and now would persuade others to follow our example. The story runs thus:—In October 1830, the late Mr. Mann, then clergyman of Maze-Pond Chapel, was urged to address his discourse particularly to the young men of our profession, then just arrived in town to commence their studies; and as it was discreetly done, the pupils had the good sense and good feeling to receive it well, and the same reverend gentleman next year also adapted a sermon particularly to his juvenile hearers. But Mr. Mann having died, the annual address was this season postponed, and would have been altogether intermitted had not the author of the sermon before us undertaken the task. That we think the object a good one is clear from the nature of our allusion to it: that, in our estimation, Mr. Binney has done it well, must likewise be apparent; there is no overstraining to product effect—nothing to which the student of truth, be he old or young, can with reason refuse his assent, or which he can deny to be of paramount importance.

* Pulpit, Nov. 15, 1832.

An Historical Dissertation concerning John Bull's Medical Panics, Ancient and Modern, &c. &c. By Adam Dods, M.D.

The title of this work led us to take it up, in the expectation of finding something either in the way of instruction or amusement for our readers and ourselves. We have found neither. It is a collection of the most stupid rhapsodies that ever were penned—often incoherent—never to the point. How came any man with M.D. after his name to write such trash? Take a specimen; it is all in the same style.

"*Peace proclaimed* to all the world, not between Belgium and Holland, but between the faculty, particularly the Board of Health, and Dr. Dods. While I was sitting very quietly in the office, correcting the press for the printer's devil, Mr. Pierpoint and Dr. Streeten were winding their way up stairs, calling out for Dr. Dods, the former with a stentorophonic and thundering voice, and the latter with one more soft, like an echo of the other, and both out of breath for some purpose, and very busy about nothing. At this critical moment a pigeon flew past the window, flapping its wings in the rays of the sun, as mighty coming events are said to cast their shadows before. I doubted whether their object was to take me by main physical force to the cholera hospital, where I should be placed in a most delightful marshy situation, to inhale the pure foggy atmosphere, surrounded on all sides with ponds and ditches full of decomposed vegetable and animal mat-

ters, and stagnated water, emitting effluvia, "like crush'd perfumes exhaling to the skies." Agues, remittent fevers, typhus, bilious fevers, and putrid sore throats, were instantly floating in my brain. However, I happily thought of Mr. Addison's plan of warming the atmosphere and dispelling "terrestrial radiations" by large fires by night, and firing cannon and wasting gunpowder by day, on the top of Malvern Hills. Then the parishes of Ledbury would send Mr. Sewell to visit me in *my* cholera hospital, as they, it is said, paid him five pounds to go to Gloucester to gain further information and instructions respecting the nature and treatment of the disease. Being recovered from my fright, I was able to attend to the wishes of the two gentlemen, which were to request me to attend the Board of Health at the Guildhall, which I did. After some rational, moralizing converse, and explanation about the devil, it was soon discovered by the meeting that I had been thinking more about the printer's devil than his Satanic majesty, consequently peace, harmony, sociality, and good-will to all mankind, were recorded by Dr. Streeten, honorary secretary, and proclaimed aloud by his worshipful the mayor, H. Clifton, Esq. Think o' that."

It may possibly be asked what our motive is for noticing such a production. It is this: the author purposes "in a very short period to again resume and continue the subjects as specified in the title-page, and complete them as speedily as my professional engagements and the printing will permit—*provided the public will subscribe for a second number.*" We have thought it right to let "the public" know what they would be subscribing to, and so take our leave of Dr. Dods.

MEDICAL GAZETTE.

Saturday, November 24, 1832.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

QUERY—DO VEGETABLES PRODUCE CHOLERA?

The market-gardeners of London, finding their trade and "occupation gone," by the supposed choleric tendency of vegetable diet, applied, in September last, through Mr. Mandano, a respectable member of their body, to several "*eminent*" medical men, to dispel the delusion which they believed the medical profession to have either created or fostered. The replies of the "Doctors" are contained in a pamphlet* which lies before us, and a more amusing collection of letters we have not met with for a long time. We must treat our readers with some of the choicest morsels in this literary olio.

The letters are thirty in number, and from men, some of whom are very well known, while as to others, the present may be looked upon as their first appearance "on any stage;" and right anxious they are to appear to the best advantage.

Several of the writers are unwilling to admit that the prejudice in the public mind against vegetable diet, was in any degree traceable to the medical world. We suspect, however, that in spite of these disclaimers, the market-gardeners are right,—we well remember how industriously some of those little men who are "out in all weathers," laboured to prove the identity of the epidemic cholera with the autumnal cholera of Sydenham, and how gladly they seized upon any thing as a *cause* of cholera, provided they could but escape from the doctrine of "personal communication." Sir Henry Halford, in his reply to the gardeners, acknowledges "that the cholera morbus of *this* country is sometimes produced by an *abuse* of fruit and vegetables, particularly if the former be unripe, or the latter ill boiled."

But what say the authorities? In Dr. Bisset Hawkins's History of the Epidemic Cholera of Russia, we read (in page 4) the following precautionary instructions issued by the Russian go-

* Opinions of several eminent Medical Men with regard to Vegetable Diet, in reference to Cholera. London, 1832. N. Archer, pp. 32.

vernment on the approach of the epidemic cholera. It is rigorously prohibited to eat apples, plums, melons, water-melons, cucumbers, raw turnips, carrots, mushrooms, and *other vegetables of the same sort.* Again, in Dr. Webster's Essay on the Epidemic Cholera, at page 98, we find it thus written:—"When the disease at Riga had arrived at its greatest height and intensity, the medical practitioners, *as it has been likewise in this country*, generally observed, if very indigestible food was used by the inhabitants, then attacks of the cholera were more severe and extensive than otherwise, and it was hence remarked that cucumbers, *and many other kinds of vegetables*, especially if used either raw or improperly cooked, were a *most prolific* exciting cause of the disease."

In one of the early circulars of the Central Board, the public are cautioned to eat "sparingly" of fruit and vegetables; and in that of December 13, 1831, "*all raw vegetables*" are interdicted, as being "acescent and unwholesome food." The instructions of the first Board of Health on this subject are thus alluded to in Dr. Birkbeck's letter to the market-gardeners. We have not been able to verify the assumption of the learned writer as to the spuriousness of the document, which, therefore, our readers must take on his authority:—there is something quite characteristic in his mode of dealing with the question.

"The absurd, and, I am sorry to find, most mischievous rumour of which you speak, has not, I hope, for the credit of the profession, 'emanated,' as you assert, 'from the medical world.' It is true, indeed, that in a very strange document, uttered by a body ridiculously entitled a Board of Health, to which the name of the President of the College of Physicians was (surreptitiously of course) appended, something was advanced against the use of fruit and vegetables in reference to cholera; yet, so far as I have been able to discover, no opinion of the kind has been maintained by any individual who, medically speaking, ought to be considered either intelligent or respectable."

The reply of Dr. James Johnson to the market-gardeners, touches on the same point; and is, moreover, in other respects so curious, that we give it entire."

"I have no hesitation in saying, that, in the course of my investigation into the nature and causes of the recent (and I hope it will soon be said, *late*) epidemic, few or no cases presented themselves to my observation where a temperate use of wholesome fruit and vegetables had any thing to do with the production of cholera. The cause of the disease appears to me to have been an inexplicable *something* extricated from the earth, or floating in the air, beyond the control as well as the knowledge of man; that this cause, whatever may be its nature, was often called forth into activity by *excesses* of all kinds, and by the *abuse* of unripe fruit and unwholesome or badly-dressed vegetable, I have no doubt; but the same might be said of almost every species of food and drink.

"The panic, therefore, respecting the use of fruit and vegetables in moderation, was wholly without foundation, in fact, and is rapidly subsiding. I have never made any alteration in my own diet or that of my family, during the prevalence of the epidemic, beyond that of temperance in quantity, and attention to the quality of fruit and vegetables in the height of summer and beginning of autumn, when the above articles of diet are abundant, and the season of the year predisposes to bowel complaints. I have no doubt, therefore, that with the disappearance of the grand and primary cause of the epidemic, the absurd prejudice against the temperate use of fruit and vegetables will also vanish from the mind of the public."

From this letter, we learn that the cause of cholera is "inexplicable and beyond the knowledge of man;"—yet in the very same sentence we learn two things concerning it: first, that it is either extricated from the earth or that it floats in the air; and, secondly, that it is often called forth into activity by excesses. How Dr. Johnson attained even this limited information regarding that

which is "beyond the knowledge of man," or why he thus discourages all farther investigations into the cause of the disease, as vain and profitless, are points on which we confess our entire ignorance. One other circumstance struck us in perusing this letter. The only alteration, he says, which he made in his household during the prevalence of cholera, was to pay attention, "in summer and autumn," to the quality of the vegetables and fruit which were consumed in his family. Are we to understand from this, that, in winter and spring, the worthy Doctor is himself, or suffers his patients to be, *inattentive* to the quality of the potatoes and apples which they consume?

The letter of Mr. Gossett is curious, as shewing the ingenuity with which a man can sometimes argue on both sides of a question, without saying any thing upon either that can be brought against him as his opinion. It runs thus:—

"Having been called upon by you, acting, I presume, for the market-gardeners as a body, to state my opinion respecting the wholesomeness of vegetable diet, I should consider myself culpably indifferent to the interest of a very numerous and respectable class of individuals were I not to take the earliest opportunity of acquainting you with the result of my experience on the subject: in doing so, however, some degree of caution is requisite, to guard against any misconstruction of my opinions, and to prevent the possibility of this public avowal being considered as opposed to the instructions I often find it necessary to give to my patients in private. Of course most of those who apply to me for advice are persons suffering from some form of disease not unfrequently resulting from a disordered state of the stomach or bowels, when I usually enjoin the strictest abstinence from vegetable food; yet it would be manifestly absurd to infer, because the discontinuance of the use of vegetables may be necessary to the removal of disease, that it is also conducive to the maintenance of existing health. With this reservation, I have no hesitation in stating my belief that the moderate employment of cooked vegetables is useful in preserving the due action of the bowels, and thereby preserving the health of the system in general."

After these, and a hundred similar denunciations, against the *abuse* of fruit and vegetables, we can hardly wonder at the public foregoing the use of vegetables altogether, as the surest means of avoiding the risk of any abuse of them. The most eminent practitioners, however, are all agreed in condemning this extreme; indeed it is really curious to observe their unanimity on this point.

The following sample of the opinions of London doctors on vegetable diet, as the cause of epidemic cholera, will, we trust, be sufficient; and to them we invite the especial attention of those gentlemen who see, in the late epidemic, nothing more than an aggravated form of the autumnal cholera of this country.

Sir Matthew Tierney thinks, "the progress of the present epidemic has been quite unconnected with the proper use of fruit and vegetables."

Dr. M. Hall says, "I have not met with a single case in which I suspected that vegetables had induced cholera."

Dr. Elliotson tells, that "If providence has ordained a supply of certain food at a certain time of the year, we may feel assured that such food is good for us at that time of the year; if fruit or vegetables are of bad quality, or eaten in excess, its effects will arise, and cholera, no less than many other diseases, may be disposed to. I have never been able to trace an instance of cholera to fruit or vegetables, and yet have seen a great deal of the disease: it has been excess in drinks to which I have satisfactorily traced cholera in most cases. I myself, though continually with cholera patients, have eaten fruit and vegetables all the season in great abundance, and so have all my family, with no ill effect*."

Dr. Frampton remarks, "I have had no reason whatever to suppose that any such cause has in any degree contributed to excite or produce the disease."

* In the original the whole of the above is given as one unbroken sentence; but as this appears to have been a mistake of the printer, we have altered the punctuation.—E.G.

Dr. Conquest will "have much pleasure in doing all that an individual can do towards removing a prejudice which has nothing for its support but ignorance and fear."

Dr. W. Philip expresses himself thus: "When I have been obliged to visit professionally those labouring under the disease, the diminution of the vegetable part of my diet has never been among the precautions I employed."

Dr. A. T. Thomson, in regard to vegetable food, thinks it an "absurd idea that it produces the attacks of Asiatic cholera."

Dr. Clark's statement is—"I have seen no proof that a moderate use of well-cooked vegetables had any share in producing cholera."

Dr. Wilson declares, "So far from discouraging the use of well-dressed vegetables as articles of food during the prevalence of cholera, I am generally urging those who consult me to admit them as leading principles in their diet."

Lastly, Sir Henry Halford writes thus: "I do not believe the disease which has prevailed lately in this kingdom, called Asiatic cholera, to have any connexion whatever with a common use of the fruits of the season."

If the doctors did originally encourage the prejudice under which the market-gardeners have suffered so seriously, they have assuredly now done their best to wipe off the reproach.

MAGISTRATES CANNOT COMPEL MEDICAL MEN TO CERTIFY WITHOUT A FEE.

A FEMALE was wounded by a stone thrown at another person; she was taken to the hospital. The Mayor desired the surgeon in attendance to send him a certificate of his patient's condition. He declined to do so, unless he was paid for his trouble. His worship was angry, and wrote to the Government on the subject. The following is the answer to his application:—

Dublin Castle, Nov. 13, 1832.

SIR,

I have received your letter of the 7th inst. with respect to a refusal on the part of the Hospital Surgeon at Limerick to give, without a fee, a certificate of the state of a girl, named Mary Noonan, who had been seriously injured by a stone, thrown by Jeremiah Ahern at another person; and having by the Lord Lieutenant's desire referred your communication to the law officers of the Crown, I am to acquaint you, for the information of the Magistrates at Petty Sessions, that he is not aware of any law which obliges the surgeon of an infirmary to give an opinion in cases of this nature.

I have the honour to be, &c.

E. J. STANLEY.

ACADEMY OF MEDICINE, PARIS.

November 13, 1832.

Presentation of Clot-Bey and his twelve Egyptian Pupils.

THIS was a striking scene. At an early hour, two of the most commodious benches were occupied by the Egyptians who have come to study medicine in Paris, and in the midst of them, distinguished by the brilliant magnificence of his costume, sat Dr. Clot, physician general to the army of the Pacha of Egypt, director and founder of the school of Abouzabel. All eyes were turned on this interesting groupe. The young foreigners have dark, strongly-marked features, and wear no beards. They have a distinction of rank among them—a chief, with his assistants and sub-assistants: these were clad in a scarlet vest and pantaloons, richly embroidered with gold; on their heads a red cap, in the Grecian fashion. The remainder of the pupils wore a simple blue dress, and cap of the same colour. M. Clot, in addition to the richly embroidered scarlet costume, wore a splendid Cachmere for a turban, and a superb damask for a girdle: on his breast were diamond stars. He looked perfectly oriental: one should know beforehand that he was a native of France, otherwise it would be difficult not to suppose him an Egyptian.

The Academy was in the highest degree anxious to hear from M. Clot an account of his proceedings in Egypt, and the President, as interpreter of the general wish, invited the visitor to gratify it. M. Clot accordingly approached the bureau, and began his story in the midst of profound silence. After a few words of apology for his want of habit in addressing an audience in the French language, he thus proceeded:—

"I lived at Marseilles, a practitioner of some years standing, when I was applied to by an agent of the viceroy of Egypt. I was invited to undertake the organization of the service of health in that country. I consented, and, with a few attendants, embarked in January

1825. I was charged at first with the military service. The troops of the pacha, at that time in Lower Egypt, amounted to about 25,000 men; the remainder of the army was in the Morea. The officers of health were all of the lowest and meanest description — persons who had risen, from being hospital attendants, to the rank of practitioners-in-chief—and all without any examination into their abilities. The pacha entreated me to organize the service after the French mode.

I found, in the first place, a supreme board of health, consisting of the first physician of his highness, his physician in ordinary, and a practitioner of the Court. I did not join this board: I was appointed physician-general to the army. I then set my plans to work; the first of which was to examine every officer of health, and to reject those who should prove insufficient. Of course this made me many an enemy; for many an ignorant person was dismissed: I narrowly escaped death from the hand of an assassin who struck me in the amphitheatre.

My officers of health were honoured with military insignia, which contributed at first very much to increase the jealousy conceived against them; but that also passed away.

The Pacha's army now amounted to 60,000 men, and there was a grievous want of medical officers. To remedy this want, I proposed to convert the hospital of Abouzabel, which is near Heliopolis, and within about four leagues of Cairo, into a medical school. I collected a hundred young Arabs for my first pupils.

But now began my real difficulties. How was I to teach these young people, with whose language I was unacquainted?

I happened to find at Cairo three individuals who understood French, Italian, and Arabic; but they knew nothing of medicine. I said to them, "Come, you shall be physicians; but first you must be scholars." I gave them a lecture, and said, "Now you have had your first lecture; study it, and write it for me in Arabic." To assure myself of the correctness of the translation, I had it re-translated into French. It was then dictated to the young Arabs, who wrote it down, and were examined through the interpreters. In this way I got through a course of anatomy.

Our theoretical mode of instruction soon began to fail us; we found that we should proceed practically to work with the *dead body*. This, however, looked like an insurmountable difficulty. The viceroy would not undertake the responsibility of permitting it: the minister of war was equally unwilling to give his sanction. One method alone remained for me, and that I resolved to try. I visited the Ulemas, the Mohammedan priests. These functionaries were long sensible of the decline of their influence, and saw that it could only be recovered through the study of medicine—the people having such a veneration for the Francs, all of whom they conceive to be physicians, and whom they generally accost by tendering them their pulse to feel. The chief of the Ulemas, a superior man, did not refuse to reason with me on the matter. His principal objections were these:—How was it possible to remove the idea of profanation which the Egyptians attached to the violation of the dead? And how could we satisfy the theological notion that the dead are sensible of the tortures inflicted upon their inanimate remains? I readily disposed of the latter objection. "Suppose," said I, "that the dead *do* really feel the torture of dissection, how are they better off if they wait to be gnawed by the worms? their pains can only be anticipated by a few hours; and should those pains be any objection, when the health and well-being of thousands of the living are depending upon them?" And as to the general utility of anatomy, I asked, "How would you best make yourself acquainted with the mechanism of a watch? should you not take it to pieces and examine every part in detail?" "Well, well," replied the chief priest, "go on, dissect; but mind I do not give you leave; I will only say nothing; I will not hinder my children from dissecting." It now only remained to overcome the repugnance of the pupils, and to secure myself from the dangers of popular prejudice. The pupils I gradually habituated to the contact of the dead body; and before three months they were all warm advocates of dissection. Through them also I obviated the risk that might arise from popular abhorrence. The pupils persuaded their parents and friends, and *they* the rest of the people; after which every thing went on smoothly. I even invited the Ulemas to witness our proceedings. The chief Ulema attended; and even Ibrahim Pacha himself, with some of the officers of his court, assisted at an entire lecture on anatomy. (*General murmur of approbation through the Academy.*)

Five years thus rolled on, consecrated to the business of instruction. The land forces were now supplied with medical officers, but the navy was still deficient; the expedition into Syria also required a supply. There was thus a rapid demand for my pupils; and when the cholera came they were all put in requisition. The cholera, as it ravaged Cairo, was a far more dreadful scourge than was ever known there before. In 29 days it cut off 60,000, out of a population of 260,000. The utmost that the plague ever cut off

was 40,000 in the course of six months. All my pupils, as I said, were employed during the epidemic. One of them, now present, was attached to the household of the Pacha, and treated sixty cases with success. I lost, however, twenty or thirty of my pupils (out of 150) during the ravage of the cholera. Abouzabel, which contains about 1800 inhabitants, lost one-half its population.

It was after the visitation of this pestilence, when the pupils reassembled, that I sent out a hundred of them to join the expedition in Syria.

I attribute the wonderful progress made in the school of Abouzabel to the method of mutual instruction which we adopted there, and mainly to the excellent capacity of the Arabs, who are very intelligent, smart, and possessed of great powers of retention.

But to conclude. It was in consequence of observing the little stability of strangers in Egypt, and of being persuaded of the paramount advantages of native teachers, that I proposed to the Pacha, to whose inexhaustible benevolence I was so much indebted, to send into Europe a certain number of young men to be instructed in the schools of medicine, and who should bring back with them a store of professional information. Mehemet Ali readily acceded to my request. He chose France; and commissioned me to select twelve of my pupils, whom I should conduct to my country. I only regretted that I could not take them all.

With regard to myself, I have been requested by the Pacha to wear in France the oriental costume, that my countrymen might see that I was raised to the rank of Bey. I have sacrificed nothing for this dignity; I have waived no opinion; I have compromised no duty of conscience. The toleration of my kind patron is without bounds; and, however true it may be that certain Frenchmen have attained the dignity of pacha, by changing their religion and becoming Turks, *I* have made no such sacrifice: it was not even demanded that I should. I am both a Bey and a Christian! I accepted, with pleasure and gratitude, a title which I did not solicit, and one, I may add, which is worth much to me in a pecuniary point of view. My appointments, which were originally fixed at 8000 francs, were afterwards raised to 12,000; but, by the addition of the title, I am the possessor of 36,000 francs per annum. Nor is the title of Bey all: the Pacha insisted also upon giving me the rank of a colonel. He wished, he said, that I should be distinguished from my professional brethren by the decoration of a star; and in bestowing it on me, he tapped me familiarly on the shoulder, and said with a smile, 'This will make you less a Christian.'"

M. Clot's interesting recital was followed by the most marked applause from all parts of the Academy.

FATAL QUACKERY.

An inquest has been held at the Black Horse, High-Street, Marylebone, for two successive days (17th and 19th.) before Mr. Stirling, the coroner, on the body of Mary Eliz. Landon, a child of five years, who is said to have come by her death through the improper treatment of Mrs. Catherine Spiller, a *doctress*, residing at Highgate. The child was put under her care to be cured of *tinea capitis:* the doctress applied plaisters of a powerful description, and the child's death ensued. On the first day of the inquest, evidence touching the general facts was given; but an adjournment took place, that the body should be professionally examined. We subjoin the chief proceedings of the adjourned inquest.

Mrs. Spiller, accompanied by several persons of very respectable appearance, came in coaches at an early hour, and were accommodated with a private room. Mrs. Spiller was fashionably dressed.

Mr. Carter, surgeon, residing at No. 2, South-Street, Manchester-Square, deposed as follows:—In consequence of the wish expressed by the jury last Saturday, I, assisted by Mr. Vickers and another medical gentleman, have made a careful examination of the deceased child's body. We removed the plaister from the child's head, and washed it thoroughly with soap and water, in order that we might have a clear view of the state of the surface. I had seen the child's head a week or ten days before, and the appearance of it yesterday morning was as different from what it was then as circumstances and that lapse of time could possibly have produced. It appeared that some powerful corrosive "remedy" had been applied, and there was a considerable sloughing almost all over the head. On the left side there was an extensive slough, in some parts penetrating into the skull. About two inches above this was a still larger slough, one inch and a half in length, and one inch wide, penetrating through the integuments completely to the bone. At the back of the parietal bones of the head was another extensive slough, one inch and a half in length, and three-quarters of an inch in breadth. There was another slough about the size of a sixpence on the left side of the hinder part of the head. We then proceeded to examine the internal parts, first the brain, which we found in a particularly healthy and fine state, not exhibiting the least marks of disease whatever. We then opened the abdomen and chest, and the whole of the internal parts ap-

peared to be in a perfect state of health, nor could we discover the slightest traces of any latent disease, or any organic morbid affection whatever, to account for the child's death. It certainly could not have been caused by any internal affection. I conclude from the whole of the examination that the death of the deceased could have been caused by nothing but the outward appearances on the head, which were certainly amply sufficient to destroy life.

The Coroner.—It appears that Mrs. Spiller told the child's father to come again on the Saturday, and he did not come until Sunday, when she said it was of no consequence; do you think, sir, that the plaister remaining on an additional twenty-four hours might have caused the mischief?

Mr. Carter.—It is certainly possible.

The Coroner.—Would not the injury be increased in extent by suffering the plaister, supposing it to contain corrosive matter, to remain on an additional twenty-four hours after the skin had been destroyed?

Mr. Carter.—The longer that any corrosive matter remains on the human body, the greater the mischief likely to be caused, certainly; but in such a case as this, where the head is the seat of the injury, the moment the integuments were destroyed and the bone penetrated, death was inevitable, though not immediate, and the original injury might have been done in a very few hours after the plaister was first applied. I had no opportunity of seeing the first plaister, to ascertain of what it was composed.

By the Jury.—It is probable, and most likely, that the injury which has produced death was caused during the first three days, and that the plaister remaining on for an extra twenty-four hours had very little to do with it.

Mr. William Randall Vickers, of Thayer-Street, Manchester-Square, surgeon, was called, and his evidence was corroborative of that given by Mr. Carter, with one or two additions. He stated, that on removing the scalp, the inner surface was highly inflamed and partly ulcerated. On the back part, the bone in some parts was almost bare, and the dura mater firmly adhered to the inner surface of the skull, and it was difficult to separate it. There could be no doubt that the death of the child was caused by the application of some highly-irritating ingredient to the external surface of the head. The child was generally healthy, with the exception of some slight herpetic eruptions on the groins, elbows, and the calf of the legs.

Mrs. Spiller was then brought in, and asked if she wished to say any thing? She said she was desirous of making the fullest statement she could. The coroner cautioned her that whatever she said would be taken down, and might be made evidence against her; but she persisted in making a statement, the substance of which was, that she had cured a great many persons, young and old; that she had administered the same remedies to the deceased that she had to other patients successfully; and that Mr. Lanton, the father, said at the last visit with the child, that he was perfectly satisfied and much pleased with the treatment.

This part of Mrs. Spiller's statement was positively denied by Mr. Landon.

The Coroner, in a short charge to the jury, observed that it could not be supposed that Mrs. Spiller had any positive design to do mischief to the child; but if persons who were ignorant of the nature and properties of drugs, or other nostrums, chose to take upon themselves to administer them, and the life of any one of his Majesty's subjects was thereby endangered, they must take the consequences awarded by the law. Mrs. Spiller had said that she had cured several persons; that might or might not be, but it would make no difference in the present inquiry. That which might be of service to one, might be fatal to another.

The room was then cleared of strangers, and the jury, after deliberating for a short time, returned a verdict of "Manslaughter against Catherine Spiller." Mrs. Spiller was immediately conveyed to Newgate upon the Coroner's warrant; and the witnesses were bound over to prosecute.

ST. GEORGE'S HOSPITAL.

On Thursday last, November 22, Mr. Brodie amputated the upper extremity at the shoulder-joint, for disease of the bone and adjacent parts. The operation, at all times rather a formidable one, received much painful interest from the violent struggles of the patient; by which the steps of the proceeding were retarded, and the prevention of hæmorrhage rendered exceedingly difficult. After the posterior portion had been divided, the trapezius, having no longer any antagonist, tilted up the scapula and end of the clavicle, so as to remove the point where pressure was applied farther from the artery; and great force was required to overcome this evil. It was intended to have removed the scapula also; but as some blood was lost, and as the patient was so extremely unmanageable, it was deemed better merely to leave a free opening, communicating with the diseased portions of bone. The patient to-day (Friday) appears better than could have been expected. We shall give the details of the case when it is completed.

PRESERVATION OF BODIES.

An important discovery has recently been made in France, by MM. Capron and Boniface, chemists, of Chaillot. By a process to which they have given the name of *Momification*, they have succeeded, after numerous experiments, in so modifying the known processes of preserving bodies as to reduce them to mummies, leaving all the forms unaltered: even the features remain so perfectly unchanged, that correct portraits may be taken at any length of time after death; and as the body is not enveloped in bandages, as in the Egyptian method, the natural forms are kept entire. The operation requires but a few days, when bodies become inaccessible to worms; they may also be exposed to all the variations of the atmosphere without undergoing any change. At a late meeting of the Academie des Sciences, a human body, and also two hearts, preserved in this manner, were exhibited, and the process appeared complete: although these preparations had been made several weeks, not the slightest alteration had taken place, and even the discoloured state of the skin occasioned by the scar of an old wound was fully perceptible.

LECTURES
ON
CASES OF DISEASE,

Treated in the Dispensary of the University of London.

By Anthony Todd Thomson, M.D.

Introductory Remarks—Psoriasis Gyrata.

Gentlemen,—The occasion which has brought us together imposes upon me the pleasing task of explaining to you, at certain intervals, the nature of the diseases of those persons who present themselves for advice and medicines at this institution. The object of your attendance is to see disease in its various forms; to observe, and learn to distinguish symptoms; to trace them to their causes; and to mark the influence of medicines—in a few words, to acquire how to apply and reduce to practice the instructions which you have received from attending lectures, in order that you may be fitted for the end and aim of all your studies—the actual practice of your profession. I shall not pause here to notice the advantages which Dispensaries afford to the attentive student, for obtaining the knowledge to which I have alluded; the opinions which I hold upon this subject, and which I delivered to my young friends in my introductory discourse from this chair last session, are before the public, and I have heard nothing urged against them which induces me to doubt their accuracy. Hospitals and Dispensaries possess each their advantages; and if those, whose duty it is to teach the nature and treatment of diseases in either, honestly perform their tasks, the opportunities afforded of studying diseases in both will be found of the greatest value to the student who is earnestly desirous of acquiring practical information. If the nature of Dispensaries does not afford to him the means of tracing the influence of remedies administered under circumstances the most favourable for their operation — namely, under the eye and the control of the physician, it introduces him to that kind of practice which is afterwards to constitute the real business of his life. He witnesses in them all the difficulties which are encountered in private practice; the interests, the passions, the appetites, and the prejudices of patients, working against him; he sees these, and he learns how to combat them. I should say, that the attendance on an Hospital cannot supply the information which may be frequently obtained at a Dispensary, any more than that at a Dispensary can compensate for the want of that which an hospital affords. A certain period spent at both is requisite to give the finish to a complete medical education.

Such being the case—assuming that you are aware of the importance of your attendance in this place—it is scarcely necessary for me to urge the necessity of your undivided attention during the examination of every patient who presents himself; for although you will find many cases so closely resembling each other as to leave no doubt on your mind that they may be justly regarded as constituting one form of disease, yet, if you observe closely, you will also discover, that each case presents some peculiar feature, which demands a modification of the general treatment applicable to the class to which it belongs. The tact in discovering such deviations constitutes much of the skill which leads to successful practice; but it is that part of your professional knowledge which is the least capable of being conveyed by instructions; it must be the result of close observation. Nature must be questioned, and truth investigated, in such a manner as shall leave the imagination

unemployed; nothing must be taken for granted. But, although no teacher can convey to you the mode of acquiring this information in each particular case, yet the general method of inquiry may be attained; and it is on this account that I urge your undivided attention during the examination of the patients. Lay a solid foundation, by accumulating observations, and, by rising from these, strive next to reach the causes of disease. In attending to this, you ought also to endeavour to make out in your mind the reasons for the line of practice which is adopted; and if you cannot satisfy yourselves, demand an explanation. I am induced to recommend to you this plan of proceeding, because it is impossible for the physician of any institution, so much resorted to by the sick poor as this is, to pause and comment upon each case that presents itself; and it is more useful for you, gentlemen, to exercise your judgment, than to lean solely upon the information which you can always elicit from your teacher. At this same time be assured, that no inquiry shall be considered too trivial not to merit an answer on my part. I shall endeavour either to guide your minds, so as to enable you to overcome the difficulty yourselves; or I shall enter into a full explanation of my views in prescribing, or candidly acknowledge my inability to satisfy your doubts. It is by such a communion and free intercourse of ideas amongst us that you will profit by your attendance here; and the expectation of seeing it realized emboldens me to prognosticate, that the retrospect of what you have acquired, even in this limited school of practice, will convince you, that it is the conscientious performance of his duty on the part of the teacher, and that earnest desire for information which alone insures attention on that of the pupil, which render instruction valuable, whatever may be the name of the place in which opportunities for imparting and receiving knowledge are afforded. Having said this much, let us now revert to the more immediate object of this discourse.

In the short period which has elapsed since the commencement of this session, among many other diseases, several cases of cutaneous eruptions have been admitted. Three of these are Psoriasis, and one of them has presented so peculiar an aspect that your attention has been particularly attracted to it. I refer to the case of Sarah Saxby, an Irishwoman, who is labouring under that form of Psoriasis which is termed *gyrata*. The following is the history of the case, as taken down from the examination of the patient on her admission, October 13, 1832.

Sarah Saxby, a native of Ireland, æt. 28, is a married woman, and the mother of several children. She has been the subject of a cutaneous eruption ever since she left Ireland, which was four years ago. It first appeared on the face, but, after some time, extended to the neck and occiput, where it is now situated. The eruption occupies the whole of the back of the neck and the right shoulder, forming various tortuous lines and circles, which, to an unexperienced person, appear like large earth-worms, writhing in various directions; the joints of which are strongly marked. She states, that the longest interval from the disease which she has enjoyed, since its commencement, has not exceeded a month; and also that she had a similar eruption on the legs when a young girl. She is frequently affected with headache and drowsiness, especially if the eruption suddenly disappear. The catamenia is regular, except when she is suckling. The bowels are habitually costive; the tongue is white; the pulse 90, quick and hard; the heat of body considerable, and there is much thirst.

She was ordered to be bled to twelve ounces, and to take nightly a dose of purgative pills, with the following mixture:

℞ Liquoris Potassæ, ℥iij.; Decocti Ulmi, ℨviij. M. sit mistura cujus sumantur Cochlearia iij. majora, ter in die.

15th.—The patient having caught cold, and being feverish, was ordered to discontinue her medicine, and to take the following:—

℞ Liquoris Ammoniæ Acetatis ℨij.; Vini Ipecacuanhæ, ℥jss.; Potassæ Nitratis, ℥j.; Misturæ Camphoræ, ℨvj. M. Sum. Cochl. iij. majora ita q. q. horâ. Perstet in usum pilularum purg.

17th.—All fever having abated, she returned to the use of her mixture containing the solution of potassa; which she has continued ever since. The eruption has greatly declined, and in some places is scarcely visible. A patch resembling Psoriasis *diffusa*, which was seated on the arm, has disappeared.

Now your attention having been particularly directed to this case, induces me to offer you a few remarks on the nature of Psoriasis in general; and, as the patient is in attendance, we have an opportunity of satisfying ourselves respecting the real character of this form of eruption.

Psoriasis is one of the order of scaly eruptions, so named from the scales, which are rather the consequence of the diseased state of the cuticle than the disease itself,

being so constantly present as to distinguish it from other eruptions. How far authors are correct in regarding Lepra, Psoriasis, and Pityriasis, as distinct genera of diseases, may admit of a question, but they are at present regarded as such; and our knowledge of cutaneous disease is not sufficiently advanced to enable us satisfactorily to decide. That these three genera, however, differ essentially from Ichthyosis, which is also classed as one of the squamæ, there can be no doubt: but, in my opinion, Ichthyosis has been inconsiderately arranged as a scaly eruption. In Psoriasis, as well as in the other scaly eruptions, the scales appear to proceed from an altered action of the vessels secreting the cuticle, which, in this case, are not merely separated, but are changed into small opaque, thickened, white laminæ, of an elongated shape, easily detached, and displaying the surface on which they lie to be red, inflamed, slightly elevated, and in truth actually papular.

In examining carefully the eruption, in the patient before us, [the patient was brought in] we will not hesitate, notwithstanding the tortuous and vermicular form of the eruption, to pronounce that it is a mere variety of the more common forms of the disease, Psoriasis *guttata* and *diffusa*. Emerging from amongst the roots of the hair, and passing down upon the neck behind the right ear, we observe that within the gyrations there are many small irregular dots and oval patches; and on a closer investigation of the serpentine lines of eruptions, there is much reason for thinking that these consist of such patches, placed end to end.

All the instances, which are only four, in which I have seen this form of the disease, have occurred in females, and the eruption has occupied the same part of the body as in this woman, namely, the back of the neck and the shoulders. In the declining state of the complaint, which has been a week under treatment, the raised appearance of the axis of each tortuous line, and its transverse cracks, are not so obvious as they were; but you have here a good opportunity of marking the manner in which the eruption disappears, a circumstance which, as I shall have many opportunities of proving to you, is one of the diagnostic symptoms which distinguish Psoriasis from Lepra. The patches have disappeared from the circumference, and the tortuous lines are not half their original breadth; they are marked on one side by a faint red line, and on the other by thinner, less elevated, and distinct scales, than you saw a week ago.

Some of the varieties of Psoriasis arise from local irritation; for example, those which appear on the hands and arms of bakers, Psoriasis *pistoria*, and of washerwomen, Psoriasis *lotorum*; but in general the causes of the disease are obscure. In the case before us there was an evident excited state of the system; the face was swelled, red, and heated, the eyes suffused, and the tongue furred; the pulse quick, full, and bounding, the bowels confined, and the urine high-coloured. The woman complained also of excruciating headache, want of sleep, and that bruised feeling of the limbs which invariably attends inflammatory fever. It might be questioned how far this condition of the system is connected with the eruption; but that it at least augments, and has renewed it, is true, as this occurred whilst the patient attended me at home, before she was admitted at the Dispensary*. In the majority of cases, not purely local, which I have seen, the digestive organs have been more or less in fault; there has been considerable irritability of stomach, and a predominant acidity. In children this state may be traced to crude and improper diet, which is sufficient to account for the disease; but in adults this state of the stomach, with which the skin evidently sympathizes, is often the consequence of mental anxiety, and whatever can lower the general powers of vitality. I have seen Psoriasis not an unfrequent attendant of the gouty diathesis, and occasionally the consequence of drinking cold fluids, while the surface was bathed in perspiration from severe and exhausting exertion.

It is not difficult to comprehend, when we reflect on the intimate connexion between the condition of the stomach and that of the skin, that an irritable state of the former may be accompanied by a corresponding irritable condition of the latter sufficient to induce such an inflammatory state of the cutaneous capillaries as should produce the inflammation and exfoliation of the cuticular scales; but it is extremely difficult to form any idea of the cause of the peculiar form of the eruption in this and similar cutaneous affections. Indeed the characteristic forms of eruptions in many instances; the horse-shoe form of that in Measles; the circular patches of Lepra; the progress of Scarlatina from the head and trunk to the extremities; and of Roscola in the opposite direction, afford food for reflection, and are facts worthy the investigation of those entering upon the practice of their profession, — when time and opportunity are favourable to such inquiries.

Women, in general, are said to be more

* Since this lecture was delivered a slight recurrence of the eruption has taken place, owing to a severe catarrh which attacked the patient, after exposure to cold and damp.

liable to Psoriasis than men, and those especially of a sanguineo-melancholic temperament, with a dry and languid circulation: but our case is an exception to this rule; our patient is a stout, plethoric woman, of a highly excitable and inflammatory habit. She has a child at her breast: but, although the bowels of the infant have been disordered by the state of the mother acting on the secretion of the milk, yet there is no eruption on the child. There is no reason for supposing that any of the varieties of Psoriasis are contagious. I have known instances of *P. inveterata* of long standing, where a discharge from under the diseased cuticle existed, and yet the complaint was not communicated to persons who slept in the same bed with the patients.

In the *P. guttata* and *diffusa*, there is not much itching or tingling in the affected parts; but in *P. inveterata*, the heat and tingling sensations, which are much aggravated by the least friction, are a cause of great uncomfortableness to the patients. In the case before us, the poor woman complains of itching, but not in an augmented degree.

The peculiar form of this variety of Psoriasis at once distinguishes it from all other eruptions; but some of the other varieties may be readily confounded with Impetigo; and still more readily with Lepra, which, however, is perhaps only another variety of the same disease.

With respect to the treatment of this case, the necessity for depletion was obvious; and, in general, you will find it to be requisite in all the varieties of Psoriasis, even when general fever does not exist, if the eruption display an evident inflammatory aspect. After reducing excitement, the next object is to allay the irritability of the stomach, for which purpose I have have found nothing more efficacious than the solution of pure potassa. It may be administered in any vehicle; and although in the instance before us I ordered the decoction of elm bark, yet, I must candidly confess, that I place little reliance either upon it or the decoction of dulcamara, which has been greatly cried up in cases of Psoriasis. Had the disease proved obstinate, or should it return, I should order arsenic, as I have frequently seen very obstinate cases yield to a combination of the arsenical solution and of pure potassa. In general these remedies have not fair play, from being administered in too small doses: in some obstinate cases I have augmented the dose of the arsenical solution to sixty minims, and that of the solution of potassa to eighty minims, three times a day, with the most decided advantage. No external application was used in the present case; and although I have found the ointment of nitrated mercury and tar ointment useful in Lepra after removing the scales, yet I have seldom seen any necessity for their application in Psoriasis, except in those local varieties of the disease, such as *P. palmaria*, *labialis*, and *præputialis*, in which cracks, and sometimes the oozing out of a thin acrid discharge from the fissures, occur.

In every variety of Psoriasis much depends on the diet of the patient: it should consist of milk in all its forms, with an occasional moderate allowance of light plainly-cooked animal food; but all salted, spiced, or stimulating meats, in particular pork, prove hurtful; shell-fish also, and perhaps all kinds of fish, should be set aside; and every description of fermented liquor strictly interdicted. So necessary is attention to diet, that, in mild cases of the disease, nothing farther is necessary than a moderate bleeding, with low diet, and a short course of solution of potassa. As a general rule, in all cases in which alteratives, which are all more or less excitants, are indicated, every other stimulant should be withdrawn.

HOTEL DIEU.

Clinique of M. Dupuytren.

Cases of Burn.

The young Egyptians went round the wards this morning (Nov. 13,) after M. Dupuytren; and it so happened that there were several interesting cases presented to their notice. Among the first were two cases of extensive burn. "Not a year passes," said the Professor, "and especially about the setting in of winter, that we have not many cases of this kind. People will be so imprudent as to use chafing-dishes in small unventilated apartments; they become asphyxiated; their clothes catch fire; and if they escape with life, it is at the expense of dangerous burns inflicted during their insensibility." This was exactly the case with the first female now visited: she took a dish of lighted charcoal into her little chamber, which was scarcely eight feet square, and held little more than her bed; there was no fire-place or chimney; there were simply a door and window, but both of them closed. She was soon suffocated, and was severely burnt before assistance was obtained.

The chief lesion was on the right thigh and ham, where there was a large eschar above ten square inches.

M. Dupuytren ordered bleeding and antispasmodics, with compresses of cerate to the part—cataplasms.

ENCOMIUMS OF OUR CONTEMPORARIES.

" Laudari a laudatis viris."

It is seldom we trouble our readers with our own praises—even when they come upon us from the most respectable quarters; but really the following commendatory effusions are so flattering to our vanity, that we cannot deny ourselves the pleasure of putting them on record. The learned writers of these editorial panegyrics must surely have held council together how they might best do us honour. How sweetly do they unite in concert like Duke Theseus' hounds—

" matched in mouth like bells,
Each under each !"

Lancet, *Nov.* 17.

" Dr. Elliotson's nerves are finely strung, and he entertains too delicate a sense of honour to permit even such a contemptible creature as the fabricator of the *mock Lancet* of the BATS, to charge him with misrepresentation, without rebutting the calumny, and casting back into the teeth of the slanderer the disgrace and ignominy consequent on the exposure of his falsehoods. The generous pupils of the London University, sensibly alive to the highly honourable feelings of their professor, intimated their intention of visiting the reviler with some marked signal of their indignation and contempt. But Dr. Elliotson calmed their excited feelings, and set the question at rest, so far as the University is concerned, by some explanatory remarks addressed to his class on Monday evening last. If Dr. Elliotson had been the aggressor, he could not have shown a greater anxiety to stand well with his colleagues and the pupils at the University. As the party attacked, he has displayed in an eminent degree the best qualities of an honourable mind. Dr. Elliotson, however, ought not to forget what sort of being is the object of his censure. If a toad were to obtrude itself in the path of a lion, and the *monarch of the forest* were to half crush it to death, the reptile would have no just cause of complaint."

Medical Journal, *Nov.* 17.

" The liberal spirit which breathed through every line of Professor Elliotson's Introductory Lecture at the London University, and which we eulogised in the strongest terms, excited the ire of that addle-pated imbecile, who ministers to the depraved taste of the corruptionists and pluralists in the medical profession. Nothing could be so perfect as the London medical schools; there was no need of a University or a King's College; both were vituperated week after week; the present teachers in London formed a great university, which was only equalled in the celestial empire; when most unluckily for this visionary institution, Professor Elliotson had the unfeeling hardihood to demolish it as if by magic. The architect saw all his hopes vanish into thin air, and then turned round on their *destroyer* and grossly misrepresented him. This led the independent Professor to withdraw his support from a periodical which would have long since ceased to exist, had not his lectures appeared in it. But he now declines his sanction to the publication of his lectures, and thus seals the doom of the most stupid, partial, and unprincipled periodical, that ever depreciated the medical literature of this country."

The " monarch of the forest" must needs be proud of so noble a pair of jackals.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 20, 1832.

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DR. ELLIOTSON.

We have received various letters on the subject of our discussion with this gentleman: some of our correspondents request that if he should write again, though in another journal, they may be made acquainted with the tenor of his remarks. The *Lancet* of this day (Nov. 24,) in which any such paper might have been expected, contains no rejoinder. Under these circumstances we deem it but fair to decline inserting any of the numerous letters we have received on the subject.

NOTICE.

We have complied with Mr. Woolrich's request.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 1, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

PUSTULÆ.

VARIOLA—SMALL-POX.

Etymology.—I will now consider a very important pustular disease, called in English *small-pox*, but in medical latin *variola*. I understand that the word pock, or pox, is of Saxon origin, and comes from the word *poccadl*, which is derived from the word *pocca*, a bag or pouch; or *pochcha*, meaning the same thing—a little bag. The term *small* was added to it in the third or fifth century, I suppose to distinguish it from the great pox. Some etymologists say it is called *variola* from the word *varius*, spotted, or else that it comes from the Latin word *varus*, a pimple. How the point is to be settled I do not know. The disease is called in Spanish *viruelas*, and some derive this from the Latin word *virus*. Such is the origin of this mass of corruption—like the disease. Mr. Moore has written an admirable History of the Small-pox and Cow-pock, both of which works are exceedingly interesting and well worth reading. He says that the word *variola* was first found in an old Saxon Chronicle, ascribed to Marius, Bishop of Vaux, in Switzerland, who says that a violent malady broke out in Italy and France in 570, attended with purging.

Symptoms.—Now the disease before the eruption appears is marked by certain premonitory symptoms. The patient first of all is generally seized with languor, drowsiness, vomiting, pain of the head and loins, just as might occur in any other fever. Here is the head affected—drowsiness and languor; here is the stomach affected—vomiting; and here are the loins affected, which almost always occurs in common continued fever. There is pyrexia, universal feverishness, quickness of pulse, and also tenderness of the epigastrium; but the pain in the loins and the tenderness of the epigastrium are frequently most intense, being very marked in this disease.

After these symptoms have prevailed a day or two, there appears about the third day, first on the face, and then successively throughout the body and extremities, small red spots—*papulæ*, and these rise into elevated pimples, and these again into hard tubercles, in the common acceptation of the word. So that first of all you have mere red spots on the skin, these spots arise into what are commonly called *pimples*, and then these pimples become very hard—*tuberæ*. These pimples become pellucid, and on the fifth day, counting from the first attack of feverishness, headache, and so on, they become pustules: from being pellucid they have purulent contents, opaque and white; and those which are large, are at first generally depressed in the centre. This is worthy of notice: they are not perfectly filled at first, but are filled in the circumference more than in the centre.

Now when this eruption is taking place, if the individual be an adult, there is frequently a great tendency to profuse sweating, and if the patient be a child, there is a great tendency to epileptic fits. It is said that one fit forebodes a mild disease, whereas several forebode a severe disease; but I should suppose that if the child had no fit at all it would forebode something better still. Where there is but one fit, there is so little mark of severity of dis-

ease that it often has been supposed a favourable symptom, but I should think it is not so favourable as where there is no fit at all.

On the eighth day—counting always from the first—if there be much eruption, the face swells from the inflammation. If the disease be pretty severe, the cellular membrane beneath falls into more or less irritation, and secretes abundantly, so the face swells on that account: the same circumstance causes the eyes to close, and the continued extension of the irritation causes the mouth to run, and the fauces to inflame. On the eleventh day the pustules are at their height, as full and as numerous as they will be; and the swelling of the face, the running of the mouth, and inflammation of the fauces subside; and then the hands and feet swell—first the hands, and afterwards the feet. You see that the irritation has diminished above, where the disease first appeared, and has extended below. The spots spread down the body and arms towards the hands and feet; and as these parts suffer the last, so they swell the last; and when the swelling commences, the irritation has already begun to subside in the parts originally affected. The pustules are then said to maturate; that is to say, they grow ripe and perfect. When this general suppuration has occurred and the formation of pustules is perfect, then again a fresh attack of feverishness occurs, and this is called the *secondary fever*. That which occurs in the beginning, ushering in the disease, and continuing for a little time, lessens when the eruption comes out, and is called the *primary fever;* and when the eruption has gone on for a certain number of days, and the general irritation is lessened, then, at the perfection of the eruption, when all the pustules have attained their full development, and each pustule has become filled with matter, and is of its full size, a second attack of feverishness takes place.

When the pustules begin to diminish, and the matter to be absorbed, the common people, especially old women, call it *the turning*. You will continually hear in practice that the disease has turned, and the meaning of that is, that the pustules have begun to subside.

The pustules on the extremities, as I have said, appear later than those on the face and trunk, and their contents, I should also mention, are more limpid: there is not that excessive inflammation there which produces pus, but only a puriform fluid—a limpid fluid rather than perfect pus, and in them the fluid is frequently absorbed altogether without any exudation occurring. In the other pocks, throughout the body and the face, the matter very frequently exudes; but those upon the extremities, particularly the hands and feet, lose their contents entirely by absorption, so that the elevated cuticle remains flaccid and empty. I need not say that those pustules which are on the extremities, coming out last, "turn"—according to the old women's expression—last. The pustules, too, when the matter escapes, generally dry into hard scabs; the matter exudes, a scab is formed of this dry pus, and frequently a little ulceration has taken place, so that a pit is left. The secretion is not merely superficial and cutaneous, but ulceration of the cutis takes place, and even of the cellular membrane underneath, so that marks are left. These pustules are nothing but so many minute abscesses, and of course there is more or less destruction of the parts, and a cicatrix is left on a small scale. If many of these run together, then a person is said to be *seamed:* there are whole tracts of loss of substance.

From the inflammation which affects the eyes, there is not unfrequently in the violent form of the disease albugo left, or staphyloma. Pustules frequently form around the eyes, and on the cornea itself, and there is often ophthalmia; and where there has been a pustule on the eye, it is common, as I have said, to have albugo, and even staphyloma. If you had formerly visited a charity for the blind, you would have seen a great number of the inmates rendered so through the small-pox, and having staphylomatous eyes. When the disease is over it frequently leaves scrofula; persons may have enlarged glands of the neck, or they may have enlarged mesenteric glands, or you may have phthisis. Frequently it leaves rupia and ecthyma; diarrhœa too is not unfrequently left after it, and the mucous membrane of the intestines sometimes falls into chronic inflammation.

You will observe, that if I enumerate again the days on which the changes take place, they are first according to the tertian type, and then they assume the quartan type. The day on which the disease begins is the first day; then on the third—that is according to the tertian type—the pustules make their appearance; then, still according to the tertian type, on the fifth day perfect pustules are formed. The eruption begins as a little spot; this is succeeded by an elevation, which afterwards becomes hard, and this contains something limpid; and then, on the fifth day, the contents become perfect pus. From that time the quartan type commences; it is on the eighth day, if there be much eruption, that the face swells, the eyes

close, and the mouth runs; and on the eleventh day the pustules are all at their height, and there is no farther aggravation of the eruption. This enumeration will assist your memories.

Varieties.—Now the disease is generally divided into two varieties, the one called *distinct*, and the other *confluent*. In what is called discreet, or distinct, the pustules do not touch each other; the pyrexia, or feverishness, is of that kind called inflammatory, and is attended with a pretty strong pulse, and great heat of the body. The pustules are comparatively few in number, and are all detached. Perhaps there may be very few pustules, only one, two, three, half a dozen, or a dozen; but if there be more, still they are detached. They all look healthy, and have a rose-coloured base, shewing a healthy inflammation; their contents are good, laudable, praiseworthy pus. The fever in this form of the disease lessens when the eruption comes out, and when the eruption is complete, the feverishness is nearly gone. The disease is mild but perfect.

In the other form of the affection, however, which is called *V. confluens*, the pustules are very numerous, and run together; the feverishness is infinitely more violent, and rather of a typhoid character; the pulse is not so strong, the patient is exceedingly weak, and there is delirium. There is often such a violent affection of the head that it produces coma; and the eruption not unfrequently begins early—there is such violence of the disease that it begins even on the second day. The pustules are not only far more numerous, but they are smaller; they are not well developed, well formed, well fed pustules; on the contrary they are flaccid, and not filled as they should be. Their quality also is bad; for instead of containing a creamy laudable pus, the contents are brown, perhaps thin and serous, and perhaps there is a brownish ichorous fluid rather than genuine pus; they not only run together, but, from not being well filled, they appear more or less flat. The feverishness in this form is very little lessened on the appearance of the pocks, and at the end of the eruption it is aggravated very much; secondary fever of a very violent character comes on. The symptoms occurring in other parts are also very severe; there is much more ptyalism, much more running of the mouth, much more inflammation of the fauces, than in the distinct form; and in infants there is sometimes violent diarrhœa. In this latter instance the lower part of the alimentary tract suffers great irritation. Frequently too there are petechiæ, vibices, and ecchymoses, between the pustules; there are, in short, red, dark-coloured spots, of various sizes. Sometimes there is bloody urine, and sometimes blood appears in the motions. There is an intolerable stench, the secretions are very unhealthy, and there is an exudation all over the body, so that the person emits a very offensive smell. Now and then patients labouring under this form of the disease die rather suddenly—they suddenly sink. The consequences of this species of the disease too are more severe than in the other form; in fact it is V. confluens that for the most part leaves such terrible consequences, as blindness, phthisis, and diarrhœa, the latter of which ends in ulceration of the intestines.

It is said, but I do not know the fact from experience, that negroes generally have a horny, warty, small-pox, the eruption being minute in size—that is to say, fibrin is effused into the pocks, which gives them a hard warty appearance.

United with other diseases.—The disease rarely, comparatively, occurs more than once during life; and although we may all see instances of its secondary occurrence, yet these are exceptions to the general rule. Like measles, however, and scarlatina, it may be had more than once, and it has been known to occur simultaneously with measles and cow-pox; it has existed conjointly with them in the same person. You know that it was a dogma of John Hunter (an assertion without proof), that no two specific diseases could exist at the same time in the same body; but it is untrue. You will see persons labouring under itch and syphilis at the same time; and there are plenty of instances on record of small-pox co-existing with measles and cow-pox, though in general one disease runs its course in the body, and then the other. It is mentioned in the Edinburgh Medical Commentaries, that measles and small-pox occurred simultaneously in sixteen children. Out of forty-three children who were inoculated, sixteen were at the time labouring under measles, and both the diseases went on together. This occurrence took place at the Foundling Hospital in Dublin.

Causes.—The cause of this disease is, I believe, in most instances a specific poison generated by an individual labouring under the disease. Children sometimes have it without there being any possibility of tracing infection; but for the most part we can do so. It is a disease which is infectious as well as contagious. There is no occasion to touch the patient labouring under it, or any thing that he has touched; to be near him is quite sufficient. One reason for thinking that it always arises from another individual labouring under it is that in Denmark the

disease was made to disappear for many years, by practising vaccination on every individual; but at last the inhabitants grew careless, and being visited by persons labouring under the affection, it again broke out. If, however, the two diseases be the same, the argument falls to the ground; if the cow-pox be merely modified small-pox, then these are merely instances of the disease occurring but once.

Liability of all persons to the disease.—Almost all persons are liable to take the disease—so liable, that it is hardly right to say that a predisposition is required. From the few there are who escape if the poison be applied, it is a better mode of expression to say, with regard to those who will not take it, that they are *indisposed* to it, than to say that they are *not predisposed* to it. The only thing wanted is, the absence of an indisposition. Persons have been known to escape this disease for forty or fifty years, and then have it. The same circumstance occurs with regard to hooping-cough and other contagious diseases.

It is supposed that the predisposition to it, if I may use such a word, is strongest in early life; but I believe I mentioned formerly, that this is hardly proved, because most persons take the disease, if they have not had the cow-pox, in infancy or childhood, and therefore there are but few adults left to have it.

Occurrence in the Fœtus.—Like syphilis it may occur in the fœtus. The mother may give syphilis to a child in utero, and also the small-pox, and in the latter affection it is singular that the mother may communicate it to the child without having it herself. Dr. Jenner published, in the first volume of the Medico-Chirurgical Transactions, instances of two women who, when pregnant, were exposed to the contagion of small-pox a few days before delivery. Both women were, I believe, exposed to it by infection; but one woman had had the affection formerly, and therefore she had acquired immunity; and the other had been inoculated, so that she also had acquired immunity. Neither of the mothers had the disease a second time, and therefore they served merely as transmitters of the poison to their children. In the one instance the disease appeared in the child on the seventh day after birth, and the other female brought forth a child covered with the small-pox. Dr. Mead, in his Treatise on Variola, you will find, mentions a similar fact. However, this has not always been the case, for Sir George Baker mentions that two women, who took the disease during pregnancy, brought forth children perfectly healthy, and they never had it till they were inoculated, which did not take place till they were three years old. I do not know whether a woman can give syphilis to a child without the disease affecting herself—whether she can have the poison conveyed to her system by a man, and yet have no symptoms of the disease, and nevertheless produce a child affected with syphilis. In my experience, wherever syphilis has appeared in a child at its birth, or soon afterwards, the mother has shewn syphilitic symptoms either then or soon after. It is, however, to be remembered, that we have no immunity from syphilis. We have immunity from small-pox and cow-pox, in consequence of the disease having occurred previously; and when immunity can be produced from a poison, then you see that the system may transmit it, being yet perfectly safe itself.

Period of Incubation.—As to the period at which the disease appears after exposure to the poison, the late Professor of Botany in Edinburgh (Dr. Rutherford) used to say that a party of soldiers were exposed to it in the natural way, and that the interval between their exposure and the appearance of the disease varied from twelve to fourteen days. Dr. Fordyce, who paid great attention to this subject, said that the period which I have now stated was the common interval: however, it is sometimes certainly known to come out earlier.

Resemblance to other Infectious Diseases.—Like other infectious diseases, it is very frequently epidemic; and it is more frequently so at the vernal equinox than at any other time. It is said, by Sir Gilbert Blane, to resemble measles and hooping-cough, in being more fatal during an epidemic than at any other time. After it has been absent some time, it is also more severe than at other periods. It is also observed to be like all other epidemics in another respect: those who have it first, have it the most severely.

Opinions of the Ancients.—It is said that, by the ancients, this was not known to be a contagious disease; and, indeed, they confounded measles, scarlet fever, and small-pox together. Rhazes, an Arabian, and one of the eldest writers on the subject, ascribes it to the fermentation the blood undergoes when the youth is becoming a man. Sydenham, who has given so perfect a description of small-pox that it can never be surpassed, had no idea that it was a specific contagion. He thought that scarlatina was most prevalent in the autumn, and he ascribed it to a moderate effervescence of the blood, arising from the heat of summer. He entertained much the same opinion of measles and small-pox. I believe I mentioned that Gadbury, the astrologer, wrote, without fear of being laughed at, that plague was not more in-

fectious than small-pox. Then another worthy man, Etmuller, who is much quoted by German writers, says, that no doubt small-pox and measles take place from the child drinking morbid nourishment in the uterus, and then, after birth, sucking it in the milk. He says, " it is not probable that those who assert that measles and small-pox arises from copulation after conception has taken place are correct, and therefore I suppose that the foundation of measles and small-pox lies in the milk which the child takes first when in utero, and then afterwards when born." It was distinctly declared to be contagious by Boerhaave, who mentioned contagion as the only cause of it.

Contagion and Atmospheric Influence.—But though nobody now doubts that it is contagious, yet its spread is greatly influenced by certain states of the atmosphere. Violent cold will check an epidemic small-pox: though it is an epidemic disease, yet a low temperature of the atmosphere will check it. The wind called *harmattan* stops small-pox just the same as plague, and it is said to prevent the effects of inoculation; so that if you inoculate when that wind is blowing, it is a fruitless task. I mentioned this particular circumstance when speaking of contagion in general, in order to shew what influences are exerted on it. Sir John Pringle says that the small-pox was carried by some troops, on one occasion, to the camp, but, in consequence of some peculiar state of the atmosphere, it would not spread. Van Sweiten mentions a similar fact. Dr. Odier, a physician at Geneva, mentions that when this disease was not epidemic it would not spread by contagion. When children had the disease by inoculation, if they were carried about the streets and brought into contact with other children during the eruption, there was not a single instance of a child catching the disease. Sir James M'Grigor says, that when the disease was prevailing extensively at Bombay, in the neighbourhood of his barracks, although there was the freest communication between the inmates of the barracks and the surrounding population, yet no person about the barracks caught the disease. Burkhardt, the traveller, says that small-pox was never known to visit the Wadykenous, which is a narrow shore leading from the Cataract up to Korosko; yet it was well known at Derr, a place situated a little distance off, and much dreaded. We must, when we are considering whether a disease is contagious or not, set no value upon the circumstance of certain states of the atmosphere putting a stop to it. Contagious diseases, in this respect, are in the same predicament as those which depend altogether upon atmospherical influence. That it is a contagious disease cannot be doubted, when you reflect that it will habitually occur to children when their parents will not allow them to have the cow-pox.

Relative effects of Inoculation and Vaccination.—Small-pox is communicated artificially by inoculation, because the disease which then arises is much more mild than that which occurs naturally. The effect of inoculation is to lessen the number of pustules, and thus to lessen the general violence of the disease. The effect of vaccination upon the disease if it do not prevent it altogether, is rather that of lessening its duration. Inoculation produces the disease with a far smaller number of pustules and less general irritation; whereas, if a person have small-pox after vaccination, the disease goes on in the usual way for a certain time, and then all at once the feverishness ceases, and there is rapidly an end to it. It will terminate, in fact, on the sixth day, instead of the eleventh.

It is found also that the disease appears much more quickly when it is communicated by inoculation than when it is communicated naturally. The affection usually appears on the seventh, or at the latest upon the eighth day, when it is communicated by inoculation; whereas, when it occurs by infection, it is generally from the twelfth to the fourteenth day before it appears;—and consequently you may, by inoculation, be before-hand with infection. If a person have been exposed to the infection of small-pox, and has a great chance of having a severe disease, it is right, if you do not vaccinate him, to inoculate him immediately; because you then produce the disease more quickly than it would otherwise occur; the artificial form gets the start of the natural, and the patient has the artificial disease instead of the natural. Dr. Fordyce also mentions, that the quantity of matter applied greatly influences the severity of the disease: he says, that if you introduce only a small quantity of matter, a less severe disease is produced than if a considerable quantity be employed. On this account, the quantity of matter should be as sparing as possible; it should only be just sufficient to produce the disease. In cow-pox, however, a different rule must be observed; because the object, in that case, is to have the affection as complete as possible, and therefore a considerable quantity of matter must be introduced; and you must not be contented with making one insertion, but you must make several. I wish you to remember, however, that, in small-pox, the object is to have the disease in the mildest way possible, and therefore the

smallest possible quantity of matter is to be introduced.

The fact of inoculation rendering the disease milder, appears to have been communicated to the Royal Society of Edinburgh in the eighteenth century, and the knowledge of it to have been brought to England from Constantinople. The knowledge of this fact is said to have existed in China and Hindostan for a great number of years. The Chinese were in the habit of placing the crusts taken from small-pox patients in the nose, having first frequently kept them in jars for some years; sometimes they reduced the crusts to powder, and made the children snuff them up;—this was called *sowing the small-pox*. The Brahmins are in the habit of scratching the surface of the skin, and then binding upon the scratch a piece of cotton moistened with the pus. It is said that a particular caste has the charge of this practice. They, however, prepare the patients for this process by some months' abstinence, from even milk and butter—and this would be pretty low diet, they having no animal meat at any time. This mode of inoculation appears to have been long practised in Persia, Armenia, Georgia, and Greece, but its origin is unknown. Some imagine that it arose in the deserts of Arabia, where there were no physicians or priests—nothing but old women, the knowledge of the fact being acquired by the vulgar. However, the practice appears to have been known an immense time in the provinces of Italy, in France, Germany, Sweden, Denmark, and even in Great Britain, among the peasants. In the north of Scotland the people were in the habit of giving the children the disease by putting them to bed with others labouring under the affection, or tying threads soaked with pus upon their wrists. But although it was known in this way among the lower orders, (just as we shall see was the case with regard to cow-pock preventing small-pox,) before the enlightened part of the public were aware of it, the practice came to us ostensibly from Constantinople. Dr. Timoni wrote to Dr. Woodward on the subject from Constantinople, and the letter was published in the Philosophical Transactions the year after. Pylarini, a physician, also wrote on the Turkish practice, and sent his communication home in 1715, and this was likewise given to the public in the Philosophical Transactions. Lady Mary Wortley Montague was at Constantinople with her husband, who had been appointed ambassador to the Ottoman court, and she there learned the practice, and being a couragious woman, tried it, with success, on her own son. On her return to England she had her daughter inoculated. Caroline, Princess of Wales, wished to have her children inoculated, but was desirous that the experiment should first be made on six felons in Newgate. She obtained the consent of George the First, and the operation was performed. Five of the felons did well, but the sixth did not take the disease, having in fact previously had it; but, on account of being inoculated, they were all saved from hanging. Inoculation was now thought favourably of in England, and it appears that in the first eight years, 845 persons were inoculated, only 17 of whom died: at Boston, only 1 out of 45 died.

Of course, as this was a new practice, it excited opposition. Whether the practice was good or bad, being new was sufficient to account for this; and many clergymen and dissenting ministers raved against it from the pulpit, and called inoculation the offspring of atheism: those who performed it were called sorcerers, and the whole thing was said to be a diabolical invention of Satan. Others, however, were of a different opinion, and Bp. Maddox and Dr. Doddridge defended it, and in doing so employed scriptural quotations. You know that the devil can quote Scripture to suit his own purposes, and therefore it was very fair for good men to quote Scripture too. However, the reasonable side of the question at last prevailed.

Then, after a time, the practice was nearly relinquished throughout Europe, just as we saw was the case with regard to the use of Peruvian bark. After the practice of exhibiting bark had been approved, the good opinion formed of it was entirely lost, so that it became a *drug* in the market; and inoculation was almost disused in England from 1730 to 1740, and in France it was absolutely forbidden.

The truth, however, was, that inoculation caused a great loss of life: it saved the lives of a great part of those who were inoculated, but it kept up the pestilence to such an extent, that far more caught it than otherwise would have done so, and it increased the general amount of the disease.

With regard, however, to the success of the practice, I may remark that frequently those who were not medical men, were the most successful. Some Carmelitish friars inoculated the Indians of South America very successfully; and the most successful inoculators in every part were non-medical men. A planter, at St. Kitt's, is said to have inoculated 300 of his slaves himself, without having lost one.

Medical men made a great preparation for inoculation by purgatives, emetics, and various drugs, and employed all these things also in the course of the disease.

They likewise confined their patients to bed, and kept them in a hot room, with a view to encourage perspiration. This practice aggravated the feverishness, and increased the mortality from the disease. Of course the disease was also kept up by so many being inoculated. Great fury prevailed against it, when in 1754 the London College of Physicians published a declaration in its favour.

Inoculation, however, met but with slender success till the time of a person named Sutton. This quack, however, used purgatives and common-sense treatment, and succeeded wonderfully, so that he spread inoculation more than the College of Physicians and all the doctors together. Sydenham practised free ventilation and refrigerants; but Sutton omitted the opiates which Sydenham was in the habit of giving, and gave calomel and tartar emetic. Sutton also restored the Turkish practice of making only a slight scratch with a lancet. The practice, indeed, fell very much into the hands of quacks. Medical men ceased to have recourse to it, but quacks took it up, and endeavoured to turn a penny by it.

Such, gentlemen, is the curious history of inoculation. Its efficacy was first doubted; the practice was afterwards approved; then violent disunion and party feeling was excited—the most virulent abuse was poured forth, and the thing dropped altogether. Then it was taken up by quacks, and quacks were frequently much more successful than the doctors, by not employing a number of medicines, which did harm.

When inoculation was first practised, it is said that only one patient out of fifty died; but now, not above one in two hundred die, and some have calculated not more than one in five hundred: whereas the mortality from natural small-pox was as much as one in six, where medical aid was rendered, and where there was no medical aid the mortality was frightfully great; and, in fact, at one time nearly all died where medical aid was not resorted to. The annual deaths from small-pox in England, during thirty years of the last century, were from 34,000 to 36,000. Before vaccination was practised, and after inoculation was established, one child in seven, throughout Russia, is said to have died from small-pox; whereas Spain, which did not trouble herself about inoculation, suffered far less than any other country, the disease having been kept up in others by inoculation.

Treatment.—In regard to the treatment of the disease, there is nothing peculiar in it; it is only the treatment of any ordinary fever. The utmost cleanliness should be observed; the patient should have plenty of clean linen; and mild antiphlogistic diet will be proper—at least in the first instance. There is no harm whatever in cold or tepid ablution, provided the body is hot. Some say that they have stopped the disease by affusion; but you may have recourse to tepid ablution if there be any objection to cold; and as the stench is very great, it would be well to wash the patient with a solution of the chlorides, and use them freely around the bed.

Now and then it may be proper to bleed. The head is sometimes so much affected that general bleeding may be premised in the case of adults; or at any rate the application of leeches to the temples. The pain in the loins, which characterizes the disease, generally goes off very soon, but the oppression of the head may require local bleeding, or, in adults, general bleeding. Usually the latter is not necessary, but every practitioner must judge of that for himself. Purgatives are proper; the bowels should be kept freely open. By cleanliness, the employment of the chlorides, purging, bleeding (general or local), and low diet, the disease will be got through in the most favourable manner.

But after a time, if debility come on, especially if the patient's pulse become weak, or if the pustules be not well filled, and there be no violent local disease; if, in short, there be any signs of debility, and of the disease assuming a typhoid type,—then wine and stimulants should be given. Sydenham was in the habit of giving opium at first, and I must say I think in that respect his practice was bad. You may consider that, in confluent small pox, when the patient is covered with pustules, such an immense number of little abscesses are equal to one large one. There is universal suppuration of the surface, and the patient requires to be supported just as he would in the case of a common abscess. It is frequently necessary, too, towards the close of the disease, to give wine, ammonia, and sulphate of quinine, with good nourishment. But there may be, on the other hand, such sharpness of the pulse, and such general irritation, that measures of this nature are improper; and you must be contented with giving the patient, perhaps, no more than milk or whey, and keep him cool. There is, as I have already said, nothing peculiar in the case; it is only the treatment of fever.

Some have advised (it is an old practice, but it has been talked of again lately) letting the matter out from each pustule: you might do this with a needle; and it is said that there is some utility in the practice. Any inflammation that may occur, whether in the head, eyes, bronchiæ, or intestines, requires to be at-

tended to. You must constantly be on the look out for these affections; but the treatment is certainly to be conducted altogether on general principles. You have only to remember that you are treating, not merely an inflammatory, but a specific disease—a disease attended by suppuration on the surface. Fresh air, cleanliness, and the chlorides, are very proper, just as in other cases.

Affection of the Larynx and Trachea.—I omitted to mention that, among the internal affections of the mucous membranes, that of the larynx and trachea frequently suffer much; and many children die from the upper part of the trachea being blocked up. If you look into the larynx of those who have died of small-pox, you will find it filled with a thick tenacious mucus, and much swelled. I believe many children die in small-pox really from the larynx being obstructed in this way. It is a point to which Mr. Alcock, the surgeon, has particularly attended; and in consequence of having had my attention directed to it by him, I have frequently examined the larynx of children who have died of this disease, and its state has been such as to astonish me. There has been great inflammation, and such effusion of thick stuff as very nearly to block it up.

[The last part of the above was given as the first portion of the next lecture, but we have thought it better to insert it here, so as to complete the subject.—E. G.]

CLINICAL LECTURE

UPON

THE LARYNX—LARYNGOTOMY—AND THE CIRCUMSTANCES UNDER WHICH THAT OPERATION OUGHT TO BE PERFORMED,

Delivered at the Middlesex Hospital,

BY SIR CHARLES BELL.

SIR CHARLES BELL began his course of clinical lectures by presenting a classification of all the cases which were then in the hospital. He read a short account of these under their different heads, and pointed out, in each department, the proper subjects for the students' attention, and the mode in which they should prosecute their studies. This, which was intended for a single lecture, was extended to five, in consequence of the rule by which the lecturer guided himself, of alluding to all consultations and operations immediately after they occurred. The operations of hernia, of trepan, of amputation, and of laryngotomy, were the subjects thus casually introduced: and we select the last.

Case.—Jeremiah Kentish, aged 60, a labourer, was admitted on the 23d October, by Dr. Watson, with general anasarca, his legs and thighs being more swollen than the rest of his body. His respiration was difficult, and attended with a wheezing sound, audible at some distance. He complained also of cough, and of inability to lie down in bed; and stated that during the preceding night, he had been nearly "choked." His pulse was hard, but not full. His bowels were reported regular; his urine scanty, though he had a frequent desire to void it.

He declared that the swelling came on suddenly, only five or six days before; that at first his face was so much swollen that he could scarcely see; that he had no previous illness, except a recently slight shortness of breath; and that he knew no cause of the attack.

16 ounces of blood were directed to be taken from the arm, or more, according to the effect of the bleeding; and 8 ounces from the chest, by cupping.
4 grains of calomel to be given immediately; and a senna draught four hours afterwards.

24th.—He was bled from the arm to 24 ounces, with very little relief to his breathing. The blood in some of the vessels only is buffy. He now says that he lost a pint and half of blood the night before his admission. His bowels have been thoroughly purged. Urine plentiful, acid, and with a pink sediment. The anasarca has almost entirely disappeared. He is now sitting up in bed, breathing with great labour, and with a loud stridulous noise, which accompanies both inspiration and expiration: he refers all his uneasiness to the larynx, and to the ensiform cartilage. He swallows with difficulty, and every effort of deglutition excites a fit of choking with cough. There is no morbid appearance to be seen in the fauces. He has expectorated a small quantity of viscid yellowish mucus. Every part of the chest sounds well on percussion, and the murmur of respiration can every where be heard, almost drowned, however, in the louder laryngeal noise.

He vomited freely soon after swallowing a scruple of ipecacuanha. This was followed by no improvement.

12 ounces of blood to be taken by cupping from the back part of the neck.
3 grains of calomel to be given every three hours; and $\frac{1}{3}$ of a grain of the acetate of morphia immediately after the cupping.

During the afternoon the steam of hot

water was inhaled for some time, and 20 leeches were applied near the larynx.

In the evening the difficulty of breathing increased still more, and each act of respiration was attended with a loud croupy sound: his countenance was now anxious and ghastly, and his pulse was less firm. It was Dr. Watson's opinion that he would probably not survive the night, unless the operation of tracheotomy was performed, and that his general condition was such as to afford good ground for hoping that his life might thus be saved. Between 8 and 9 o'clock, he sent to request Sir Charles Bell's assistance, who immediately attended at the hospital. Mr. Joberns and Mr. Arnott were also present; and all agreed upon the propriety of proceeding to the operation forthwith.

Although the patient was placed in a bed at the further extremity of the ward, the crowing sound of his breathing could be heard before entering. Upon approaching him, he was seen sitting forwards, moving with restlessness from one side of the bed to the other, and throwing his arms about, as if seeking for some new place of support. His countenance was pale and expressive of great anxiety, and his lips were of a livid blue colour. His shoulders were in continual action, being alternately elevated and depressed to the utmost; and the prominent larynx moved up and down in a remarkable manner, corresponding with the laboured heaving of his chest. He spoke with sudden, and as it were, convulsive efforts, earnestly expressing how thankful he should be to have the obstruction of his breathing removed, and said that in every other respect he felt easy, being free from pain except at one part, pointing with his finger to the lowest part of the larynx.

It was remarked how very short the space between the larynx and the sternum was, and that when the larynx was drawn down by the action of its muscles, there was scarcely half an inch between the upper part of the cricoid cartilage and that bone.

The operation was begun by pinching up the skin over the space between the thyroid and cricoid cartilages, and then dividing the fold thus made with the knife. Two small arteries, which threw out a stream of blood more than two feet, had to be secured by the ligature. After dissecting a very little, the point of the knife was thrust into the membrane which joins the fore part of the thyroid and cricoid cartilages, and the blood in the wound showed by its frothiness that the air-passage was opened. The longitudinal slit which was thus made, was enlarged by cutting with the bistoury sideways; and after this was done, it was attempted to introduce a silver canula into the trachea. But as soon as this instrument entered the larynx, a dreadful paroxysm of suffocation was the consequence: the patient gasped, struggled, and drew his breath with a moaning sound, occasionally interrupted for some seconds, as if he were on the point of ceasing to respire altogether; and it was a considerable time before he could be restored from this attack so as to submit again to the operations of the surgeon. It was next attempted to keep the slits of the wound apart by introducing a catheter wire, previously bent upon itself, into the opening; but another paroxysm of suffocation, more alarming than the former, and lasting a greater while, was immediately produced; and the interrupted and vain attempts to express his distress with words, the laborious heavings of his chest, the perspiration starting in drops from his face and brow, all showed the intolerable nature of his sufferings, and how impossible it was to retain such an instrument in the wound. Finding it thus impractible to preserve a tube within the trachea, it was resolved to remove as much of the membrane which surrounded the opening already made in the larynx, as would permit the air to have a free passage into the lungs. Upon commencing to do this, it was astonishing to every one to what a depth the larynx was withdrawn, it being not less than an inch and a half from the surface of the wound. What principally, however, created a difficulty in the object proposed by the operator was, that the inner membrane of the larynx had become so extremely irritable, that whenever it was touched, however slightly, by the hook, the blades of the scissors, or any other instrument, a fit of coughing and an attack of laborious breathing were excited. Besides this, the larynx had a continual rapid movement upwards and downwards, (resembling the incessant rising and falling of the piston of a steam-engine at work:) and thus the depth of the larynx, the extraordinary irritability of the mucous membrane, the constant movement of the windpipe, together with the filling up of the wound with blood, as quickly as it was sponged away, all conspired to make it an operation of great difficulty to remove the angles of the membrane that were left. Another circumstance was observed deserving of attention, since it prevented respiration being performed through the orifice in the larynx: at each inspiration, the lips of the opening, which were seen to be expanded during expiration, became completely shut; and this was obviously consequent upon the thyroid and cricoid cartilages being drawn, by the action of their muscles, more closely together during the act

of inspiration. Sir Charles Bell remarked that the spasmodic action, producing this shutting of the orifice, even caused the cartilage to pinch the point of his finger when it was applied over the part: and it was from observing this fact that to some of the witnesses of the operation it appeared indispensably necessary to have a tube inserted into the windpipe. The cricoid cartilage was so hard, that it was supposed to be ossified: and whenever the bistoury or strong scissors were employed to cut a piece out of it, fresh paroxysms of suffocation were produced. Several loose portions of membrane were removed from the orifice in the larynx, and also those loose portions of the cellular membrane which were in danger of being sucked inwards during respiration were snipped away. Two catheter wires were then employed to hold the integuments apart: this was accomplished by doubling each of the wires, and forming their bent extremity with a hook, resembling that which is sometimes used for holding the eyelids separate in operations upon the eye: one of these hooks being inserted on each side of the exterior wound, and the wires being bent round and fastened at the back of the neck, the surface of the windpipe was kept freely exposed to the air. When this contrivance had been applied for a little, the breathing became greatly improved; and as an indication of the relief which the patient had received, he fell sound asleep. The crowing sound continued, which proved that his breathing was not altogether performed through the wound. An assistant had to be placed behind the bed-chair to prevent the patient's head from nodding forwards in his sleep, which he had already shown deranged the apparatus in the wound. The pulse was 93, and of good strength.

3 grains of calomel to be taken every two hours.

25th.—He passed a tolerably good night, sleeping a good deal at intervals. The aperture is smaller by the swelling of the soft parts. The respiration is carried on chiefly through the wound, but with labour and hissing, and occasional expulsion of viscid mucus. Last night a small portion of his powders was observed to issue at the wound; and the same thing has since happened upon his swallowing milk. He can swallow liquids only; and he experiences some difficulty, apparently, when they are in the act of passing through the bag of the pharynx. The sound over the chest, on percussion, is good: some large crepitation is heard by the stethoscope. The pulse is smaller, and wiry. His bowels have been once opened. He is to continue his medicines, and to take arrow-root and milk from time to time.

Vespere.—He is much more comfortable: a metallic tube has been introduced into the trachea, through which he respires easily. His breathing is attended with but little noise. He has an urgent occasional cough, which is relieved by expectoration of tough mucus, partly through the tube and partly by the mouth. His bowels have been opened five times. His pulse is above 100, small, and sharp; his tongue is clean.

Opii, gr. $\frac{1}{2}$, statim. et adde sing. pulv.
Opii, gr. $\frac{1}{3}$.

26th.—He has passed a good night, sleeping a good deal. The pulse is more tranquil and natural. His tongue clean and moist; his countenance is greatly improved; he has had three stools. An opiate enema was administered. In other respects he is the same as at the former report.

27th.—He has had a good night. He speaks better, but he does not breathe more easily through the natural passage. His gums are tender, and he has the mercurial fœtor. The calomel is to be omitted.

28th.—He is going on well, and his countenance is more natural. A larger tube has been inserted.

29th.—He is improving; the tube has been out for about an hour, and he breathes easily through the wound, which is suppurating. When the opening is closed, he soon begins to be distressed; though he seems to breathe better through the natural passage than he did. The fits of coughing have been less frequent and less violent, and the expectoration less viscid. He asks for more food. The act of swallowing is more easy, but it still produces a little coughing; and a small quantity of the fluid which he takes still passes occasionally by the wound. The pulse is 82, of moderate strength; the bowels are open; his gums are very tender. He is to have three eggs a-day, beat up with his milk.

30th.—He has passed a bad night, with much coughing and expectoration. The tube, by some misunderstanding, has been left out since yesterday morning. A portion of his liquid food still appears occasionally at the wound. The bowels are open; his gums tender; the pulse as before. The tube is to be immediately replaced.

31st.—He has been more comfortable since the tube was replaced, and seems to be much in the same condition as before its removal, except that his pulse is rather more frequent.

Nov. 6th.—The tube has been out since the 3d, and he has continued to breathe comfortably through the aperture, which is contracting. He breathes partly through the mouth, and can bear to have the

wound closed for a little time without inconvenience. His gums are still tender. He sleeps well; his bowels are regular; his pulse is good, and his appetite keen. Occasionally a small portion of his food shews itself at the wound. He swallows much better, and seldom coughs after doing so.

16th.—He breathes through the natural passage, and the opening is completely closed. His pulse is 95. He is somewhat hoarse, and says he has a feeling of soreness in the wind-pipe internally, in the situation of the wound.

Sir Charles Bell began his lecture by remarking, that as it was early in the season, few of the gentlemen had probably advanced so far as to be familiar with the larynx by demonstration, and the older pupils would not be unwilling to hear a short recapitulation of the anatomy. He should therefore give a description of the larynx. This he did, first taking it as a piece of mechanism, consisting of cartilages and muscles, and then he dwelt upon the sensibilities with which it is endowed. It was, he said, a surprising circumstance, that this sensibility, which was a guard upon the passage to the lungs, and without which we would not have a moment's security to life, should become, from the circumstances to which he was about to allude, a cause of death: for if foreign matter lodge about the glottis, though it be quite too small to interrupt the passage, yet will it produce spasmodic stricture. If the morsel be interrupted in the pharynx, the glottis is spasmodically shut; if the surfaces hereabouts be inflamed, the very air itself becomes a source of irritation and spasm; and if ulceration should take place, or coagulable lymph be thrown out, it will cause death, more by exciting the spasm of these muscles than by producing actual obstruction. He then drew a contrast between the condition of the parts as we examine them in the dead body and the actual circumstances in which we may have to operate. It would seem, he said, strange that he should recommend the exercise of the imagination in an art like surgery; and yet some of the most dangerous precepts are to be found in books, because the authors have not set forth the actual circumstances, the scene in which the surgeon has to act, and the condition of the patient who has to suffer. At present he had no occasion to describe to his hearers the actual circumstances, or to excite their sympathies: they had seen this old man, after long suffering, sitting up in bed, incapable of utterance, looking round for aid, gasping for breath, and his hands abroad; his face and neck flushed, and his eyes sparkling.

"You have witnessed," continued the lecturer, "the condition in which you have to operate in these cases. So far from being able to lay the patient down, or stretch out his neck, you have seen how the shoulders, sternum, and clavicle were raised, the head drawn down, and the cartilages of the larynx squeezed together by their muscles. But most of all, it is necessary that you reflect upon the condition of venous turgescence, and, indeed, of arterial action too, which characterizes the parts. I am reminded of this by a circumstance which you see stated in the case: the skin was pinched up and cut across, and this was immediately followed by streams of arterial blood from both sides of the wound. If I had cut upon the thyroid gland, you would have been able to tell me whence this blood came; but these arteries did not belong to branches of the third, fourth, or fifth degree of minuteness—they are not known in your anatomy—they are merely cutaneous vessels; and yet you saw that they both required the ligature. This should teach you to be very observant of the circumstances in which you operate: and you would do well to remember that the veins bleed with unexpected profusion, in consequence of the difficulty of the return of blood into the chest during this condition of obstructed breathing.

There cannot be a greater proof of the suffering and anxiety of a patient with impeded respiration, than the readiness with which he submits to the operation; since it is one which must appear to him of the most desperate nature, and which he has heard of only as the certain means of death. Again: you have seen what has always appeared to me a remarkable phenomenon; no sooner is the breathing made free by your operation than the patient falls asleep. This man, although half a dozen candles were close to his face, and we were, with bloody hands, still actively engaged in providing for his safety, fell sound asleep. Can there be a better proof of his long-continued struggle than this? Can there be a better instance of the value of our profession?

Sir C. Bell then made a distinction of the cases for which this operation requires to be performed *.

In the present instance, where there is no accident, or drawing in of a foreign body into the windpipe, we have to ascertain where the disease is seated; and you may have perceived how my excellent colleague was desirous, by percussion of the thorax, to find whether the lungs were

* See a lecture by him on Tracheotomy, for extraction of a body drawn into the windpipe, in the fifth volume of the Gazette.

affected, or were in any measure the cause of the patient's very obvious distress. It has occurred that the operation has been performed when the impediment to breathing was below the part operated on; and the suffering has thus only been aggravated. The disease in the tube may be venereal ulcer, or scrofulous ulcer and abscess about the cartilages of the larynx; or cynanche laryngea, or cynanche trachealis. The inflammation may have subsided, leaving an œdema of the membrane of the larynx, which is in danger of choking the passage: and all these circumstances are important, since the success of the operation will depend on the temporary nature of the obstruction.

Perhaps the most important question that you can entertain, regards the time when the operation is to be performed. I have known it repeatedly happen that the medical consultants have delayed the operation, in the expectation of the circumstances of the case more distinctly vindicating the propriety of their decision. Observe, then, how a disease, which is local at first, extends its influence to the lungs themselves. The spasm in the larynx, and the laborious respiration, are, at last, attended with effusion into the lungs. Either the mucous secretion in the bronchi is increased, so as to impede the entrance of the air, or the effusion into the cellular texture of the lungs compresses the bronchial cells: however this may be, the effect is but too obvious; we see it in the common inflammatory croup, that the child, which is at first struggling with an obvious difficulty of breathing, and with the face flushed, lies, after a certain time, more composed, with less frequent cough, and with cheeks pale and cold. If in this condition the larynx or windpipe could be relieved, it would avail nothing; the child would not recover; and so I have known the operation delayed in an adult who had cynanche laryngea, until coldness and indifference characterized the condition of the patient; and when the operation of laryngotomy was performed, there was not even a temporary amelioration produced.

On the 17th the subject was renewed, on coming down from the visit to the patient.

You have again seen this man, reduced somewhat and pale, and his voice more raucous than natural, but otherwise perfectly well, and only desirous for more food. The opening is closed; in short, he presents such a contrast to his former condition of agitation and suffering, as must interest you in the practical question. It now appears to have been a case of inflammation of the larynx; and it is possible that much of the difficulty of breathing may have proceeded from œdematous swelling of the membrane. The case naturally recalls to my recollection some other occurrences. Some time ago a man lay in Hertford ward with a disease in the head of his tibia. There was reason to believe that the pains were syphilitic; and you are aware that when this disease has thoroughly affected the bones, mercurial action should be slowly raised, and long continued. He was attacked with mercurial erythema; and, as frequently happens, a blush in the pharynx showed the sympathy of that surface with the general condition of the skin. As soon as this was observed, the treatment was immediately changed; but a night or two after, he was seized with suffocation, and the house-surgeon being raised from bed, thought to relieve him by bleeding. The patient died before the morning. Now although such treatment might account for his death, in the lowness and faintness that accompanies the mercurial action upon the system, yet it appeared from the condition of the membrane of the glottis, as disclosed upon dissection, that we might ascribe his death, with more probability, to the serous effusion and gorging of the membrane of the rima glottidis.

There is another subject which it is my duty particularly to press upon your attention. Many of you must recollect the young woman who lay opposite to the door in Northumberland ward; she was subject to disease apparently of the kidney and bladder, but may have struck you more, perhaps, as being a remarkable example of aphonia. She could not produce the slightest tremor in speaking; her whisper was so low, that it required the nurse to put her ear close to her lips; and what gave unusual interest to her case was, that she had had the operation of laryngotomy twice performed on her. She must have been attended by a ready-handed surgeon; for besides this, she had suffered extirpation of both amygdalæ. Now this girl one night had an attack of difficulty of respiration, amounting almost to suffocation; but this was removed by giving her ether and opium. She had, besides, other symptoms strongly characteristic of hysteria; and I confess to you, that my conception altogether of this case was, that the operations had been performed without necessity. I remember to have been sent for to perform the operation of laryngotomy in a woman, whom I found struggling in an hysterical paroxysm. The next morning she breathed and spoke perfectly well, but could not pass a drop of urine. Now these are circumstances occurring under your own eye, which I have no doubt will persuade you, that discretion and the power of discriminating, are above

every thing necessary in the practice of your profession. And here let me point out to you a paper in the last volume of the Medico-Chirurgical Transactions, by Mr. Wood, as conveying a great deal of information upon this subject, and as an example to you. He had been well educated in anatomy and pathology; but not satisfied with that, as has been too much the usage here, he has had recourse to books, and has furnished us with a paper well supported by authorities and sound argument. This is becoming in young men when they write on practical subjects; and nothing can be more ridiculous than the contrary mode of proceeding—when you find men, in the first years of their practice, dictating to the whole profession. You will hear with regret that this young author, who promised so well, has very lately died of cholera.

Let me now say a few words upon the operation. The perforation of the tube, in this case, was made in the membranous space between the thyroid and cricoid cartilages; but I must acknowledge, that when there is disease in the larynx, it would be well if the operation could be performed lower down. Let us not, however, conceal from ourselves the difficulty of doing this. If you cut upon the fore part of the trachea, you have a deluge of blood from the thyroid gland or guttural veins; and you must suspend the operation or use the actual cautery; and unless this precaution be taken, that may happen in your hands, which has happened again and again, that the patient has been suffocated—drowned, I may say—in his own blood. After reading the case, I need not point out to you how much the sternum is elevated, and the larynx drawn down—how the trachea is sunk, or drawn backwards—how deep and confined the whole space is; and it is these considerations which suggest to me a slight change on the mode of operating. If you see reason for operating lower than the part perforated in the present instance, instead of cutting with the knife carried longitudinally on the face of the trachea, where blood flows at every touch, clear the convexity of the cricoid cartilage, and keeping close to its surface, the firm cartilage being your guide, separate the soft parts, pushing them downwards off the front of the tube. Having done this, perforate, with the knife transverse, between the cricoid cartilage and first ring of the trachea. If blood should be in the wound at this time, it will not be drawn into the windpipe, because the slit which you have made in the tube is not open. Through that slit I would have you introduce the canula; but to do this the canula must be prepared. To have a sharp stilette in it is not without danger; for you must recollect that it is on record, that, in attempting to perforate with the trocar and stilette, the trachea has been transfixed. This is a thing not easily comprehended whilst you study these parts in the dead body, but witnessing the difficulty of doing the operation in the living body, you may conceive it possible. The canula must have within it either a conical piece of wood, or a bougie, which shall pass easily into the slit, and convey in the silver tube; or the tube itself must be cut obliquely at the further end, so as to slip into the perforation; which latter mode is much to be preferred, because the instant it is introduced there will be relief; whereas by using the trocar with the stilette, there is a temporary obstruction of the windpipe. When a tube is introduced into the trachea further down than this, and retained there for some time, the ring above the perforation is pressed inwards, and made convex toward the calibre of the tube, so that there is a permanent straitening of the windpipe at that part; and this, I conceive, will make it difficult, in the event of present success, to withdraw the tube and restore the natural respiration. In the manner of operating which I have suggested, the greater firmness of the cricoid cartilage will prevent this indenting of the upper edge of the perforation. I always hesitate to recommend what I have not actually done, for unexpected circumstances present themselves. I return, therefore, to the consideration of the operation as you have seen it performed. When the membranous space between the thyroid and cricoid cartilages is opened by a crucial incision, upon holding aside the integuments, the patient at once breathes freely. This is of the utmost consequence; it immediately gives him composure; he recovers from the struggle which has perhaps too long continued; and the relief is so perfect that he falls asleep. Now this is so essential a benefit, that we must not resign it without very deep consideration. If, for example, on perforating lower down, the inner membrane should exhibit a degree of irritability at all equal to what you saw in the present instance, you would not be able to give the patient relief—certainly not that immediate relief which is required, and only by cutting out a portion of the cartilage. With regard to the effect of this removal of a portion of the cartilage I speak with some hesitation; but it has occurred in this hospital, when the windpipe has been cut by the suicide, that the cartilages have retracted. An unfortunate girl, determined on destroying herself, put a penknife into the centre of her throat and cut downwards, dividing the rings of the trachea; she lived several weeks, and on

her death the trachea was found very much diminished in its calibre, by the curling in of the cartilages. If we make the incision longitudinally, without taking away a portion of the cartilage, we cannot expect that the patient can have that relief which we have seen given in the present instance, unless we introduce a tube. Holding up the chin and stretching the neck would not tend to open the slit which you have made in the windpipe, but the contrary; whereas you have seen that in perforating above the cricoid cartilage, by holding apart the integuments, and stretching the neck, the patient was remarkably relieved. The snipping away of the angles left by the crucial incision in the membrane, is not so likely to be permanently injurious as taking away a portion of the cartilage, which is essential to the mechanism of the tube, and for preserving the freedom of the passage. The same observation does not apply to the cutting of the cricoid cartilage; but you will remember that it was not my intention to cut through that cartilage; for as it is a continuous ring, and firm at the back part, it would not have opened out: my object was to notch it, and to enlarge the membranous space. It is, perhaps, just as well that the ossification of the cartilage, and the irritability of the membrane within, prevented my accomplishing this, since the recovery has, in all probability, been the more rapid.

REMARKS ON THE *Structure and Formation of the Membranes* OF THE HUMAN OVUM.

By Robert Lee, M.D. F.R.S.*

[With an Engraving on Wood.]

The difficulty of determining the precise period of impregnation, must render all observations on the human ovum before the middle or near the end of the second month more or less vague and uncertain. After this time the organization of the ovum is so far advanced, that the membranous layers which envelop the embryo, and the form of the embryo itself, can be clearly perceived with the naked eye. The amnion is then a transparent sac, which contains the embryo and the fluid in which it floats. The chorion, covered with villosities on the external surface, surrounds the amnion, but is separated from it a short distance by the interposition of a gelatinous fluid, which is deposited in a very delicate reticular texture. There is a third membranous layer, namely, the decidua, which completely surrounds the chorion, and connects the ovum with the inner surface of the uterus. This, as is well known, appertains not properly to the ovum itself, but is a production of the lining membrane of the uterus; for in cases of extra-uterine conception, the chorion and amnion alone envelop the embryo, and a deciduous membrane has been found lining the cavity of the uterus.

In a specimen, however, of Fallopian tube conception, which I assisted in removing from the body of a lady who died about the eighth or ninth week of pregnancy from rupture of the tube and internal hæmorrhage, no organized deciduous membrane lined the inner surface of the uterus, but the whole of it was coated with a thin layer of soft flocculent albumen.

It is to Dr. William Hunter that the merit is due of having first accurately described and represented in his engravings of the gravid uterus, the disposition of the uterine and reflected deciduous membranes. He has described the decidua as a very soft, tender, pulpy membrane, which lines the whole cavity of the fundus uteri, reaching to the beginning of the cervix, and passing a little way within the origin of the Fallopian tubes, at which place it is perforated by small openings. Besides that portion of decidua lining the cavity of the fundus uteri, another portion forms an external covering to that part of the chorion, which is not in contact at the inner surface of the placenta, and which he named decidua reflexa. The ovum lies between a part of the decidua vera, or that lining the inner surface of the uterus, and the decidua reflexa, both of which unite into one membrane at the edge of the placenta; or the decidua vera divides itself at the edge of the placenta into two laminæ, one of which passes between the placenta and the inner surface of the uterus, and the other forms the decidua reflexa, which covers the outer surface of the chorion as the pericardium does the heart.

When the decidua reflexa is beginning to pass over the chorion, there is

* From Medico Chirurgical Transactions, vol. xvii.

at an early period of pregnancy, an angle formed between it and the decidua, which is often extremely thin and perforated with small openings, so as to look like a piece of lace. In proportion as pregnancy advances, the decidua reflexa becomes gradually thinner and thinner, so that at the fourth month it forms an extremely fine layer covering the chorion. It comes at the same time more and more closely in contact with the decidua which lines that part of the uterus to which the placenta is not fixed, till at length they adhere together*.

Dr. Hunter has offered no explanation of the manner in which the decidua reflexa is formed, and Dr. Baillie, who completed his description of the gravid uterus, admits that the manner in which the decidua envelops the ovum has never yet been observed, and therefore can only be a subject of conjecture. The obscurity which has hitherto prevailed on this subject is probably referable in a great measure to the difficulty which has been experienced by anatomists of procuring the gravid uterus for dissection at a sufficiently early period, with the contents undisturbed. The extent of this difficulty will readily be estimated when I state, that the most early case of pregnancy which Dr. Hunter ever had an opportunity of examining in the dead body was of three complete months, and that his description of the contents of the gravid uterus before this period, was drawn entirely from recent ova expelled in abortion.

The greatest diversity of opinion still prevails respecting the structure and mode of formation of the deciduous membranes, though they have been carefully investigated since the time of Dr. Hunter, by many distinguished physiologists. Neither Lobstein, Krummacher, Gardien, Breschet, Dutrochet, nor Velpeau, have been able to discover the openings in the decidua, corresponding with the orifices of the Fallopian tubes, and the last of these authors has concluded from his researches, not only that the decidua invariably forms a shut sac in the uterus before the descent of the ovum, but that it is an inorganic layer, and wholly destitute of blood-vessels during the entire period of gestation. According to this view of the disposition of the parts, it is supposed that as the ovum passes through the Fallopian tube into the uterus, it pushes before it the deciduous membrane lying across the orifice of the tube, and thus acquires the thin membranous covering termed decidua reflexa. "L'ovule, après avoir parcouru la trompe, deprime necessairement la membrane caduque, pour se glisser entre elle et l'uterus, à la surface interne duquel il finit par se coller: dès ce moment, la membrane préexistante se trouve formée de deux portions; l'une, très grande, tapissant tout l'interieur de la matrice, à l'exception du point qui est en contact avec le germe, porte le nom de caduque uterine ou interne; l'autre, très petite, deprimée par la moitié inferieure de la vesicule fecondée qu'elle enveloppe, constitue la caduque reflechie interne, ou l'epichorion. L'etendue de la première augmente en même proportion que celle de l'uterus, et l'agrandissement de la seconde suit, de toute necessité, l'accroissement du germe. Aussi la cavité qui les separe, et qui n'est autre que la cavité deformée de l'ampoule primitive, est elle d'autant plus considerable qu'on s'eloigne moins des premiers temps de la gestation*."

Dr. Burns, who has enjoyed several opportunities of examining the contents of the gravid uterus within a month after conception, has given the same mechanical and erroneous explanation of the formation of the decidua reflexa. "In every case," he observes, "the decidua, consisting of two layers, is completely formed before the ovum descends. Where the embryo passes down through the tube, it is stopped when it reaches the uterus by the inner layer which goes across the aperture of the tube, and thus would be prevented from falling into the cavity of the uterus, even were it quite loose and unattached. By the growth of the embryo, and the enlargement of the membranes, this layer is distended and made to encroach upon the cavity of the uterus, or, more correctly speaking, it grows with the ovum. This distention or growth gradually increases, until at last the whole of the cavity of the uterus is filled up, and the protruded portion of the inner layer of the decidua comes in contact with that portion of the uterus itself which remains attached to the outer layer†."

* An Anatomical Description of the Human Gravid Uterus, by W. Hunter, M.D. pp. 79–83. London, 1794.

* Traité Elementaire des Accouchemens, t. i. p. 232.

† Principles of Midwifery. London, 1820. Page 184.

On the 10th of March, 1832, a young woman who was in the second month of pregnancy poisoned herself with oxalic acid. The uterine organs were removed from the body, without disturbing their contents, by W. B. Hutchinson, Esq. house-surgeon to the St. Marylebone Infirmary, and to his kindness I am indebted for the preparation of the parts now exhibited to the Society, and for the opportunity which has so seldom been enjoyed by anatomists, of dissecting the gravid uterus before the third month of conception. Both Fallopian tubes in this case were pervious, and the ovum being attached by the placenta to the inferior segment of the uterus, it was obvious that it could not have pressed before it the decidua reflexa in the manner usually represented.

Description of the Uterus and appendages of a Young Woman who poisoned herself in the second month of pregnancy.

The uterus had acquired double the size which it usually exhibits in the unimpregnated state. It was five inches long, three and a half in the greatest lateral direction, and two inches in the antero-posterior diameter.

A longitudinal incision was carried down the middle of the posterior surface, crossed by a transverse one parallel to the entry of the Fallopian tubes. The thickness of the parietes of the uterus, though greater than in the quiescent state, were not proportionate to the general increase in the dimensions of the viscus—they were four lines at the fundus, and six lines at the cervix, gradually increasing towards that part; the chief difference was observable in the already enlarged size of the uterine venous sinuses.

The deciduous membrane, which closely adhered to the inner surface of the uterus, was then laid open by two incisions parallel with the longitudinal and transverse incisions previously made in the parietes of the uterus. The cavity of the uterus being exposed, the ovum, about the size of a pullet's egg, came into view, and was observed to be situated towards the lower part of the uterus. The part of the cavity to which it adhered was included between two parallel lines, drawn, the one transversely across the uterus at the distance of half an inch below the entry of the Fallopian tubes, the other at two inches distance from the os tincæ. Consequently the ovum was situated altogether below the entry of the Fallopian tubes, and was unattached both at its upper and lower part, leaving a free space or canal between it and the os tincæ, corresponding to the shape of the elongated cervix, and a much larger cavity between the upper part of the ovum and the fundus uteri. But as this latter space is not only inexplicable on the received theories of the formation of the decidua reflexa, but directly at variance with these, it demands a particular and minute description.

Intervening between the superior and unattached surface of the ovum and fundus uteri, was a broad but shallow cavity, measuring three inches in the lateral and one inch and a half in the antero-posterior diameter, and from one to two lines in depth. The upper concave surface of the cavity, formed by the decidua lining the fundus uteri, or decidua vera, was irregular and slightly reticulated. The inferior convex surface formed by the decidua covering the ovum, or decidua reflexa, was perfectly smooth, resembling the external serous surface of the uterus. Into this cavity the Fallopian tubes freely opened by palpable orifices; that on the left side, by which the ovum had entered the uterus, being rather more than a line in diameter, that in the right rather less. The cavity thus formed between the decidua lining the fundus uteri and the decidua covering the upper and unattached portion of the ovum, was filled with a red-coloured serous fluid.

The ovum was next laid open by an incision through the chorion parallel with the longitudinal incision of the uterus, and the amnion inclosing the embryo was brought into view. The placenta was situated principally over the cervix and posterior part of the body of the uterus, and the decidua closely adhering to the placenta passed across the upper part of the cervix uteri, in the form of a thick reticular membrane. The decidua was then observed to extend upward between the uterus and chorion, every where firmly connecting these together as high as the entrance of the Fallopian tubes. From this point the deciduous membrane was spread out in two different directions, viz. over the upper convex and unattached surface of the ovum, and over the whole concave surface of the fundus uteri, so as to form

the cavity above described, into which the Fallopian tubes freely opened. The deciduous membrane interposed between the ovum and uterus exhibited the usual degree of development and of organization. Where it passed off from the uterus to cover the upper surface of the ovum, it was somewhat thicker than elsewhere, and was divisible into two distinct layers. The tufts of vessels of which the placenta is constituted were more distinct from each other than they subsequently become, and they filled the entire space between the chorion and decidua. The appearance of a division of the placenta into a fœtal and maternal portion did not exist. The different parts of this interesting and most beautiful preparation have been faithfully represented by Mr. Perry, in the accompanying drawing.

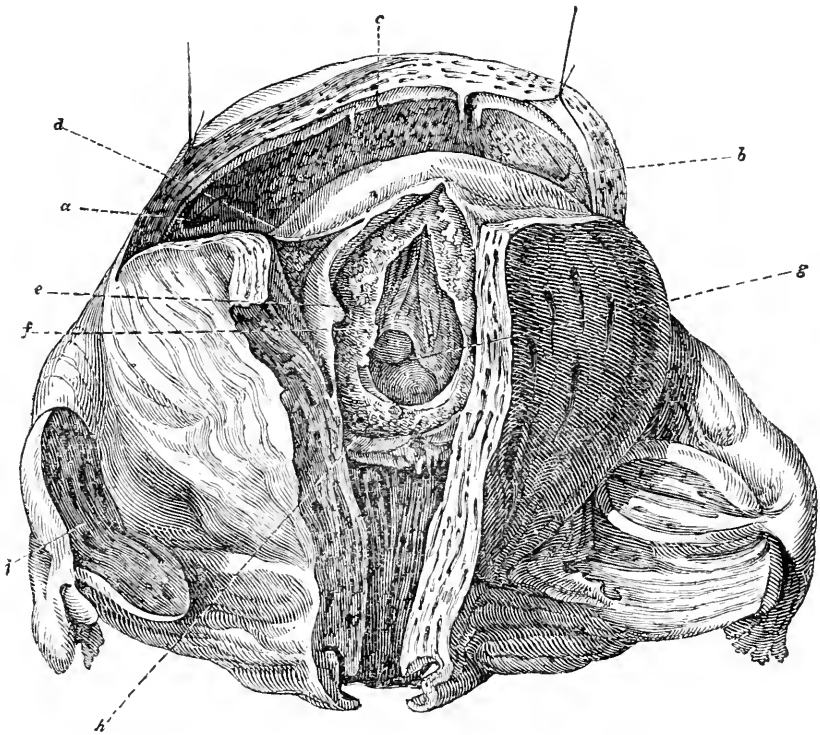
If the statements of the authors above alluded to, and the generally received opinions respecting the formation of the decidua reflexa be well founded, it would follow, that in all cases the ovum would attach itself to the uterus by the placenta, either directly over the edges of the orifice of the Fallopian tube, through which it had descended, or to its immediate vicinity, and that the deciduous membrane would never be found interposed between the uterus and placenta, as it invariably is. The facts which I have now adduced clearly demonstrate, that the Fallopian tubes are open in the early months of gestation; that the ovum may attach itself by the placenta to the fundus body, cervix, or over the os uteri, and that the deciduous membrane forms neither a shut sac nor inorganic layer, prior or subsequent to the arrival of the ovum in the cavity of the uterus. These circumstances are also strictly in accordance with the fact, that when the ovum can first be perceived, it lies loosely imbedded in the soft flocculent albuminous matter which at this period of gestation coats the inner surface of the uterus, and that this pulpy semifluid matter becomes gradually converted into those delicate organized membranous layers, by which the attachment of the ovum to the uterus is so firmly secured during the whole period of pregnancy. The albuminous substance interposed between the uterus and ovum becomes the decidua uteri, or decidua vera, while the albumen which envelops the unattached hemisphere of the ovum becomes the decidua reflexa. To whatever part of the uterus the ovum adheres by the placenta, its relation to the deciduous membranes will be the same, the decidua vera forming the connecting membrane between the ovum and uterus, and the decidua reflexa covering only that part of the chorion which hangs loose within the cavity of the uterus.

From the circumstances now detailed, it also follows that the names decidua uteri and decidua reflexa are improper, in so far as they are founded on speculative ideas regarding the mode in which these membranes are formed, and which, if not positively erroneous, are at least by no means demonstrated. It would be preferable to distinguish these membranes not in this hypothetical manner, but from their anatomical relations, which must be true, whatever be the fate of our conjectures; and I therefore propose to denominate them respectively decidua uteri and decidua ovuli, or uterine and ovuline decidua*.

At the end of the fourth month of gestation, when the ovum has enlarged so as to fill the entire cavity of the uterus, the decidua uteri and the decidua ovuli coalesce, and during the remainder of pregnancy form a thin, soft, pulpy membrane, which is closely united to the inner surface of the uterus, by numerous small tortuous blood-vessels and flocculent fibres. At this period also the villosities of the chorion have disappeared, where the placenta does not exist, and the amnion, the chorion, and the decidua, have become so firmly adherent to one another, that they constitute a membranous sac consisting actually but of one layer, though susceptible of being artificially divided into three distinct laminæ. M. Velpeau asserts, that the decidua uteri, and decidua ovuli, remain distinct membranes until the end of pregnancy; but in seven gravid uteri near the full period, which I have examined, I have never perceived more than three concentric layers in any part of the fœtal membranes. The existence of numerous blood-vessels, proceeding from the lining membrane of the uterus to the decidua, which has also been denied by the same writer, is clearly demonstrated by the preparations of the gravid uterus in the Royal College of Surgeons in London; and it scarcely admits of a

* The term ovuline decidua I have adopted at the suggestion of my ingenious friend, Mr. Owen.

doubt, that these vessels serve not merely to supply nourishment to the membranes which envelop the fœtus, but that they enable the amnion to secrete the fluid contained within its cavity. The numerous small arteries which proceed from the inner surface of the uterus to the decidua covering the placenta, are also, I conceive, solely destined to perform the function of supplying this organ with nourishment, and not, as has generally been supposed, to effect certain changes in the fœtal blood as it circulates in the vessels of the placenta.



Explanation of the Woodcut.

a, The right Fallopian tube, pervious.
b, The left, ditto.
c, The decidua uteri, or decidua vera.
d, The decidua ovuli, or decidua reflexa, covering the unattached part of the ovum.
e, The decidua uteri, passing down between the ovum and uterus.
f, The chorion.
g, The amnion.
h, The placenta, lying between the chorion and decidua, crossing the cervix uteri.

VENEREAL CASE TREATED WITH FUMIGATIONS.

To the Editor of the Medical Gazette.

SIR,

IN the autumn of 1831, Capt. T. contracted syphilis, which shewed itself by a chancre, occupying two-thirds of the prepuce, for which he took internally and rubbed in mercury, and apparently got well. About five months after this his general health became much deranged, and innumerable blotches appeared on all the surface of the body and limbs; for these, and on account of his ill state of health, he was advised to leave Ireland, and proceed to Harrowgate, for the benefit of the baths at that place, and other appropriate treatment.

He had scarcely commenced the former, when the blotches became open ulcerations, from the size of a common playing card to that of a sixpence. The irritability became excessive, and his health daily worse; he, notwithstanding, persevered in the treatment advised for eleven weeks, but only with progressive aggravation of all the symptoms. His physician then recommended his making the best of his way to London, and to take the sulphurous fumigations under my direction.

On his arrival, I found he had an ulcer in the throat; fœtid discharge from one ear; his forehead, nose, and cheeks, were covered with a continuous scab, with extended surface of coppery coloured redness round it and the other ulcerations; he had fœtid discharge from the nostrils, and snuffling speech, indicative of caries or disease of the nasal possages; nodes on each tibia, the pains of which occasioned his nights to be sleepless; and the original chancre was open to its former extent. He was in a very weak state, and the case seemed formidable; he, however, commenced the sulphurous fumigations on the 26th of September, taking one daily. His improvement, even under this simple mode of treatment, was rapid. In the short space of a week, more than one hundred of the ulcerations had healed, his throat was better, and his general health seemed improved; but his night pains he stated to be increased. It should be borne in mind that, until this time, no internal medicinal treatment was resorted to; he solely took the sulphurous fumigations as directed by his physician, a gentleman who had in his own person experienced the advantages of them. Although the amendment thus far was so manifest, yet the leading characteristics of the case being considered, his physician being absent, and from my knowledge of the sulphurous fumigations, I dare not calculate on the progressive improvement of the patient, nor on the permanency of the benefit which he had already received, without the conjoint aid of mercury; I therefore felt it my duty to urge his taking further advice. He consulted Mr. Brodie, who was of opinion that mercury was necessary to establish a cure; and, there being no continuous surface free from ulcers, on which the ointment could be rubbed, he was ordered fifteen grains of blue pill every 24 hours, with sarsaparilla, and to continue the fumigations. He commenced the mercury on the 6th of October. On the 9th he was under the influence of the medicine, which was diminished to 10 grains. On the 10th it was further diminished to 5 grains in the 24 hours. On the 12th it was needful to discontinue the medicine altogether; he, however, went on with the sarsaparilla and the fumigations. The progress will perhaps be best considered by reference to the following note, which I had occasion to write to Mr. Brodie.

"Sir, I hope the case of Capt. T. will be satisfactory to you, and tend to prove the utility of the fumigations, which rendered very few of the blue pills necessary before he became duly influenced by the medicine. Every ulceration has healed; the pains in the shins have quite left him; the nodes are gone; and I think you will immediately perceive how much the coppery coloured redness has left the face, and is disappearing from all the healed patches on the surface of the body and limbs."

Dated Oct. 17, 1832.

From the date of this note, the patient's recovery proceeded with the same celerity as from the first of the treatment. He has left London, perfectly convalescent, and continues to take only the sarsaparilla. In all, he took but 34 fumigations between the 26th of Sept. and the 6th of the present month, and latterly only one every other day. This was the whole of the treatment that was resorted to, with the exception of one dose of castor oil, which was directed with a view of abating ptyalism. It may be said from the speedy recovery of this gentleman, that there was a favourable idiosyncrasy of the system, which disposed him to be so readily influenced by the treatment. It might be so; but such a conclusion, I think, should not be hastily assumed; for I have had similar cases, treated with similar success, and there has been no relapse though years have gone by; and I can now refer either to the patients themselves, or to the medical gentlemen whose patients they were. But confining myself to the case above stated, I would observe, it was one of those which at first sight, under the customary modes of treatment, would lead every medical practitioner to conclude that he should

have a rebellious, or perhaps an incurable disease, to contend with.

I think the success attending this and similar cases is mainly attributable to the *heat* by which the patient is surrounded when submitted to the process of fumigation; its advantages when we wish to mercurialize the system have long been acknowledged. I have often had to observe too the beneficial influence of the sulphurous fumigations, not only in venereal, but in other obstinate ulcerations. The stimulus of the sulphurous acid gas certainly agrees well with them, and disposes them to heal, as instanced in the above case, before the conjoint aid of mercury was resorted to; yet I cannot conceive that sulphurous fumigations would alone have done permanent good in such a case, without the aid of mercury. It is the combination of the two remedies, constituting in this country almost a new mode of treatment, which I think deserves the attention of the profession.

I feel, however, that I must conclude these remarks, concise as they are, on account of the value of your pages; otherwise, from a conviction arising from eleven years practical and exclusive experience with the results of the fumigatory method of treatment in various diseases, I believe that such observations, if more ably advocated, would embrace matter of valuable information in general, and of which many of the profession have only a very indefinite knowledge.

I am, sir,
Your most obedient servant,
JONATHAN GREEN.

40, Great Marlborough-street,
Nov. 20, 1832.

STATE OF THE TONGUE IN DISEASE.

To the Editor of the Medical Gazette.

SIR,

I HAVE often thought that the state and colour of the tongue in disease unduly influenced the minds of medical men; experience confirms me in the belief. Its situation in the inferior part of the mouth, and composed as it is, of muscular fibres, arteries, veins, nerves, and membranes, which, independent of the sympathy (a word used here in its conventional meaning,) established between it and remote organs, expose it to various changes. Though ready to admit that the supply of nervous energy which it receives from the third branch of the fifth, the hypo-glossal, glosso-pharyngeal, and thin interlacements with the great intercostal and par vagum, must influence its sympathetic appearances in diseases of the thoracic and abdominal organs, yet there are cases where these appearances have no physiological or pathological relation to the diseased viscus.

Our admiration of the great men who have preceded us in the paths of medical inquiry has, doubtless, often led us into erroneous conclusions, where, in our investigations of morbid or healthy structure, instead of following nature as our unerring guide, we set out with certain data which the writings of those men supply, and are content if we can only verify their descriptions. Had the genius of Bichat been content with the vague notions which Haller left us of the membranes, in which he could discover nothing but the modification of cellular membrane, his best claim to immortality would have been lost.

The tongue, which is covered by a mucous membrane constantly moistened with a fluid, secreted either by the imaginary glands of Bichat, the salivary glands of Piorry, or, according to Majendie, by the entire surface of that membrane, has, since the first records of medicine, been considered as an index of the healthy or diseased state of the stomach and intestines. That it does often indicate the condition of these organs, is certain; and perhaps one of the most accurate observations of Hippocrates is, that aphthæ on the tongue of adults, without any specific disease, indicate the scanty, capricious, and irregular action of the lower intestines; but that there are many cases where there does not appear the slightest sympathy between it and the diseased viscus, is equally certain. We often find ulcers in the mucous membrane of the stomach without any corresponding symptom on the tongue. The mucous membrane which lines the mouth being a continuation of that which covers the tongue, we might, *à priori*, suppose that its functions should be similar; but observation proves this not to be the case. This membrane, though similar in organization, differs

essentially in function, according to the organ it supplies: the pituitary differs from that of the stomach and intestines; in some animals the splenic and pyloric portions of the mucous membrane of the stomach differ; whilst, in the class ruminantiæ, the mucous membrane of each stomach differs in function from the other. The secretion of the mucous membrane of the tongue, which, like other mucous membranes, has been considered as an outlet for the effete matter of our bodies, is increased both by the nervous energy with which it is supplied, and the constant action of the tongue, by which the dilatation and contraction of that membrane is augmented.

Most writers on symptomatology are tediously minute on the importance of its appearances in disease; but many of the morbid hues which they make it assume, appear to me distinctions without a difference. Landre Beauvais says, if there be great dryness of the tongue in acute diseases, internal inflammation is to be feared; but then he says, that if the patient breathe with the mouth open, no inference can be drawn from it. Roughness of the tongue, which, he says, is caused either by weak or violent excitation of the absorbent vessels, or spasm, frequently indicates delirium; again, he says a villous tongue *may* indicate chronic weakness of the abdominal viscera, or inflammation of the lungs, and may announce the approach of hydro-thorax. What other anomalous diseases can such a tongue indicate? I shall not dwell upon the endless variety of shade, which the author of the Doctrine Physiologique insists on, confident that the less we suffer ourselves, in our diagnosis or prognosis, to be guided *solely* by them, the less cause we shall have to regret it. The same may be said of the coats of the tongue. We often see people in the enjoyment of good health, whose tongue is constantly loaded; and in France I find that several experiments have been made on the effects of abstinence on the tongue, which always appeared loaded as in disease, but which a little food soon cleaned. The mucus of the tongue being more abundant than that of the rest of the mouth, and placed, as the tongue is, in a never ceasing current of air (when the mouth is open) passing and repassing to the lungs, its aqueous portion must be incessantly evaporating, whilst its grosser matter becomes incrusted on the superior surface of the tongue, which its quiescent state in disease greatly assists. The rapid and hurried respiration which unavoidably ensues when diseases of the abdominal organs check the descent of the diaphragm, thereby diminishing the expansion of the lungs, must increase this dryness. How far the tongue may enable us to ascertain the nature of disease, and whether the serous parenchymatous, or mucous texture, be its seat, is a refinement at which I have not yet arrived. But when we find such men as Percival and Graves, of Dublin, disregarding, in a great degree, the appearances of the tongue in the management of disease, our faith in the paramount importance of the tongue, unless it be like fatanic faith wedded to some clear falsehood, must begin to yield.

I shall close this letter with a short extract from Dr. Graves on Fever:—"As to the tongue at an advanced period of fever, I have often derived the greatest advantage from wine and opium, although the tongue was dry, the colour of old mahogany, or else coated with yellowish-brown dry fur, and protruded with difficulty, while the teeth and gums were covered with sordes. Wine or porter, in moderate quantities, seem generally to agree better with this tongue than opium: in some cases, however, the latter is advisable."—I am, sir,

Your humble servant,
RICHARD BURKE, M.D.

4, Bolton Row, May Fair,
Nov. 7, 1832.

CASE OF EMPYEMA—PARACENTESIS—RECOVERY.

By W. G. GOWING, M.R.C.S.
Surgeon, of Norwich.

MR. RICHARDSON, æt. 22, a healthy active man, of fair complexion, by trade a baker, was, in March 1830, attacked with the following symptoms. An obtuse pain in the chest, difficulty of breathing, attended by painful inspirations, cough, quick pulse, dryness of skin, white tongue, great thirst, urine scanty and high-coloured. These symp-

toms soon yielded to the use of the lancet; sixteen ounces of blood were taken from the arm, a blister applied to the chest, and a purging mixture, composed of salts and senna, given every four hours till the bowels were freely evacuated. In about three weeks he was again able to resume his business, but did not entirely lose the cough. He occasionally complained of shortness of breath, with flying pains about the chest, till April 11, 1832, when the cough returned with increased violence; he soon began to lose flesh; his countenance became pale; his breathing more or less hurried by bodily exertion; pulse varying from 130 to 140 in a minute; urine high coloured; tongue clean and red. The fever which came on towards evening was generally preceded by rigors, and terminated by profuse perspiration. The expectoration at first appeared viscid and opaque, but soon assumed the character of purulent matter: from five to six ounces were discharged daily, for three months prior to the operation; his nights were passed almost entirely without sleep. The tartar emetic ointment was rubbed on the chest, five grains of ext. Papaveris given every night, and the decoct. Lichen. with mineral acid, three times a-day. His diet consisted chiefly of milk and animal broths. In consequence of not being able to lie on the right side, I was induced to examine the chest: the left side was evidently larger than the right, more particularly on the posterior surface. On placing my hand on the swelling, and desiring my patient to cough, I was fully convinced of the existence of a large quantity of fluid. I therefore felt no hesitation at once in recommending an operation, which my friend, Dr. Lubbock, fully concurred in, as the only chance of preventing immediate suffocation. On the 27th of July the operation was performed, in the following manner. The patient being placed on a chair, with his shoulders slightly elevated, the integuments were drawn up with the left hand; an incision was made between the second and third spurious rib on the posterior part of the chest with a lancet, through which a silver canula was passed, and upwards of eight pounds weight of matter evacuated. The canula was then withdrawn, and a compress of lint applied. Almost immediately after the operation the cough ceased, as also the expectoration.

28th.—Much relieved by the operation; passed a good night; pulse 110.

29th.—Passed rather a restless night; is free from pain and cough; a considerable quantity of matter discharged from the wound.

A pill containing five grains of Ext. Papav. and five grains of Pil. Hydrag. to be taken at bed-time. Took freely of milk broth.

August 3d.—He is improved in every respect. Pulse 100; appetite good; ate some animal food, and drank half a pint of porter.

Two grains of Sulphate of Quinine, three times a-day.

12th.—He gains strength daily, takes gentle exercise, and enjoys his food.

Sept. 10th.—Since last date he has improved in health and strength, being capable of sustaining considerable bodily exertion without much fatigue.

October 4th.—All appearances of pectoral disease gone, wound healed, and his strength completely restored.

From the history of this case, it appears reasonable to infer, if my patient had been left entirely to nature, he would inevitably have lost his life, and that the cure may very fairly be ascribed to the operation.

Norwich, November 8th.

MEDICAL GAZETTE.

Saturday, December 1, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

CLOGS OF THE ANATOMY ACT.

THERE never yet was a measure of any public import adopted, that there was not a host of dissatisfied cavillers raised to attack it. What grumblings, what abusive railings, and Billingsgate rhetoric, have we not heard poured out, in certain low quarters, against the act for regulating the schools of anatomy!

The resurrection-men themselves could not apparently take a warmer interest in denouncing it: no doubt its existence as a law is a dreadful grievance to the friends, followers, and survivors of Bishop; their occupation is gone—they must turn their hand to something else; but before they do so, we must not be surprised to find them uttering volleys of curses on what they consider to be the hardship of their situation. They curse the friends of order, they revile the legislature; above all, they abuse the Act. This, however, is just as it might be expected: for our part, we have no whit the worse opinion of the Anatomy Act for all their abuse.

Forsooth, it does not work well: there has not been a competent supply of bodies in the schools since the beginning of the season—the first season of its operation. This puts us in mind of the extravagant expectations of certain people regarding another bill—which was to give them meat, drink, and clothing, almost without asking for either: but, alas, they have only been disappointed! Will such persons never have common sense, moderation, patience? A state of things of the most odious description has been got rid of; a band of desperadoes, the terror of the public, the detested, though necessary, agents of the anatomical teachers, have been dismissed; and a new order prevails. The machinery is stiff as it sets to work in the commencement; the discontented pick flaws in it, and the impatient are up in arms because it is not perfection itself.

We never had any idea of maintaining that the Bill—still less the Act—even approached perfection: we took it, and made up our minds to be content with it, seeing that it was probably as good as could be hoped for from the public and the legislature, in this boasted time of enlightenment. It was our impression, after duly considering the state of public feeling, that we ought to make the best bargain we could, and not stand higgling for comparative trifles; and having obtained the Act, either as a boon or as a right—for we do not care to consider which—we thought, and continue to think, that the measure should be allowed a fair trial: the question should be, not how does it work, but rather, has it got time to work? Such as it is, we should conceive it but prudent not to encumber and clog its operations by superfluous or unneeded assistance. Plan after plan is suggested to improve or guide the machinery: we should recommend great caution in adopting any; or at all events, any proposition that should be adopted ought to be clear and explicit, and beyond a suspicion of being engendered for a partial purpose.

There has been indeed only one plan proposed which we deem deserving of notice—that for securing an equitable distribution of the subjects obtained from the parishes. It was discussed at two meetings of the principal metropolitan teachers of anatomy; it was adopted by a decided majority; but we find, after all, that it is not to be acted upon. This may seem strange, but it is not without some shew of reason: it results from the present supply from the parishes being limited, and the principle which seems to actuate the non-contents is, that where there is scarcity and dread of a famine, it is better that a few should be well provisioned than that all should starve.

In truth, here is the hitch in the old place: it is not the profession that is wanting to the public, but the public to the profession. The legislature has done its part—the public have but partially done theirs.

Several of the parishes have handsomely come forward, and liberally supported the views of the legislature; but a large number, we regret to say,

have refused to give up their unclaimed dead—or rather, they take care to leave none unclaimed.

But whence is this refusal?—are we sure that it emanates from the collective sense of the parishes, or from the individual wisdom of the overseers? Are the public (or that portion of it included in those latter parishes) really chargeable with this embargo on science, or is it the doings of their functionaries? That these persons are immediately the obstructors of the supply, we know; how far they act by authority, we are not sure: but we would fain believe it a libel on the public name to attribute the obstruction to that source.

After so many years of well-contested argument, with the ultimate surrender of opinion, if not conversion, of the great unprofessional mass of the community, are we now to have a recusant opposition imputed to them, in consequence of the inveterate prejudices of a few? The charge clearly comes home to those personages who hold the office of overseers, and who should bethink themselves well what they do when they proceed to interpose their brief authority between the public good and their own self-importance: they should see that their zeal may not overstep their discretion. We say not this in any spirit of unkindness; we are willing to make due allowance for the example displayed by certain agitators of the medical press—mischievous blockheads who know not, nor ever care, what the result of their doings may be, so they succeed in setting the pupil against the teacher, and the public against the whole profession.

There is another source too of ill example—though it may be but a consequence of the last. We have heard, and upon authority which we cannot question, that the parish officers have misleaders nearer home. There are *parish surgeons* who have a voice influential in the disposal of the dead, who, however, not only will not employ that voice in the cause of the promotion of science, but absolutely discountenance, both by word and deed, the advancement of that cause. This to us, we must confess, is one of the most unaccountable sources of opposition—at the same time that it is, we fear, one of the most effectual. What can the lay officers think of the propriety of giving up bodies to the schools, when they find their professional brother functionaries totally opposed to it? Must they not naturally assume that there is something revolting in the process of dissection; or that, at least, the office of the anatomist is one of questionable utility? That there can be any regularly-educated surgeon who would give currency, by the sanction of his example, to such absurd opinions, is what we can scarcely believe; yet that this is the tendency of the course pursued by those professional men in authority of whom we speak, is undeniable. Their motives for such conduct can only be inferred to be invidious, partial, prejudiced, or selfish. We blush that such inferences should be drawn regarding men of the profession!

It is with much reluctance that we have taken up our pen at all at the present moment, to treat of the Anatomy Act—an act which, we are persuaded, were it let alone by those "cogging, cozening slaves," whose cue is to abuse and revile it, would work peaceably and usefully—would want but little more than patience and a fair trial to put its machinery into play—and, above all, would conciliate the good opinion of the public at large by the simplicity of its operations. But the mischief, we fear, is done, and will require a remedy or reaction; the Act alone will probably now be insufficient for the full attainment of the object at which it aimed; and it may be neces-

sary at least to devise some means by which such supply of bodies as can be procured may be made available to the purposes of all the established schools. The plan of equitable distribution, proposed we understand by Mr. Grainger, cannot be abandoned with any good reason or good grace; and though it should at first apparently bear somewhat hard on those teachers who are sure of a supply, it would at the same time relieve them from the charge of an undue monopoly, and undoubtedly soon remove a most prejudicial impression from the public mind; for nothing can have a more injurious effect, in the eyes of the public, than variance and disunion among the teachers of anatomy. We do not say that any such variance really exists at present, but it should cautiously be guarded against, lest the public should believe there does. Even a difference of opinion between such parties, and on such a subject, would run the chance of being magnified into a struggle, which would excite no sentiments but those of ridicule and disgust.

We believe it to be a fact which cannot be disputed, that there is ample *materiel* for an abundant supply of the schools, if but the parishes generally, and the parish officers in particular, would contribute that assistance which was all along expected from them. It was matter of calculation, before the passing of the act—nay, long before the bill was drawn up—that there would be ample resources, independent of exhumation, when once a fair legitimate measure should be adopted. The calculators were right, so far as the amount of the resources was concerned; but they neglected an important point—to determine how they should be made available, and how the intrigues and mischievous interference of individual disturbers should be prevented. To the latter source do we primarily attribute the recent inconveniences which have been complained of; we are convinced that medical agitation has far more to do with the matter than any thing essentially incorrect in the principle of the Act, or any illiberal feeling on the part of the public.

CHEAP SUBSTITUTE FOR QUININE.

The extreme dearness of this article—the well-known remedy for the cure of ague—and perhaps the only infallible specific that medicine affords, has set many inquirers to work, in order to discover some substitute of equal virtue, but within the means of the poorer classes affected with intermittents. M. Magendie, who was entrusted by the Academy of Sciences with the task of performing a series of experiments for the purpose of ascertaining the virtues of the powder of the leaves of holly (*ilex aquifolium*), has just returned a very favourable report. He tried it largely in numerous cases of ague committed to his charge in the Hôtel Dieu; and in consequence of his report, the gold medal of the Academy, value 1500 fr., has been awarded to M. Rousseau, the discoverer, "for having added to the materia medica an indigenous remedy, which will be found to be of the greatest value wherever agues are endemic and the natives poor."

NOTE FROM DR. ELLIOTSON.

In our article on the Medical Schools and Dr. Elliotson, published a fortnight ago, after adverting to the unusual modes adopted by that gentleman of carrying on the discussion, we added:—"Under such circumstances, it is in vain to look for any thing like a cool and dispassionate investigation of the points at issue; the learned Professor will therefore excuse us for requesting, that if he has aught farther to adduce, he may confine himself to the new channels he has opened for communicating with the public—for here, as regards this journal, the controversy must end." Notwithstanding this intimation of our intentions, we have received a note from Dr. Elliotson, enclosing a letter from the Secretary of the London University, which the Doctor *desires* us in peremptory

terms to insert. We shall not do so. We beg, however, to observe, that had the request been made with common courtesy, we should have complied with it: as it is, we feel bound in candour to give the purport of Mr. Coates's letter, which is this,—that no proposal has been either adopted or formally made to any of the "Faculties" in the London University, that the Introductory Addresses should be laid before them previous to delivery. From this we infer, that the "determination" (the word we used) of the other Professors to avoid hereafter the repetition of certain indiscretions to which they are sensibly alive, has not been expressed by them *quasi* the "Faculty of Medicine," and consequently is not recorded in the Secretary's books. So far, and no farther, does this communication extend; and we are perfectly willing to give Dr. Elliotson the full benefit of our mistake as to a formality, and that too regarding a point perfectly extraneous from the subject of the discussion. Had he attempted to disprove our arguments regarding the schools, or to explain away the proofs afforded by his own letters of acknowledgment and thanks, that his charge of unhandsome conduct regarding the publication of his lectures was unfounded, we might possibly have been compelled, however reluctantly, to enter upon the subject again; but when we declare that no attempt whatever of this kind is made, we trust our motives for declining to do so will be appreciated. In truth, we fear to trust ourselves, lest, under the provocation of repeated incivilities, we should violate that temper and forbearance which respect for our readers and ourselves alike prompts us to preserve.

MEDICO-CHIRURGICAL SOCIETY.

November 27, 1832.

W. LAWRENCE, ESQ. IN THE CHAIR.

Fatty Discharges from the Bowels and Bladder.

Two interesting papers were read this evening, which served to throw still further light on the subject with which Dr. Bright opened the business of the session: the discharge of fatty matter from the intestines. The paper of Dr. Elliotson, *on the Discharge of Fatty Substances from the Alimentary Canal and Bladder*, gave an account of most of the old cases on record which had any connexion with the subject. He began by a notice of the ambergris found in the rectum of the spermaceti whale, which, he said, was seldom observed higher up than seven or eight feet above the anus, and one mass of the substance had been obtained which weighed above 180lbs. A variety of old authorities were quoted, to shew that instances of similar formations were by no means rare in the human subject. Tulpius gives a very exact account of a female who, for above fourteen months, went on daily discharging from the bowels a large quantity of a yellow fat: it used to settle over the fæces like melted butter. It was remarkable, that, in this case, there was no pain in passing the stools — no wasting of the flesh, or colliquative fever; but there must have been, says the author, some internal heat, sufficient to dissolve the fat and keep it fluid—"latitante in ventre ipsius occulto aliquo calore dissolvente proculdubio quem hic describimus adipem." Appearances of a similar kind have often been observed in the discharges of individuals who have taken castor-oil. Dr. Elliotson met with two cases, in the course of his practice, in which fatty discharges were strikingly present; and he had obtained an account of a third case, with notes of the post-mortem examination. The first person whom he had to treat in the disorder, was a patient who was under his care for phthisis and diabetes. The discharges of fluid fat were very abundant, and alternated with the presence of bile in the evacuations. The patient sunk exhausted. There was another case — that of a female—which was strongly analogous; and in the third, of which Dr. Elliotson had obtained an account, the patient was an old lady, who died wasted in a very extraordinary manner. It reminded Dr. E. of the case in Tulpius which immediately followed the one already quoted; where an old woman voided large quantities of fat from the bowels and bladder, and towards the termination of the disease, which proved fatal, was affected with fever, which wasted her to such an extent that she became a parched and juiceless corpse. Dr. Elliotson referred to a valuable letter of Dr. Babington to Sir Everard Home, given in the Philosophical Transactions for 1813; and stated the substance of a note which he had himself received from Dr. Prout, relating to fatty discharges from the bladder. Dr. Prout observed, that such appearances in the urine had sometimes attracted his notice; that he did not consider the fatty substance in such cases to be of the nature of cholesterine, but rather of margaritic acid; and he added, that he generally looked upon cases of this description as

connected with malignant disease of the kidney, or some other important organ.

In a short conversation which followed, Mr. Stanley alluded to the researches of Mr. Brodie, concerning the office of the bile, and the more recent and ample lucubrations of Tiedemann and Gmelin, touching the same subject: the latter authors hold that the bile acts upon the fat in the intestines, in order to render the chyle perfect. Mr. S. thought that the facts stated by these physiologists might elucidate, in some measure, the alternate appearances of bile and fat in the cases read during the evening.

[We purposely defer giving an account of Mr. Lloyd's paper this week, hoping to have more room for it in a future number.]

ST. THOMAS'S HOSPITAL.

Injury of the Hip-joint, and Secondary Luxation into the Ischiatic Notch.

(Communicated by F. Ward, Surgeon, &c. Balham Hill, Surrey.)

The following interesting and rare case is at present in Henry's ward, under the care of Mr. Travers.

Michael Flemming, æt. 40, a tall but not very muscular man, a shoemaker, was admitted September 27, having received an injury to the hip-joint from a fall. On admission he stated, that while walking on the pavement a month before, he slipped from the curb-stone, and fell with the whole weight of his body on the left hip, which part, he thinks, struck against the edge of the stone. On attempting to rise he again fell, and struck his knee. He was taken to Guy's Hospital and examined, but neither fracture nor dislocation being made out, he was dismissed. On the following morning he was brought to St. Thomas's Hospital. No fracture nor dislocation could be detected; he complained of a good deal of pain in and about the hip-joint, for which he was cupped freely and dismissed. After this he obtained admission into St. George's Workhouse as a pauper, where he was again carefully examined by the parish surgeon, but with the same result. He remained here a month, suffering very severe pain at times; kept his bed, and had the parts fomented frequently. He also states, that the day after the accident he could perceive that the left leg was a little shorter than the right; he could, however, bring the foot to rest on the ground when in the erect posture, by holding any thing to support him, though he could not bear the weight of his body on that leg, nor advance it before the other. He continued to suffer pain in the hip all the time he was in the workhouse.

He was seen on the day of admission by Mr. Travers, who examined him standing and lying down. Both legs were of exactly the same length, the left knee a little more advanced than the right; no alteration could be observed in the appearance of the hip-joint, and the contour of the buttocks was uniform. He could not raise the left thigh from the bed without the assistance of his hands; when standing erect he brought the foot and heel to the ground, but could not bear any weight on it, nor advance it before the other; he had a constant pain in the hip, extending down the thigh to the knee.

Directed to remain quiet in bed, and apply a large blister over the hip-joint.

The following week he still complained of pain; the blister was therefore repeated, and with considerable relief.

A third blister was applied to the outer side of the thigh. On Thursday, November 15th, the man's lameness continuing, Mr. Travers again examined the limb, and was much surprised by the following appearances. The injured thigh was found more than an inch shorter than the other; the knee raised and inverted; the foot also turned in; the great trochanter forming a remarkable prominence on the outer and back part of the gluteal region. Rotation outwards caused considerable pain, and the head of the bone could be distinctly felt to strike against the part on which it rested. The thigh could be carried backwards and outwards to some extent, but not inwards or forwards.

The nature of the injury, as it now existed, was very evident; and although a period exceeding three months from the time of the accident had elapsed, Mr. T. determined to attempt the reduction. He was therefore taken into the operating theatre, and placed on a table on his right side, a padded girth passed so as to fix the pelvis, which was then made secure by a cord to a fixed point; a linen roller applied round the thigh, and the padded strap buckled round above the knee, to which the pullies were attached. Extension was then made across the lower part of the right thigh for twenty minutes, without any change being produced. A vein in the arm was opened, and thirty ounces of blood taken. The extension was kept up, and doses of tartarized antimony administered for a considerable time; but neither sickness nor syncope induced. During the extension the leg was rotated, and an assistant endeavoured to raise the bone by means of a round towel passed over his shoulders and under the upper part of the patient's thigh. This process was continued for near an hour. By passing the fingers from the trochanter along the neck of the bone, the round head could be partially felt, deeply and firmly fixed in its position.

All means having failed to replace the bone, he was removed to bed, for nature to complete that which no doubt she had already commenced—namely, the formation of a new acetabulum.

Observations on the preceding Case,
By Mr. Travers.

The above case is accurately stated by my friend and former dresser, Mr. Ward, who was with me at the first and subsequent examinations. I can explain it only by supposing one of two primary accidents. 1. The laceration of the teres and capsular ligaments. 2. The comminuted fracture of the acetabulum on its ileo-ischiatic side.

I know that a dislocation may, from hurry or insufficient care, be overlooked or mistaken; but this was not that case, as will be concluded from the facts stated in the narrative. Secondary luxations arise from such casualties as those above-mentioned, and also from destruction of the parts forming the articulation, by the inflammatory, *i. e.* ulcerative process. The last is so marked and so slow a process as to be inadmissible in the present case as a mode of explanation. Its frequency makes surgeons sufficiently familiar with it. Unreduced luxations are generally viewed as opprobrious to the surgeons who have been called to them; but a case like the preceding would be very uncharitably, or rather unjustly, made the subject of a reproachful comment. It is on this account that its publication is important, and that I avail myself of the opportunity of adding a remark or two.

At the end of a month from the accident, I undertake to say positively that no recognizable luxation existed; yet there was lameness and pain in the joint and its extended motions, which led me to suppose it the seat of ligamentous inflammation from the concussion, and to blister it freely. The signs of synovial inflammation, or "morbus coxæ" in its first stage, were not present, and the health was not disturbed. It is now a dislocation so palpable as not to admit of a doubt; and the question is, how and when the bone became luxated in the interval between the end of September and the 15th of November. If the preliminaries to dislocation (as the tearing through of ligaments, or a breach of the wall of the acetabulum) had taken place at the moment of the injury, the head of the femur might afterwards be so easily displaced as that its actual escape might be unperceived.

The ulceration of the lacerated capsule, the separation, or perhaps extraneous attachment, of an insulated fragment of the wall of the acetabulum, might either of them be accomplished in this interval without any general or diffused inflammation of the joint.

Subluxations take place, in the shoulder and hip-joints, from injury as well as from disease. Their signs are necessarily, like the displacement, partial and imperfect. As the process of absorption advances, the head of the bone gradually passes on, and then over the border of the receiving cavity, and imperceptibly the semiluxation becomes total. In the ginglymoid joints—*e. g.* knee and elbow—though the semiluxation is yet more frequent, the injury seldom proceeds the length of complete displacement, owing to the different disposition of the articular surfaces as compared with the ball and socket-joints.

Two circumstances noticed in this case serve to confirm the belief that the injury of the ligamentous or bony structure predisposed to the luxation. 1st. The unremitting pain from the time of the accident, and its material relief by the repetition of blisters. 2d. The notorious shortening, disfiguration, and increased lameness observed at the end of seven weeks from the patient's admission; which led to the discovery of the complete dislocation.

Bruton Street, Nov. 25, 1832.

ST. GEORGE'S HOSPITAL.

Case of Amputation at the Shoulder-joint, with some Observations by Mr. Brodie.

James Spawforth, æt. 19, admitted July 11, 1832, under the care of Mr. Brodie.

Nov. 21st.—This patient has at present several sinuses (seven or eight) in the neighbourhood of the left shoulder-joint, from which is discharged a thin, puriform, offensive fluid. Two or three of these openings are seen on the skin covering the upper and back part of the scapula, leading down to the supra spinal fossa and spine of the bone; others at the anterior and posterior edges, and one at the outer and lower part of the deltoid muscle. From the former of these, dead or diseased bone can be distinctly felt, when examined by means of a probe; from the latter this is by no means distinct. The muscles about the joint, and of the upper extremity, are wasted, but the integuments ap-

parently not much affected by the disease. Any motion of the joint produces excessive pain, especially when accidentally shaken or jarred. He suffers little when at rest, but sleeps indifferently; he has no cough, palpitation, or other symptom of visceral disease. Pulse generally about 96; bowels regular; urine natural; appetite good.

His aspect is sallow and exsanguine, but this would appear to be natural.

About two years and a half ago, while living in the country, he struck his shoulder against the handle of a truck. No swelling, and but slight pain, succeeded the accident; the latter however continued, and in three months he was unable to move the joint freely, partial anchylosis having supervened. He came to London, and placed himself under the care of Dr. Gordon and Mr. Guthrie. Leeches, blisters, caustic issues, and rest, were recommended; and under this treatment he was considerably relieved. He returned into the country, and remained free from pain, but with slight anchylosis of the joint. Some person in Liverpool advised that forcible means should be adopted for the removal of the stiffness; and about ten months since this was had recourse to, upon which inflammation and abscess supervened: the latter presented itself at the fore part of the pectoral and deltoid muscles, was punctured, and a large quantity of pus escaped. Since that period abscesses have continued to form and burst, producing the sinuses above described. He laboured about four or five months since under a severe attack of bronchitis; and although a young man, has always lived a very irregular life. Since his admission into the hospital he has taken sarsaparilla, nitric acid, quinine, &c. with a view to the improvement of his general health.

22d.—Several consultations having been held on this case, and the patient constantly expressing a wish that the part should be removed, it was agreed that the arm should be amputated at the shoulder-joint, and that the diseased bone should if possible be extracted.

At one o'clock P.M. the patient was taken into the theatre and seated on a chair. A round towel was placed across the lower part of the chest and held by an assistant, to prevent the patient moving from the seat. Mr. Cæsar Hawkins made pressure on the subclavian artery in the neck, which was found to command the pulse. Mr. Brodie proceeded to the operation.

Operation.—An incision, commencing at the sinuses on the back of the shoulder-joint over the outer portion of the spine of the scapula, was carried forwards, outwards, and downwards, to within an inch or an inch and a half of the insertion of the deltoid muscle; from thence it was continued upwards and inwards, towards the coracoid process of the scapula: the parts were now dissected up from the bone, forming a flap of the deltoid muscle. The operation was so far effected by means of a large scalpel. Several vessels were divided, but of small size.

A common amputating knife was now employed, which was carried below the acromion process, directly into the cavity of the joint. [The patient now struggled most violently, so much so that the assistants could with difficulty retain him on the chair.] The arm from the elbow was now pressed towards the side so as to evert the head of the bone, and with one incision the parts beneath were divided downwards and outwards, forming another flap, somewhat corresponding in shape with the former made by the deltoid. Mr. Keate immediately placed his thumb on the main artery: several others bled profusely, so that three or four ligatures were applied previously to that which secured the axillary: the latter artery was divided obliquely from above downwards. This being tied, eight or ten ligatures were required on smaller vessels before the hæmorrhage was arrested. All the ligatures were cut close to the parts on which they were applied, about ten ounces of blood being lost throughout the operation. An examination was now made with the finger to ascertain the extent to which the bone was diseased, in doing which an abscess of considerable size was opened, situated between the neck of the scapula and ribs, from which pus escaped. The neck of the scapula, spine, and coracoid process, were found to be carious. From loss of blood, the extreme irritability of the patient, and extent of disease, it was deemed advisable not to proceed further with the operation, but to dress the surface of the wound with lint, which was accordingly done, the flaps being brought in apposition by strips of adhesive plaister. Some simple dressing, compresses, and bandages, secured the whole, and the patient was sent to bed.

So great was the resistance offered by the patient, that on one or two occasions it was impossible to keep up the pressure on the subclavian artery, and Mr. Keate held the divided vessel for some time between his finger and thumb. The parts were every where infiltrated with lymph and serum, so that the tenacula, when applied, frequently lost their hold.

A section of the head and shaft of the bone was afterwards made in a longitudinal direction. The head and upper part of the shaft was of its natural size, but the middle and lower part of the latter, towards the elbow, was much diminished. Here the outer shell was thin, and the cancelli

bloody and easily turned out from their situation. The upper portion of the shaft of the bone, together with the epiphysis or head, was filled throughout with the yellow deposit commonly seen in scrofulous bones; the line of demarcation between this and the bloody cancelli below being very distinct. The cartilage of the head of the bone was completely destroyed; the carious surface of the bone being exposed. A soft pulpy substance, of a purplish red colour, two or three lines in breadth and an inch in depth, proceeded from the surface of the head into the cancelli beneath. The muscles of the limb were wasted, and of a pale colour.

Mr. Brodie's remarks on the case were nearly as follows:—

You will have the opportunity of seeing the appearances presented by the section of the diseased bone, as it will be handed round to you for that purpose. The bone is soft, with a yellow deposit in the cancelli, and the disease is of that kind which I have described under the name of scrofulous. The disease has not been confined to the head and shaft of the humerus: the scapula partakes of it; a portion of that bone being dead, and the cartilage of the glenoid cavity being completely destroyed by ulceration.

The patient has laboured under the disease between two and three years. He came to London, and was under the care of a gentleman who is now present (Mr. Guthrie). Under Mr. Guthrie's treatment, every thing seemed to be going on favourably towards a cure. All the symptoms subsided, and he left London with the shoulder-joint beginning to be anchylosed. You well know that anchylosis is the best thing that can happen where the cartilages of a joint are destroyed by ulceration, and that no dependence can be placed on the cure unless anchylosis has taken place. After his return to the country, the patient, in an evil hour, placed himself under the care of a person whom he describes as a bone-setter; who, finding the joint anchylosed, undertook to restore its mobility. For this purpose, he moved the arm with such force as to destroy the adhesions which had taken place. The consequence was a fresh attack of inflammation, and the formation of extensive abscesses.

When the man had been for some time in the hospital, and it was evident that the disease could not be relieved by common methods, it became a question whether an operation might not be resorted to with advantage. A year or two ago, in a case resembling this, I attempted to remove the diseased joint by excision, but the result has been far from satisfactory. The patient, to this day, lingers about the hospital with abscesses still open, exfoliations of the scapula occasionally taking place, the limb useless, and the general health in a bad state. Mr. Babington also, about the same time, performed the same operation on a patient with disease in the shoulder-joint; but, although here the disease was of much smaller extent, and the circumstances altogether more favourable, the patient (if I am rightly informed) still suffers from open sinuses and occasional small exfoliations. The experience which we have had in this hospital, as to the excision of the shoulder-joint, did not, therefore, offer me much inducement to repeat the operation in this man's case. My colleagues were of the same opinion as myself, and we agreed that it would be much better to proceed at once to the removal of the whole limb by amputation at the shoulder. Some years ago I had performed this last operation, under somewhat similar circumstances, with success. A young gentleman suffered from caries of the shoulder-joint. Some large abscesses formed, and burst externally. The case, for some time, did not appear to be hopeless, but at last some large arteries became ulcerated; the patient was exhausted by repeated hæmorrhages, and I was driven to the amputation of the limb as the means of saving the patient's life. After the limb was removed, I found the glenoid cavity of the scapula ulcerated and deprived of its cartilage. The bone was soft, and I cut off the diseased portion of it with a common scalpel. The patient recovered without a single bad symptom. This was seven years ago, and he has continued well up to the present hour.

The operation of amputation at the shoulder is, under ordinary circumstances, one of the simplest and most expeditious in surgery. But in this instance it was rendered very difficult, and I may say hazardous, in consequence of the patient

having no sort of control over himself, and struggling in such a manner that he could scarcely be held by those who assisted me. We must not attribute this altogether to want of nerve and resolution, for you will observe that the parts which the knife divided had been all for a long time in a state of inflammation. The pain of dividing soft parts, which are in a healthy state, is sufficiently severe, but where they are in a state of inflammation it is aggravated three-fold, or more than this. You know well how much the patients suffer during that operation, which you so frequently witness in this hospital, of cutting down on the tibia, and trepanning it, for necrosis; and the state of the soft parts in this case, was nearly similar to what you find in these cases of necrosis.

Our original plan was, that the limb should be amputated first, and that I should afterwards saw off the diseased portion of the scapula. But, partly from loss of blood and partly from the violent struggles which he had made, the man not to proceed to the second part of the operation. A considerable portion of the scapula adjoining to the shoulder-joint is actually dead. I have dressed the surface of the wound, down to the dead bone, with lint; and I trust that it will ultimately exfoliate, and that thus a cure may be obtained. It would, undoubtedly, have been more satisfactory if I could have done the whole of what I originally intended, but the thing was impossible; or, at all events, it could not (under the peculiar circumstances which you have witnessed) have been accomplished without considerable risk to the patient's life.

Nov. 29th.—The patient has done extremely well, and there is every appearance of his recovery. Should any thing occur to change the prospect, we shall record it.

NEW SPECULUM.

To the Editor of the Medical Gazette.

Sir,

If you will take the trouble to refer to my letter containing the sketch of a speculum, which I sent for publication last week, I think you will find that my name is Patrick Mollison, and not J. Thos. Elliot, as the printer has so ingeniously made it out; and yet I do not altogether blame him, as, on considering my usual style of signature, I find that, improbable as it may appear, there really is a certain resemblance between the names, which is more than sufficient to satisfy the judgment of the nimble-witted unhesitating compositor. As this has caused some confusion to Mr. Thompson, the surgical instrument-maker who manufactures the instrument, and also to myself, I shall feel obliged if you will give this a place in your next number.

I am, sir,

Your very obedient servant,

Patrick Mollison.

THE PRINTER OF THE GAZETTE *versus* DR. ELLIOTSON.

To the Editor of the Medical Gazette.

Sir,

The Lancet of last week having repeated the statement attributed to me by Dr. Elliotson, in his address to his class regarding his discussion with the Medical Gazette, I shall feel obliged by your allowing me to record my positive and unqualified contradiction of it, whether proceeding from him or Mr. Wakley. The passage I allude to, is that in which Dr. E. mentions, as one reason why you should not have controverted any thing he said, that the "publication of his lectures, *as the printer of the Gazette informed him*, had 'doubled the sale.'"

The only circumstance of which I have any knowledge, as the possible source of this erroneous assertion, is, that some time ago I happened to mention that the Gazette was rapidly increasing in circulation, and that there had lately been an increase of nearly a thousand in the number printed. That this is what I really did say, Dr. Elliotson admitted, indeed, on a subsequent occasion: I refer to a conversation in the course of which he voluntarily paid a very high compliment to the correctness of the reporter of his lectures: he observed, that the "*medical booksellers*" had told him that the sale of the Gazette had increased lately nearly a thousand; and added, "*I believe you also told me so yourself.*"

I shall content myself with simply declaring that I said not one word that could lead Dr. E. to suppose that I attributed this increase in any particular manner to his lectures, although, as you are well aware, I might assign good reasons why I *could not* have said so. The inference, therefore, which assumes the rise in the circulation of this journal to be attributable to them

alone, is wholly and exclusively Dr. Elliotson's.—I am, sir,

Your obedient servant,

E. C. WILSON.

57, Skinner-Street, Nov. 27.

P.S.—I think it right to observe that I am far from supposing that Dr. Elliotson attributed to me the above statement with the knowledge that it was incorrect. I conceive the impression on his mind to have been, that, previously to the time from which I dated the rise in the circulation of the Gazette, it did not exceed a thousand, and that therefore he considered he had come to a right conclusion when he stated that it had "doubled." It may be as well, however, that he should be informed, that to have doubled the sale would have required a much larger number than the increase he is pleased to suppose was produced by his lectures.

MEDICAL & PHYSICAL JOURNAL.

THE Editors of the Medical and *Physical* Journal present their compliments to the Editor of the Medical Gazette, and will feel obliged to him if he will do them the justice to state that the "encomium" published in the last No. of the Gazette, and headed "Medical Journal," was not published by them. The Editors would be quite distressed to deprive the Editor of the Medical and *Surgical* Journal of the *merit* of the article referred to, and they are equally anxious to protect themselves against the imputation of thus indulging in personalities, from which they at all times studiously abstain.

Nov. 28, 1832.

[We regret that we should not have designated the periodical with sufficient precision. We cannot, however, for a moment admit that any one would suppose *such* an extract could have been taken from the pages of our esteemed contemporary—the Medical and *Physical* Journal. —ED. GAZ.]

LONDON UNIVERSITY MEDICAL SOCIETY.

IT appears that there is an association of pupils so called, and that they take in certain periodicals for their edification. Now Dr. Elliotson having declared war against the Gazette, it was very naturally thought by some of his pupils that it would be highly gratifying to their Professor if they were to discontinue it, and accordingly a motion to that effect was unexpectedly proposed about a fortnight ago, and carried, notwithstanding the opposition of a considerable number of the members. Before their next meeting, our answer to Dr. Elliotson had appeared, *when the former decision was reversed.* But we understand that the question is to be brought forward at the next general meeting. We take leave to recommend, that on this occasion all those young *gentlemen* who are moved with virtuous indignation against the personalities and scurrility of the Gazette, and who approve of the freedom from those vices displayed by the Lancet, should as a point of conscience vote in all things in favour of the latter, and against the former—they will thus be called fine independent fellows by Wakley; and if they follow in his steps with diligence, and adopt his principles with zeal, it is just possible that in time they may come to be as respectable, and as much respected, as that worthy himself.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Nov.* 27, 1832.

Abscess	5	Heart, Diseases of	1
Age and Debility	47	Hooping-Cough	16
Apoplexy	12	Inflammation	34
Asthma	22	Bowels & Stomach	4
Cancer	3	Brain	3
Childbirth	10	Lungs and Pleura	3
Cholera	4	Insanity	8
Consumption	71	Jaundice	7
Constipation of the Bowels	2	Liver, Diseases of the	9
Convulsions	44	Measles	17
Croup	2	Mortification	10
Dentition or Teething	8	Paralysis	8
Dropsy	17	Rheumatism	5
Dropsy on the Brain	9	Small-Pox	19
Erysipelas	1	Sore Throat and Quinsey	1
Fever	5	Spasms	2
Fever Intermittent or Ague	5	Stricture	1
Fever, Scarlet	21	Unknown Causes	50
Fever, Typhus	1	Still born	19

Decrease of Burials, as compared with the preceding week . . . 4

METEOROLOGICAL JOURNAL.

November 1832.	THERMOMETER.	BAROMETER.
Thursday . 15	from 42 to 49	29·72 to 29·98
Friday. . . 16	33 47	30·09 30·22
Saturday . 17	31 45	30·30 30·25
Sunday . . 18	33 45	30·09 30·00
Monday . . 19	34 45	29·90 29·82
Tuesday . 20	37 48	29·73 29·64
Wednesday 21	39 48	29·59 29·55

Prevailing wind, S.E.

Except the 16th and 17th, generally cloudy; a little rain in the evening of the 15th.

Rain fallen, ·2 of an inch.

Thursday . 22	from 37 to 49	29·55 to 29·70
Friday. . . 23	29 49	29·83 29·90
Saturday . 24	34 51	29·99 29·96
Sunday . . 25	40 49	29·95 29·78
Monday . . 26	34 48	29·52 29·63
Tuesday . 27	28 43	29·62 29·42
Wednesday 28	31 44	29·54 29·61

Prevailing winds, S.E. and S.W.

Except the 22d and 23d, generally cloudy; frequent rain since the 24th.

Rain fallen, ·6 of an inch.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 8, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

PUSTULÆ.

VACCINIA - COW-POCK.

Identity of Cow and Small-pox.—The next disease, gentlemen, of which I shall speak, is one which is put, by Drs. Willan and Bateman, in the order vesiculæ—viz. the cow-pock; but although there are only vesicles at first, the contents become so turbid that at last there is genuine pus; and I think it is much more consistent altogether to put it in the same order with small-pox. Indeed the cow-pock is believed by many to be nothing more than a modification of small-pox—to be merely the small-pox, modified by passing through the cow. There can be no doubt that small-pox is an affection which cows, and perhaps other brutes, may have. You most probably have seen the accounts lately published in different journals, of some experiments that have been made with a view of ascertaining this point. Clothes have been taken from patients labouring under small-pox and laid on cows, and they have had the disease called *cow-pock*. If the disease be really small-pox, modified, we then see no wonder in the circumstance of it generally affording immunity from that disease to those who have it. The disease, however, of cow-pock is far milder than small-pox, and it is strictly a contagious disease; it cannot be communicated by infection, as small-pox may; it is only communicated by palpable matter.

Symptoms.—The disease, given artificially, begins a few days after the poisonous matter has been inserted into the body. By a slight scratch, or by a wound of any description, a small transparent pearl-coloured vesicle is formed, with a circular or somewhat oval base; the upper surface being more elevated at the margin than at the centre till the end of the eighth day, the margin itself being red, turgid, shining, and roundish, so that it often extends a little over the line of the base. The vesicle contains clear lymph in little cells that communicate with each other. About the eighth or ninth day it is surrounded by an areola, varying in diameter in different cases, from a quarter of an inch to two inches, and is usually attended with a considerable tumor and hardness of the adjoining cellular membrane. The areola declines from the twelfth day. The surface of the vesicle then becomes brown in the centre, and the fluid concretes into a hard round scab. The colour afterwards becomes black, and so it may remain for two or three weeks. There is also left a permanent cicatrix about four or five lines in diameter (this it is important to remember), the surface being marked by pits denoting the number of cells of which the vesicle has been composed.

The vesicle, you will remember, is formed about the sixth day after the insertion of the virus; about the seventh or eighth day there is an inflamed areola—a swelling and hardness; and it is on the eleventh day that all the symptoms decline. The vesicle then becomes muddy, and darker. If there be any pyrexia of the system, it occurs about the eighth or ninth day. Now and then (and I have seen such a case myself) the disease has nor appeared for two or three weeks after vaccination; and then suddenly the disease has begun, inflammation has taken

place, and the affection has gone through its regular process.

Necessity of the Disease going through its regular Course.—Now if there be a violent degree of inflammation, or if the disease vanishes too rapidly, or if there be any variation from its proper course, you must not imagine that any security is given from the small-pox. If, on the one hand, there be too little inflammation, so that the affection soon subsides, and no genuine vesicle is formed; or if, on the other hand, there is too violent an inflammation; then, in either case, you may doubt whether the disease will be of any use. Nay more, if the cicatrix, after the disease has appeared to go through its stages properly, is not of the description which I have now mentioned—if there be not a permanent cicatrix about five lines in diameter, a little depression with very minute indentations—you may then suspect that the disease has not been perfect. You may recollect my having mentioned, that, in the case of all contagious diseases, you may have a disease of the greatest mildness or the greatest severity. A contagious disease will not only vary as to the time at which it appears after the virus has been applied, but it will vary as to the time in which it goes through its course, and it will vary as to its degree; so that I am satisfied that the plague will sometimes occur with only a slight indisposition: and we continually see gonorrhœa so mild as to last only twenty-four hours; whereas, in other cases it will be so severe as to last some weeks. Now this general fact is strikingly shewn in cow-pock: you continually have it die away from the disease not being fully formed, and, on the other hand, you sometimes have it so very violent that the whole course of the affection is disturbed. Nothing should occur for twenty-four or perhaps forty-eight hours; and then there should be a little irritation: a vesicle ought to be gradually formed; on the seventh or eighth day there should be an areola, and all the symptoms should decline on the eleventh day. When it is all over, you ought to see a dark and hard scab for two or perhaps three weeks, and then a permanent cicatrix should be left, with little indentations arising from the cells of which the pustule has been composed.

Immunity afforded against the Small-pox.—This disease, in the greater number of cases, gives immunity from the small-pox; and where it fails, which it frequently does, the small-pox is, in the greater number of instances, milder than it otherwise would have been. In general, when that disease occurs after cow-pock it suddenly stops; it is ushered in by great pyrexia, and then, about the sixth day, it suddenly declines.

I believe I mentioned that the effect of inoculation for small-pox was not of this description; that it caused the disease to be produced with a smaller number of pustules, whereas vaccination did not lessen the number of pustules, but shortened the course of the disease, so that about the sixth day all the violence generally ceases. This, however, is not a universal occurrence, because some patients die of the small-pox after they have had the cow-pock. At first it was imagined that cow-pock was a certain preventive of the small-pox; however that was a hasty conclusion: because it prevented the disease for a certain time, and in the majority of cases, that afforded no solid basis from which to infer that it would prevent it in all cases, and for the rest of life; further experience was necessary before such a conclusion could with propriety be drawn. But we may now safely assert that a great number of persons who are vaccinated escape the small-pox; and where persons do not escape, the greater number of them have the disease very mildly. I believe the whole of the matter comes nearly to that.

Produces only a single Vesicle.—This disease produces only a single vesicle or pustule; it does not produce a number all over the body as small-pox, and other pustular diseases, do.

Mode of Vaccinating.—As it is very desirable that the disease should be fully formed, and the constitution thoroughly affected by it, it is the practice to make several insertions of the matter, perhaps two in each arm. The arm is as convenient a place as can be chosen, and it is usual to make two wounds in it. The lancet should be held so that the matter may gravitate into the wound.

Treatment.—There is no treatment required in this affection, unless you choose to give the child a mild aperient.

History of Cow-pock.—As to the origin of our knowledge of the effect of this disease in preventing the common form of small-pox, I may mention, in a few words, that we are indebted for the publication of the fact to Dr. Jenner. In 1768, when he was apprentice, he learned by report that the cow-pock on the hand of milkers prevented them from having the small-pox; and he very frequently, at his master's, had to dress the hands of such persons. From his inquiries he satisfied himself that the ulcers he dressed were derived from the teats of cows. He learned too, that it was very well known in that part of the country, among the peasants, that persons who had these sores upon their

hands could never be made to take small-pox by inoculation.

In the further prosecution of his studies he came up to London; and having returned to the country and settled there as a surgeon, he commenced a series of inquiries into this matter. He found a very considerable number of persons insuseeptible of the small-pox; and in all these cases he was assured that the persons had had the cow-pock. The oldest farmers, however, said that the idea was not known in their younger days. Notwithstanding this insusceptibility which he found among so many persons, he met with exceptions; and he found some who had had those sores, and yet afterwards had the small-pox. Some medical men of whom he made inquiries believed the fact, and others disbelieved it. He found the difficulty cleared up in a great measure, by ascertaining that there were several sorts of sores arising from cows' teats, which were communicated to those who milked them, but that there was only one which was the genuine cow-pock. He likewise had to encounter another obstacle: from the influence of external circumstances the cow-pock among the cows ceased, and he was unable to make any experiments on the subject. I mentioned, when speaking of contagious diseases in general, that affections, respecting the contagion of which there can be no doubt, will sometimes cease, and sometimes cannot be made to spread, merely as it would appear from certain external circumstances. Now cow-pock, which is only contagious, not infectious, is said to have so ceased, that it was impossible for Dr. Jenner to get matter to make experiments. However, in 1796, the cow-pock broke out in a dairy-maid, whose finger had been scratched. From this finger he vaccinated a boy, and regular cow-pock was produced. He repeated the experiment on another, taking the virus from the human subject, and he then likewise produced the disease. He mentioned the facts to several of his medical friends, and prepared a document to lay before the Royal Society; but he was advised in kindness and true friendship not to expose himself by communicating any such nonsense, merely because it was new. However, he persevered; he did communicate his knowledge to others; and just the same fury was excited among medical men that had been excited formerly, when inoculation was first made known to them. It was said that it was taking the power out of God's hand—that God gave us the small-pox—and that it was impious to interrupt it by the cow-pock. When I was a boy I heard people say that it was an irreligious practice; that it was taking the power out of God's hand, forgetting that it was merely using that power which God has given to us. Sermons were preached for it and against it, and hand-bills were stuck about the streets. I recollect seeing it stated in a hand-bill, that a person who was inoculated for the cow-pock had horns growing in consequence of it. Many were said to have died from mortification produced by this practice. One of the surgeons at St. Bartholomew's Hospital—there being no clinical lectures then—used to give gratuitous lectures against the cow-pock, in which he advised all the students not to resort to such a practice. He was interred in this city, and by his direction a tablet was erected to his memory, on which was inscribed, that he was all his life strongly opposed to *cow-pocking*. His rancour did not cease even with his death. It appears that a great want of principle was manifested; that an account was forged setting forth a number of deaths as having arisen from the disease, and the greatest lack of candour was displayed. After a time, however, all this ceased; and now I need not say that it is a regularly established practice, although it certainly does not deserve such encomiums as Dr. Jenner supposed it did. It is not an absolute preventive of the disease, but it does prevent it in a large number of cases; and where it does not, it generally makes it much milder.

I have already stated that, with regard to treatment, none at all is necessary; and I will not take up more of your time respecting its details, because if you consult Mr. Moore's History of Vaccination, which is almost as amusing as a novel, you will there find every thing that I can tell you respecting it.

Varicella.

There is another disease very much allied to all these, and which is called the *little small-pox*, varicella, or, in common language, the chicken-pock, or swine-pock; but which requires no treatment in general, any more than cow-pock.

Symptoms.—The chicken-pock is chiefly important as being liable to be mistaken for small-pox; but in itself it is totally unimportant. The affection begins as a vesicular disease, but there are continually some pustules. There are, however, fewer pustules than in small-pox, and for the most part they do not amount to more than 200. They go through their course too with far greater rapidity than small pox, and there is very little irritation of the system—frequently none at all. It is sometimes a difficult matter to distinguish between it and small-pox; but when you consider that the disease has far fewer pustules, that it generally runs through

its course with great rapidity, and with scarcely any disturbance of the system, there is no great difficulty in making the diagnosis, more especially if you know that the child has had the small-pox before.

It is said that in chicken-pock there is always cough; that there never was a case occurred without being attended by some degree of cough. It is a contagious affection, and there is a little feverishness before the disease takes place; but in about six days the whole is over.

Identity with Small-pox.—Some have imagined that this disease is only a modification of small-pox; that it is only a milder form of the disease, called modified small-pox; but I will not give any opinion on the subject, because I do not think that we have sufficient observations on these various diseases to enable us to speak with any degree of certainty. After this disease I have frequently seen ecthyma and rupia take place, just as after small-pox; and sometimes there have been scars, just as in small-pox. I had the small-pox myself, and was not pitted at all, but the chicken-pock came afterwards, and left several pits; so that the disease occasionally produces pitting here and there the same as small-pox.

Dr. Willan has given some representations of the disease, in his plates. It occurs in two or three forms; you see very small pustules; it is easily distinguished from small-pox by the disease being in its genuine character vesicular. Now and then, however, there are pustules, and now and then there is pretty smart feverishness. The best description of this disease is contained in Dr. Heberden's Commentaries, and the account is very well worth reading. It is only important to know that there is this disease, because people frequently think that their children are going to have the small-pox when they are not. If the patient be scarcely ill at all, and has a crop of pustules of this description, you may be almost sure that it is the chicken-pock which is about to occur. There never is, I believe, any internal affection of any consequence when this disease exists. In very rare cases there is violent pyrexia, headache, delirium, and even convulsions; but they are all transient. There is no severe affection of the larynx, of the bronchiæ, or of the intestines, as in many other cutaneous diseases.

Acne.

Those eruptions of which I next proceed to speak are not placed by Bateman with pustular, but tubercular affections, because there is a considerable hardness of the skin. The fact is, however, that suppuration takes place for the most part in these affections, if they last long, and I therefore prefer arranging them with Rayer as pustular diseases. There is only this difference in them, that there is what may be called slow chronic pustules instead of acute ones—they are *blind*, as people commonly say.

The first of these to which I will allude is called by Bateman and Willan *acne*, and by Rayer *couperose*. It is a disease exceedingly common, and not at all contagious, nor is there the least harm in it. It occurs particularly in young men and women, especially the former, and prevents them from being very handsome about the period when they wish to look the best. Sometimes the face will be affected with this disease for four or five years.

Varieties.—It now and then appears with little black specks in the midst of rather hard elevations, and then it is called *A. punctata*. Sometimes there is very great hardness, and it is thence called *A. indurata*. In the ordinary form it is called *A. simplex*, and is described by Bateman to be an eruption of small pimples, not very numerous, without much inflammation, the surface between the pimples being perfectly healthy; only that there is a little roughness of the face. It now and then occurs, causing the sebaceous follices to be large and distinct, and marked with a black speck on the top, and then it is called, as I have just said, A. punctata. By squeezing them, you force out what is called a *maggot*, but it is only the contents of the sebaceous follicles; and by continued squeezing, you may force out stuff as long as the follicles will supply it. It occurs almost solely in the face: it will take place in the neck, but the face is its usual seat. Many people have a little of this affection, but some have it very severely. There is no occasion to remember the particular names; sometimes there are black specks, and sometimes there is a good deal of redness around them. Now and then it occurs with considerable redness and prominence of the skin around, so that you may discover each particular vessel, and from its redness it is called *A. rosacea*. You will see this in middle-aged and elderly persons; and in this form the maggots lie in a bed of roses. This is a very permanent complaint: I do not know that it is often got rid of; but, luckily, it does not occur till late in life; and it is taken for granted to be an outward and visible sign, not of *spiritual*, but of *spirituous* graces. Every person is set down for a tippler who has such a nose as is represented in this plate, (pl. lxiv. of Willan.)

Each of these hard inflamed pimples of

the skin may suppurate. Some will subside after a time, but a great many suppurate, and if they do not, it is an instance of termination by resolution, and we ought not the less to call it a pustular disease; because, if it pursue its course—if it be not arrested by something or other, it goes on to that end;—if it is not resolved, suppuration is the termination of it.

Treatment.—There can be no doubt that when these pimples are small, it is much the best practice to squeeze them, and empty the contents. If this be done, the tubercle will for the most part subside; and of course, if they suppurate, the sooner the matter is let out the better. I am not aware that internal medicine has any effect on the disease; but I have seen great benefit arise from the application of stimulants, and one of the best is the ointment of the nitrate of quicksilver rubbed well upon the part—yellow citrin ointment, as it used to be called. This stimulates the disease, which seems to be one of inaction. Of course, if it stimulate too much, cold applications should be applied, and the irritation diminished. You sometimes find this ointment too strong, and then it is necessary to dilute it with another—with simple spermaceti if you please, or zinc ointment. Some people give sarsaparilla and nitric acid in these complaints, but I do not know that they do any good, nor do I know that Plummer's pill is serviceable, but I think I have seen benefit from tar water. The best local applications are the stimulating substances that I have now mentioned. I have seen the face swollen all over when they have been employed, and of course, if any very great inflammation come on, that must be treated in the ordinary way.

Sycosis.

Then there is another disease which occurs in the face, but not so much about the nose and the parts of the face destitute of hair, as upon those parts which are covered with hair. It takes place particularly in the beard of men about the chin, and from its situation it happens to be called *sycosis.*

Varieties.—When it occurs on the chin it is called *S menti.* If it occur about the margin of the hairy scalp, it is called *S. capillitii.* There is, however, no occasion to make a variety because it occurs in these different situations; you might as well make varieties of rheumatism accordingly as it attacks the shoulders or the knees.

The tubercles in this disease are not as hard as in acne: they continue for a length of time, and they are more inclined to suppurate. It makes shaving an unpleasant operation, notwithstanding you have a good razor, a good strop, good soap, and warm water. These affections are merely slow chronic pustules, and the complaint is exceedingly obstinate.

Treatment.—I have not seen the disease much relieved by bleeding, either general or local, or by the exhibition of mercury; but, of course, there are cases where antiphlogistic measures are proper. I have seen it subside from the administration of iron; but, for the most part, all sorts of applications fail. You may apply stimulants, and after a time they do no good; or you may apply cold soothing applications, and after a time they lose their effect.

It is absurd to call these tubercles, for there is simply inflammation; there is no tubercle—no organic change in the skin. The gentleman represented in pl. lxv. of Willan must have regretted having a beard. Acne is disease of the follicles, and it is frequently attended by extreme hardness, whereas sycosis is not so hard. I really do not know what to recommend in the disease; every one must be left to his own judgment. I have been tired out and out by the treatment. Rayer gives a drawing of both these affections.

Of course, as this is a disease which principally occurs in the beard, women are exempt from it, unless their ovaries begin to dry up, and they acquire the character of men; but it does not occur where there is no hair. Both these diseases are confined to the head; acne to the face at large, and sycosis only where there is hair.

DISEASES CHARACTERIZED BY BOILS.

The other pustular diseases of which I will speak, are not treated of by Willan and Bateman, but they are all, or nearly all, spoken of by Rayer; one, however, to which I will draw your attention, is not spoken of by him. Rayer makes a distinct class of those diseases which are disposed to gangrene. Now and then plague is attended by pustules on the skin; large ones, indeed, such as are commonly called boils, and there is a great tendency to gangrene. The same occurrence takes place in the disease called *pustule maligne*—malignant pustles, which are generally communicated from brutes. He makes a separate class of these, but they are merely suppurations, and I therefore think that they ought to be classed with the pustular diseases. However, if the suppuration be very considerable, not merely pustules, but a very large suppuration, it may only lead to confusion to speak of them in that way; and it is to be remembered that they are not mere pustules, but that the cellular membrane is chiefly implicated, and the skin only secondarily. Still, however, as the disease occurs on the surface of the

body, it is well to consider it as an affection of the skin.

Now the most simple affection of this description is a sty of the eye; then a more severe one is boil, in which there is a disposition to gangrene; and then another is carbuncle—common carbuncle, in which, however, there is a strong disposition to gangrene. These three diseases, not one of which is mentioned by Willan and Bateman, Rayer puts together, and calls them boily diseases—diseases characterized by boils. A carbuncle is only a large boil, but it is of such an extent that surgical aid is necessary to let the matter out.

Then he makes another sort, which differ only in their tendency to gangrene, and these are maliguant pustules, which he includes among the *inflammations gangreneuses*;—and the plague itself. To these may be added another, namely, the glanders of horses, which may be communicated to the human subject.

With respect to sty, boils, and carbuncles, I shall say nothing, because they are spoken of in the lectures on surgery. Those of which I shall speak are malignant pustules, the plague, and glanders. As to the plague, it is a disease not confined to the surface; but, then, many affections called skin diseases, are not confined to the surface. Such is the case with small-pox: it is a general affection of the system, and involves the skin among other parts. Now the characteristic of these suppurations is a disposition to gangrene. In respect to all these diseases, whether small ones, such as sty and boil, or great ones, such as malignant pustules and plague, they bear the same relation to porrigo and bullæ, that those do to the small vesicles of herpes. I said that I thought it wrong to separate them; and so with respect to these, I think it a pity to make different classes merely on account of their size. Because small-pox and porrigo have small suppurations, and plague or carbuncle is characterized by a suppuration of large extent—more magnified, it is no ground for constituting a different class of diseases. You will recollect that they are merely pustular diseases, with suppurations on a large scale.

PLAGUE.

The first of these diseases of which I will speak is the plague.

Symptoms.—Now the plague is very similar to typhus and continued fever; but it so affects the surface of the body that I have thought it well to speak of it among diseases of the skin, as Rayer has done. It is, like many other diseases of the skin, an acute fever—as in the case of small-pox, for example. It is an acute fever, attended by headache, delirium, and a burning sensation at the epigastrium. Perhaps there may be great strength of body at first—the person may be of a full phlogistic diathesis—but great debility soon comes on, and very often there is debility from the first. Glandular swellings speedily appear in the arm-pits and groins, so that the disease is characterized by buboes; but the glands of the groins are more frequently affected than those of the arm-pits. Sometimes these glandular swellings or buboes come on at the first, and sometimes not till towards the end of the complaint. Besides them, however, there are upon the surface vesicles of all sizes, the contents of which are frequently dark. There are upon the surface, boils, carbuncles, and vesicles; and between them, and even where they do not exist, there are often vibices, petechiæ, and ecchymoses. These petechiæ, it is said, will sometimes rise into carbuncles; where at first there was merely a little effusion or congestion of blood, there will at last sometimes be carbuncles: occasionally there is not sufficient power of the constitution—not sufficient strength of inflammation for carbuncles and buboes to arise. Just as in the case of the violent application of malaria, or the violent application of the poison of typhus fever, and also as in cholera, persons will sometimes die immediately, without any reaction taking place.

Fatal tendency.—The plague usually destroys life in from two to five days; but if a person survive the fifth day, recovery is generally expected. Most people die who are seized with this disease, even though they enjoy every advantage of treatment and comfort. It is said that the disease may be had more than once.

Antiquity of the Disease.—Some consider it a very ancient disease: the symptoms are mentioned by Hippocrates, and Dr. Bancroft contends that the disease is mentioned in the Bible; that this was the affection under which the Philistines laboured when they are said to have been smitten in the private parts, after taking away the ark. He says that the disease spread as they carried about the ark—that it was a contagious disease, and the more they carried about the ark the more the disease was communicated, till at last it spread from Ashdod to Ekron. He considers that the Philistines probably received the disease from Egypt. Some consider, that, as the Philistines were smitten in the hinder parts, they were afflicted with piles; but Dr. Bancroft contends that piles would not have killed them in the way in which they perished. However, I think there is this objection to Dr. Ban-

croft's argument that it was the plague—if you read the book of Psalms (as people ought to do, and all other parts of the Bible), you will there find it said, that they were not only smitten in the hinder parts, but put to a *perpetual* shame: and therefore a chronic disease was left; but the plague would not leave a chronic disease of that description. It is stated, that from 50 to 70,000 persons were smitten by the disease. But whether Dr. Bancroft be right or wrong, the symptoms were distinctly mentioned by Hippocrates. It is a disease that is almost always prevailing in the Mediterranean, at Constantinople, Venice, and all the various parts of that sea. It has likewise prevailed at Marseilles, Moscow, and London.

Proofs of its Contagiousness.—There can be no doubt whatever of its being a contagious disease, but it is rarely communicated without contact. It is for the most part believed to be a contagious disease in the strict sense of the word; not infectious. One of the latest writers upon it (Mr. Madden, a surgeon) says, that if the air be close—if there be no ventilation, no cleanliness, and the emanations from the patient are very much concentrated—it may be communicated by infection; but if there be any ventilation at all, then it can only be communicated by contact—contact with the individual or something that he has touched. Some have denied, of course, that this disease is contagious; but there are proofs without end that it is. When the French army were in Egypt, about eighty medical officers died of it in one year. The next year they employed Turkish barbers to dress the patients and bleed them, and then only twelve medical officers died; but one-half the barbers died: however, it was a very good change. It is said, that at Moscow, in 1771, all the assistant-surgeons were seized with it, amounting to fifteen, of whom three died; but the physicians, who did nothing but walk through the wards with a pen in their hands, generally escaped: the assistant-surgeons, however, were reduced to the same state as the barbers. At Marseilles there had been no plague for fifty years, till 1720, when an infected vessel arrived. The disease at that time was distinctly traced to the arrival of an individual from an infected spot; and half the inhabitants died in a short period after the arrival of the infected vessel. At Moscow, it is said that the plague had not been known for 150 years, till they had war with the Turks, and two soldiers from an infected place arrived and died; after which, 80,000 perished from the disease in the city, and 20,000 in the neighbouring villages. In 1813, it is said that the plague had not been known in Malta for 137 years previously, and then the disease was brought from Alexandria. Howard says that the plague of London, which occurred in 1665, was conveyed to a village in the Peak of Derbyshire by means of some old clothes. He was so astonished at the absurdity of many medical men denying that it was contagious, that he writes as follows:—"Have not some of our professors sullied their names with the dangerous doctrine of the non-contagion of the plague? From no other cause than the error of the physicians, who constantly maintained that the disease then epidemic was not contagious, happened that terrible visitation which, in 1743, ravaged the city of Massina and its vicinity, with the loss of above 43,000 individuals in the short space of only three months." If you look into most writers you will find that persons who attended others labouring under the disease suffered, while those who ran away escaped it. The Turks are so satisfied of its being contagious, that when the disease prevails they shut themselves up, and the Pacha holds communication with no person whatever. I think there can be no doubt of the plague being contagious, in the strict sense of that word.

Atmospherical Influence.—However, it is remarkable that great heat and great cold will stop it. It is a disease that will not bear great heat, so that it has never been known to occur in tropical climates; so that when the heat has arisen to a certain point, it stops. This takes place in Egypt about the 24th of June; and as that is the nativity of John the Baptist, he has the credit of putting a stop to the plague; the Catholics ascribe it all to him. From the intense heats it is said never to appear in Upper Egypt; and it ceases altogether as the hot weather comes in. The winter also causes almost a complete cessation of it, and frequently renders exposure to a person labouring under it perfectly harmless. From its being so contagious a disease, Dr. Wells considered that it was owing to quarantine laws that we are not now troubled with this pestilence. He says that many persons ascribe our exemption from the disease to the fire of London; but he contends that the plague has not been known in London since 1665, whereas the fire did not take place till 1666. He says that the fire of London consumed only one-fifth of the town, leaving the Borough, Wapping, Whitechapel, Clerkenwell, St. Giles's, and the purlieus of Smithfield, untouched, which were among the dirtiest places. He says, secondly, that Bristol has escaped for the same length of time as London, and yet there has been no fire in that city, and the improvements there began much later than in London. He then says, the

Dutch are as cleanly as we are, and yet the plague continued there forty years longer than in England. Next he instances the town of Craeow as a beastly place, and yet there has been no plague there for a century. Fourthly, he says that ague alarmingly increased, and returned eleven years after the fire, and that dysentery continued till the end of the century, notwithstanding the improvements; and therefore he argues *à fortiori*, that as they could not prevent dysentery, they could not prevent the plague. Fifthly, he says that the plague is not known in India, China, and North America, where in many places they are filthy in the extreme. Sixthly, he says the plague began first among the poor, who associated with the sailors of infected vessels. But he contends, that from the time the quarantine laws were established, the plague has been unknown in England; and from the considerations I have now stated, the circumstance could not arise from the increased cleanliness and general improvement of London, but from the strict adherence to quarantine laws.

I need not repeat to you some facts which I mentioned when speaking of contagion, to shew that this disease was contagious. Dr. White, I told you, inoculated himself and died. You will find instances of this given in Dr. Heberden's Medical Commentaries.

Period of Incubation.—When the poison has been applied, the disease generally appears in from three to five days.

Not Communicable by Dead Bodies.—It is said that the disease is rarely caught from a dead body. I mentioned, when speaking of the innocuous agency of putrified animal matter, that Howard stated that persons did not suffer from the stench of putrifying dead bodies of persons who had perished of the plague. I believe persons may touch the dead bodies without fear of catching the disease, but touching their clothes is another thing. It is said by Dr. Bancroft, that the Turks employed by the French to bury the dead all escaped, with the exception of one individual. Howard says, that in Turkey people are not afraid to handle the dead bodies.

Treatment.—As to the treatment of the disease, I believe that one-half of those who have it perish, and therefore you may suppose that the treatment is not very successful. But we are told that the treatment must be conducted on the same principles as in common fever. If there be a phlogistic diathesis, active bleeding, cold affusion, and calomel, are recommended; but, on the other hand, when there is debility, we must exhibit wine, quinine, ammonia, and, if Dr. Stevens be correct, the neutral salts in great abundance. Of course those who make one exclusive rule of practice will kill a great many; those who always bleed will destroy a great number, and those who always give brandy will do the same. But Mr. Madden has compared the two modes of treatment. He says, that generally where bleeding has been had recourse to, the mortality has been very great; but where he gave strong brandy and water, and induced a copious perspiration, his success was very great. He also gave enemas of the same ingredients—that is to say, hot brandy and water; he sponged the body with vinegar and water, soaked the head with vinegar, had hot poultices put on the buboes till they gave pain, and cut into the carbuncles to arrest the mortification; and by this local and general treatment he was so far successful, as to save seventy-five patients out of a hundred.

I should suppose that the period for lowering in this disease was very short, and that stimulating treatment was the most superior of the two. The best antiphlogistic treatment would be, not to evacuate blood, but to apply cold water, and purge. I should, from the accounts I have seen, think that active depletion would be very dangerous. The moment softness of the pulse was perceived, I should imagine that the treatment mentioned by Mr. Madden would be very proper.

LECTURES
ON
DISEASES OF THE EYE;

Delivered at the Birmingham Eye Infirmary,

By Richard Middlemore, Esq.

CATARRHAL OPHTHALMIA—CATARRHAL INFLAMMATION OF THE CONJUNCTIVA.

I MENTIONED to you that the mucous membrane of the eye was subject to those affections to which the same description of texture in other situations was liable, and among other affections, to an inflammation producing an increase of its natural secretion, and arising generally from a peculiar condition of the atmosphere. You will often find a disease of this kind very prevalent, and it will be frequently accompanied by other catarrhal symptoms, in which case it is termed an influenza. This state of the mucous membrane of the eye is ascertained to be dependent, in many instances, on a peculiar condition of the atmosphere. It will not be expected that I should on this occasion enter upon

the investigation of that process by means of which the application of cold to the surface, or the occurrence of an altered state of atmosphere, gives rise to the products to which we have just alluded, for it is a subject involved in great obscurity, and would require for its proper elucidation much inquiry and extensive research: we will therefore be content to take the effects as they are presented to our notice, without making any inquiries concerning their cause, or attempting to explain that series and succession of events by which the phenomena designated catarrh are connected, as effects, with those external agents which, we are well aware, give rise to their establishment.

Symptoms.—The earliest symptoms of catarrhal inflammation of the conjunctiva, are, an uneasy sensation of smarting; a slight increase of vascularity, which is least considerable near the cornea; a trivial degree of pain, and augmented lachrymal secretion. The second set of symptoms are—considerable smarting, and a sensation of stiffness on moving the lids; an uniform scarlet tinge of the whole of the sclerotic conjunctiva; greatly increased mucous secretion; and a slight amount of serous effusion beneath the conjunctiva, which is particularly evident immediately around the circumference of the cornea, and also whenever the globe of the eye is moved in the orbit. The third set of symptoms consist of those in which the more important textures of the eye have become affected, either from contiguity or sympathy.

If you see a patient with catarrhal ophthalmia at its commencement, you will observe that the redness is not very considerable; there will be great enlargement of those vessels which are situated at the periphery of the globe; but that part of the conjunctiva near to the cornea will be almost as pale as usual—there will not be that arrangement of pink vessels around the cornea, which is so distinctly witnessed when the iris or ciliary processes are inflamed. The conjunctival vessels at first proceed in fasciculi, by degrees they become much enlarged, others increase in size, they approach nearer to the cornea, until the whole of what is popularly termed the white of the eye, becomes one uniformly scarlet surface. You will remember that the vessels of the conjunctiva are of a scarlet colour, very different from the pink appearance noticed when those of the sclerotica are enlarged; you will also remember that they are loose and may be readily moved about by the finger, or by suddenly altering the position of the conjunctiva, with respect to the sclerotica.

You will not in these cases have much chemosis; there will be a slight degree of serous effusion beneath the conjunctiva, separating it to a certain extent from the sclerotica, and raising it around and above the margin of the cornea, but it will rarely proceed beyond this, certainly not to the extent of producing that condition of chemosis you will notice in purulent and gonorrhœal ophthalmia.

The enlargement of the superficial vessels, by destroying the smoothness of those surfaces which move upon each other, occasions considerable smarting, and gives rise to a sensation such as would be experienced if sand or dust were beneath the lids; but independently of this sensation there will be scarcely any pain—none of that aching and throbbing, or acute and darting pain, which characterize inflammation of the deep-seated parts, unless indeed, the inflammation shall have extended as in what we termed the third set of symptoms; then of course the ordinary symptoms of ophthalmitis will be present, but such a state is not what we are now considering, and is one which will seldom if ever occur, if proper remedies be administered in due time.

Your patient will have at first, increased lachrymal discharge, but by degrees this secretion of tears is diminished, and the mucous secretion becomes gradually increased, so that when the disease is fully developed, the frequent removal of this augmented quantity of mucus is rendered necessary; during sleep it incrusts at the edge of the tarsus, and accumulates in considerable quantity at the inner canthus, so as to prevent the patient from opening the lids when he first awakes, without giving rise to pain, and tearing away some of the ciliæ which are imbedded in the adhesive mucus which collects at the tarsal margins; very frequently strings or patches of this discharge will collect upon the cornea, rendering the patient's vision very defective, and they will often express considerable alarm lest their eye-sight should be lost—you need have no hesitation in allaying their apprehensions, when so excited.

As this mucous discharge decides the catarrhal nature of the disease, and furnishes one of the most striking characteristics by which it is distinguished, it is important that you should be well acquainted with its qualities in the different stages of the inflammation; it will be at first of a thin consistence and of a greyish colour; by degrees it becomes more consistent, and is eventually, thick and glutinous, so as to resemble pus in its external qualities. These are the characters by which it is ultimately distinguished; and you will bear in mind, that its primary qualities, as to colour, consistence, and adhesiveness, will materially assist your judgment when deciding upon the nature of the disease.

You will discover that the palpebral portion of the conjunctiva will, in many instances, have partieipated in the mischief, and that a part of the secretion which incrusts upon the border of the tarsus, and agglutinates the edges of the eye-lids, proceeds from it, and you will also find that the meibomian secretion becomes altered, and that, in short, a slight degree of tinea is present; indeed the palpebral conjunctiva may be primarily affected, and the sclerotic portion of that membrane may or may not be involved; the symptoms will be in many respects the same, except that the vacularity and tumefaction of the lining membrane of the lids will exist, instead of the phenomena we noticed when describing the circumstances which characterized an affection of the sclerotic portion of the conjunctiva; there will also be a greater degree of irritation at the tarsal borders, owing to the inflammation of the meibomian glands, and a consequent change in the qualities of their secretion.

There will generally exist a degree of constitutional disturbance, corresponding to the severity of the inflammation of the eye, and if the mucous membrane of the nose become much and extensively affected, there will be a sensation of weight over the forehead, a certain amount of catarrhal fever attended with occasional rigors, slight cough, increased discharge from the schneiderian membrane, and so on; in short there will exist the symptoms of decided catarrh. Sometimes the uneasiness occasioned by catarrhal ophthalmia is increased during the day, and much relieved during the night, or, if that be not the case, there will be a distinct remission and exacerbation of the symptoms at regular intervals.

Causes.—It has been mentioned, that a peculiar state of the atmosphere is the most frequent cause of the disease under consideration, and that the mucous tunic of the eye is liable to be diseased from many of those agents which exert an injurious influence upon mucous membranes in general; and to this statement it remains to be added, that keen winds, or currents of cold air, applied directly to the surface of the eye, will also produce catarrhal ophthalmia, under circumstances which render it highly improbable that there exists that particular state of atmosphere, which, in the common acceptation of the term, is favourable to the production of influenza, or to catarrhal affections generally; long exposure of the body to cold, without a degree of exercise sufficient to prevent chilliness, or subjecting the surface of the body generally, or of the head or face particularly, to the influence of rain or snow*, or allowing the body to become suddenly chilled by inaction or other causes, after its temperature has been raised by exercise, or increased by sitting in a warm room, or by remaining in a protected situation: sudden and extreme changes in the state of the atmosphere, as to heat or cold, dryness or dampness, are also to be classed among the causes of catarrhal ophthalmia. From this account of the causes of catarrhal ophthalmia, you would naturally expect, that at particular seasons, and in particular districts, it would be exceedingly prevalent, and such is really the case; you will find that at a public Eye Infirmary, for instance, the children of the poor residing in some particular district will be affected in great numbers, and the same occurrence is sometimes noticed in large schools.

Diagnosis.—You would distinguish catarrhal ophthalmia from inflammation of the deep-seated textures, by the absence of acute pain, and much intolerance of light; by the colour, the situation, and the mobility of the blood-vessels; by the state of the pupil, and by the condition of vision: and you would distinguish it from other forms of conjunctival inflammation, by the nature of its exciting cause; by the quality and quantity of the discharge; the general appearance of the inflamed organ; and (if such were the case as very generally happens), by the presence of other catarrhal symptoms, or the prevalence of catarrhal affections generally. It is not likely to be confounded with gonorrhœal ophthalmia, on account of the mildness of the symptoms of the disease under consideration, compared with those of gonorrhœal ophthalmia, the difference in the qualities of the secretion, and the absence of severe chemosis, and extreme tumefaction of the eye-lids. It is however more difficult to lay down certain rules by which catarrhal may be distinguished from purulent ophthalmia in the adult, especially when this latter affection is very mild: purulent ophthalmia is attended with a discharge of a yellow colour and of a distinct purulent nature; the meibomian glands are not materially affected; it is capable of being readily propagated by contagion; it is not attended with an affection of the other mucous membranes; and it does not appear that atmospheric influence alone is capable of producing it; at least, if it be so, it is only in a few very rare instances: catarrhal ophthalmia is, on the contrary, attended with a discharge of a greyish colour, and

* One of the most severe, and at the same time best marked cases of catarrhal ophthalmia I ever witnessed, occurred in the person of a gentleman who was walking out one cold evening for nearly an hour, during a heavy fall of the most chilling sleet he had ever remembered. The disease commenced on the following morning, but was unattended by any affection of the other mucous membranes.

a mucous quality*; it is accompanied with great irritation of the tarsal margins; it often begins in the palpebral portion of the conjunctiva, the former disease being almost invariably confined at its commencement to the sclerotic conjunctiva; it is not propagated by contagion; it is generally connected with an affection of other mucous structures, and in many instances is much controlled by atmospheric influence. If you will carefully bear in mind these circumstances, and contrast them with those I have pointed out as belonging to other diseases of the conjunctiva, I do not think you will often be mistaken in your diagnosis of catarrhal ophthalmia.

Treatment.—It will not be necessary to enter upon the consideration of the treatment adapted to that stage of the disease (if indeed it can properly be termed a stage of catarrhal ophthalmia) when, either from the omission of remedies, or the misappropriation of them, it may have extended to other textures, and involved the deep-seated and more important structures of the eye, inasmuch as I have already spoken at some length on that subject when treating of simple acute inflammation of the conjunctiva, and besides such a state of things is of very unusual occurrence: my observations, therefore, will be directed to the management of those two conditions termed the first and second set of symptoms.

The severity of the symptoms would determine the propriety of general bleeding, and also regulate the amount of blood you might deem it adviseable to abstract; you might bleed in the arm, or take blood by cupping, either from the temples or the back of the neck, as you might judge best suited to the circumstances of the case; or the symptoms may be so exceedingly slight, and the patient so weak and delicate, that you might think it more prudent to apply merely a few leeches, or indeed not to take away any blood, either by general or local means. You will generally afford great relief by the abstraction of blood, and frequently remove the inflammation in a few days, by so commencing your treatment. It is right of course to keep the bowels perfectly open, and for this purpose you will select from among the various kinds of purgatives, such as appear to be most suitable to the various circumstances of your patient: the weak delicate subject of a relaxed habit, would probably be injured, and needlessly enfeebled, by an amount of purgative medicine, which would be inadequate to produce the slightest action on the bowels of the hardy and robust. It would be adviseable to administer at bed-time, a few grains of calomel with ten or fifteen of Dover's powder, and to direct the careful use of a pediluvium, more especially if other catarrhal symptoms be present: aware how much depends on the proper use of the pediluvium, I never recommend it, unless it is tolerably certain that the patient will be carefully and judiciously managed during and immediately after its employment, for it will occur to you that such a remedy imperfectly applied might aggravate the malady it was intended to relieve. To prevent the agglutination of the tarsal margins, and to correct the altered state of the meibomian secretion, you might order the unguentum plumbi* to be smeared along the edges of the eye-lids, two or three times a day, first removing the discharge which is apt to collect in that situation by bathing the part with warm milk and water: you would be careful to direct this ointment to be applied at bed-time, as its application will greatly contribute to your patient's comfort, and prevent that adhesion of the lids which is not only injurious but very painful. Your collyria will consist of some astringent fluid; a weak solution of alum or zinc will generally answer the purpose of relieving pain, and diminishing the discharge; they may be applied either in a warm or cold state as may be most soothing to your patient's feelings: prejudice would direct you never to apply them under such circumstances when cold, but experience will give you very different instruction, but I have previously pointed out the circumstances which would regulate your practice in this particular. It may be adviseable to use anodyne fomentations, such as a weak aqueous solution of opium, or a decoction of poppies: an extremely painful condition of the eye, or, an unusual irritability of constitution, would render such local applications desirable.

I forgot to mention that if the disease be so little severe that you do not think the removal of blood necessary, or if venesection has been practised and the inflammation be only slightly diminished, it would be right to apply a blister to the nape of the neck, or to adopt some other mode of exciting counter-irritation.

As intolerantia lucis is not one of the usual symptoms of this disease, you would not judge it necessary to exclude light from the eye altogether, but merely direct the patient to wear a green shade, and thus protect the inflamed organ from the vivid impression of its more brilliant rays; certainly no mode of protecting the eyes from

* I do not mean to deny that when catarrhal inflammation of the conjunctiva has been long continued or unusually severe, it may give rise to distinct purulent discharge.

* This ointment may be conveniently prepared by carefully rubbing half a drachm of the liq. plumbi acetatis into an ounce of well made spermaceti ointment.

light beyond this, can, in ordinary cases, be required.

Of course it will be requisite to limit the diet of the patient, in a great measure, to warm diluting beverages; no animal food or strong liquors should be allowed until the symptoms are declining, and you will find it prudent, if you desire to prevent a return of the disease, to be imperative in your request, and not to allow the full diet to be resumed too soon.

It is well known that medical men differ greatly, not only in their views of disease, but also as to their modes of treatment; and I shall illustrate this fact by reading to you one or two sentences from that part of Dr. Vetch's observations on diseases of the eye which refers to the treatment, and indeed includes nearly the whole of his remarks on the treatment of catarrhal ophthalmia. "It is a well-known fact," says he, "that the application of a powerful stimulant to a part in which inflammation has taken place, will, by carrying the excitement of the vessels beyond the action of the disease, put a stop to the further progress of the inflammation. On this principle, this form of ophthalmia yields for the most part to any strong stimulus applied to the part, such as spirits of vinegar: snuff blown into the eye has the same effect of curing this inflammation, by exciting a greater, though a temporary distention of the vessels*." If you for a moment reflect on the nature of the remedies here recommended, and at the same time consider that their use comprehends nearly the whole of the treatment advised for the cure of an acute inflammation of the eye, you will agree with me that it is not more meagre and inappropriate in means than unscientific in their application. The unguentum nigrum has recently become a favourite application, (particularly with Mr. Guthrie)† for the removal of this and many other forms of inflammation of the conjunctiva, attended with increased discharge from its surface; but I cannot recommend its use for the cure of catarrhal ophthalmia. I shall have occasion to point out to you in the course of these lectures many diseases at a certain stage of which it may be advantageously applied.

CHOLERA AT HUTTON—ITS PROPAGATION BY CONTAGION, &c.

Stokesley, 15th Nov. 1832.

Sir,

Believing, as we do, that the object of the Central Board is to obtain every possible information respecting the malady which has lately prevailed in the village of Hutton, we take the liberty of making a few remarks not directly coming under any of the heads in the printed forms sent from your Board, which, filled up, are herewith returned.

The elevation of Hutton, its open and dry situation, the general cleanliness of its inhabitants, and their not dwelling in crowded or ill-ventilated houses, would seem to have rendered the place little likely to be visited, especially so severely, by the spasmodic or Indian cholera; but in this, as in most things, human foresight may learn the futility of its prognostications—worldly wisdom the narrowness of its knowledge.

The medical profession are divided in opinion concerning contagion in cholera: we think it our duty to state our opinions on this head, not presuming to think that the mere experience of the disease at Hutton can alone be decisive. Having no theory to advocate, no preconceived notion to support, we shall simply state the facts on which we found our ideas of the contagious nature of cholera, and trust they may be deemed fair and reasonable grounds for the conclusion we have come to. It may be premised that one of the undersigned had previously been disposed to consider the cholera non-contagious; the other from having had ample opportunity of investigating the disease at Stockton, where he resides, as likewise last winter at Newcastle and its vicinity, was inclined to a contrary opinion. We shall now briefly state the facts which have produced a conformity of sentiment, and induced the conviction that the cholera *may* be conveyed by contagion; not, however, by any means denying, but, on the contrary, believing in its extension epidemically, independent of contagion.

The weaver, John Cooke, the subject of the first case, had been under medical treatment for diarrhœa previous to his departure from Newcastle, where it is a matter of notoriety that the cholera prevailed, though we understand no reports were made. J. C. reached home on the afternoon of October 2d, and within a few hours was in the collapsed stage of the disease, and fell a sacrifice to it early in the morning of the 3d. Stephen Catchesides was much with him before death, and assisted in laying out the corpse. Isabella Walton, on the 4th,

* A Practical Treatise on Diseases of the Eye. By J. Vetch, page 174.

† Medico-Chirurgical Review for July, 1832.

washed the clothes of the deceased, and William Bainbridge was much about and playing with them. Bainbridge's house adjoins Cooke's on the one side, and three of the family died; Cateheside's on the other, and four died. These houses have a common yard; and it may further be observed, that all the cases were confined to the immediate neighbourhood of them, with the exception of the above named Isabella Walton, her son-in-law, and a young married woman in the adjoining house, who lived at Enterpen, a distinct and separate part of the village, leaving the larger portion of the place entirely exempt from the disease. It may here be remarked that no communication, or almost none, took place between those residing in the immediate neighbourhood of the disease, and those at a little distance from it, except by the vicar and the undersigned*.

We deem it unnecessary to adduce further evidences in support of our opinion, since, if the above facts be considered inconclusive, we cannot perceive how contagion (employed to embrace infection) can have any existence except in those cases where inoculation may be said to afford us tangible proof. In whatever way, however, the disease is disseminated, we are willing to admit there is something inexplicable about it. There appears to be a period, wherever it prevails, when the exciting cause, be it what it may, seems to have its intensity accumulated, which after a time, depending probably on the extent, and other circumstances of the place, gradually declines, as evinced both by the number and severity of the cases.

At Hutton, from the 6th to the afternoon of the 8th of October, its virulence was at the highest; and though it is very true we had severe and fatal cases after the 8th, we certainly, on the whole, found the disease more manageable. Another circumstance it may be proper to notice, though we do not profess to account for it. Certain patients appear on the first seizure to be death-stricken, and all human efforts are fruitless. Two very marked instances of this occurred in the cases of Mary Bainbridge and Elizabeth Skelton, in both of which, in spite of every care, and of every possible exertion on our part, the disease, without a check, went rapidly on to its fatal termination. In both, grief, despondency, and fear, we may fairly state to have been powerful predisposing causes.

Let it not be supposed from this that we are inclined to advocate inattention or inactivity in any instance—far otherwise: these hopeless cases may be suspected at their outset, but cannot be positively ascertained; and, therefore, we are disposed ourselves, and would strongly urge it on our professional brethren, to employ in such cases exertions more unremitting, and attempts more varied.

The symptoms of this disease have been so often and so ably delineated, that it is needless to enlarge upon the subject; unless it be worthy of notice, that in all the cases the secretion of urine was wholly suspended. That we consider, on the whole, severe cramps rather a favourable occurrence; at least, those who fell most speedily victims, either had none, or scarcely any. It is likewise a fact that children are exempt from cramps. Aware that some of the profession consider all hopes at an end when the pulse at the wrist is imperceptible, we think it right also to state that we had four or five cases where at one period of the complaint, with the most careful examination, we could discover no pulsation, yet the patients recovered.

Previous to the appearance of cholera at Hutton, there had been a few cases of the common fever of the country; and since its subsidence, others of a more severe character have occurred—many fatal; of which Jane Cooke, who had the cholera mildly, was one. But one further remark, previous to entering on the treatment; and this we make, not from any idea that the circumstance is at all connected with the disease, or even (as far as we could ascertain) a predisposing cause. In almost every case, adults as well as children passed the *vermes teretes* in the dejections or by vomiting; and from observation among others in the village, variously affected, but not seized by the cholera, these were voided if cathartics were administered. As regards the treatment adopted at Hutton, we have little to remark. Blood-letting in no case seemed to prove of much benefit, and in some certainly hurried on the collapse. Emetics, either of common salt or mustard, on the approach of the collapse, or when the characteristic diarrhœa had continued

* By a return which accompanies this paper it appears that all the persons alluded to in the above paragraph became successively affected with cholera.—E. G.

for some time without vomiting, but a pain or sensation of uneasiness at stomach or bowels, with (in some cases) nausea, we found very useful. Calomel, both in large and small doses, with or without a small portion of opium, decidedly answered our expectations best. It has been said we should be cautious in the administration of large doses of powerful medicines, as the assimilating functions, being suspended or very greatly lessened, much is to be feared from their accumulated effects when re-action takes place: in so far as it regards calomel, this is, we believe, a needless apprehension; as, in no one instance, even where very large doses had been ofttimes repeated, was there the slightest degree of what is commonly stiled mercurial action. In several instances the croton-oil was used, and, we believe, with advantage in many. In one case, where the patient had been for hours previously considered to be in a state precluding all hope, two drops of the oil were given, and an hour after, another; shortly after which, being left for a few minutes alone, he got out of bed, used the night-chair, and passed a full, good, feculent dejection, though at this same time no pulsation was perceptible at the wrist, and he had, through the preceding night, been delirious. His habits had been for years (especially for the last three months) intemperate in the extreme. A few hours after this appearance of improvement, jactitation and restlessness came on, and he sunk: yet surely in this case we are entitled to consider the oil to have acted beneficially. Astringent enemata, and also sinapisms, were freely had recourse to, and from which doubtless some good was obtained. Stimulants did not afford us any satisfaction, and they were very little employed, except in those cases which occurred in old age.

Ere we close this report, we cannot avoid declaring our unqualified opinion that vast injury has accrued by the crude suggestions and the absurd specifics which the quacks, both in and out of the profession, were daily, by means of the diurnal press, foisting on the public: but while we sincerely lament the mischief done by these, we entertain a firm hope that the Central Board may be enabled to collect such a mass of experience from, unhappily, the numerous local boards in correspondence with them, as shall afford a very desirable acquisition to our knowledge on this subject when laid before the public. If we may be allowed to suggest, there are certain desiderata which the Central Board, we conceive, have the only, or at least the readiest means, by their connexion with government, of having effectuated—viz. if, as we are disposed to believe the disease, under certain circumstances, to be contagious, to have an efficient power established, with sufficient means at disposal for the cleansing and purifying the habitations that may be visited by the malady; for preventing, as far as possible, more than the necessary intercourse with the sick, and the speedy interment, in deep graves, of the unfortunate victims;—but, above all, for the destruction of the clothes, &c. of any one who may have died of it, since it is a fact which it is not for us to explain, that, until the cholera evinces itself in a place by a more than usual number of deaths, there are numbers will give no credit to its existence; and, ignorant that it mostly proves a positive loss to the profession, declare the rumour of its presence is only to serve the private ends of the practitioners.

In conclusion, we have to acknowledge our high sense of the conduct of the Rev. R. J. Barlow, whose unremitting exertions, and ready and constant attendance on the sick, are beyond all praise, and without whose aid we should have had much difficulty and prejudice to contend with, and our endeavours must have been still more unsatisfactory: delicacy forbids us to say more, while justice condemns us for so inadequately and unworthily noticing his strenuous and laudable efforts.

We have the honour to subscribe ourselves, sir,

Your very humble and
obedient servants,
(Signed) R. H. KEENLYSIDE, M.D.
J. ALLARDICE, Surgeon.

To W. Maclean, Esq. Secretary to the Central Board of Health.

PERFORATION OF THE HEART.

To the Editor of the Medical Gazette.

SIR,

IT has been the subject of censure that young practitioners should betray a fondness for the observation of cases,

which, from their rarity, seldom require medical treatment; and this censure would no doubt be merited, if they neglected to acquire that knowledge which is only more useful, inasmuch as its application is more frequently called for. And it is questionable if a more extensive cultivation of morbid anatomy will not prove the comparative frequency of those pathological conditions which are now considered as of rare occurrence.

Oct. 9, 1831.—At 8 A.M. I was requested to visit Richard Abraham, ætat. 63. On the previous day he had followed his usual occupation of breaking stones on the road, but on his return in the evening he complained of indisposition, and in the course of the night suffered from a fixed pain in the left side of the chest, which extended across the sternum and through the right side, but still he referred to the left side as the seat of this pain.

I found him lying on his back, his head and shoulders being particularly low, the surface of the body was cool, the pulse regular and natural, beating 84 in a minute, the bowels acting properly, no thirst, the tongue rather coated in its middle, respiration perfectly free and natural, no cough, the pain not increased either by attempting to cough or by inspiring deeply, but slightly if he turned on the left side, no lividity or other change in the appearance of the countenance.

Suspecting that an inflammation of the chest, from previous exposure to cold, was about to declare itself, I ordered the position of the patient to be altered by placing pillows under the shoulders, the surface to be kept moderately warm, and some warm gruel to be administered with two calomel and colocynth pills; promising soon to make a second visit, to determine on the necessity of bleeding and such other measures as after reaction should be established might seem called for.

In about an hour from this time he complained of sickness; he was raised in bed, retched, appeared faint, and died without further struggle or complaint.

On the following morning I examined the body with the kind assistance of Dr. Burrows, and found the pericardium distended with full two pounds of dark blood, which was partly fluid and partly coagulated. The heart was found to be perforated near its apex so as readily to admit the little finger into the left ventricle; the edges of this perforation presented the irregular appearance of a muscular part forcibly torn asunder. The other thoracic, together with the abdominal viscera, were beautifully healthy—not the slightest vestige of present or past disease could be traced. I regret that the bloodvessels were not minutely examined, but in the ascending aorta, not far from the heart, I found two portions of ossification, which did not however involve any thing approaching a circular portion of the vessel. This man had suffered frequently from chronic rheumatism, and had complained of occasional pain in the chest, attended with palpitation.

Excepting the rent in the ventricle, I observed nothing morbid in the appearance of the heart, which is placed in Mr. Richard Smith's Museum at the Bristol Infirmary, but to be quite sure of this I wrote to Dr. Richard, from whose kind reply I quote the following.

"* * * I perceived, of course, the perforation of the left ventricle. The muscular parietes appear otherwise to be in a sound state. The only morbid phenomenon which is discoverable is a plate of bone, being an ossified portion of the internal membrane, including one of the aortic valves. The heart certainly appears large, particularly the left ventricle, but I am not sure that the enlargement is to a degree that can clearly be said to constitute disease."

If I have not occupied too much of your valuable space I will beg permission to view this case in reference to physiology.

The importance of morbid anatomy as a branch of pathology is most happily appreciated, but its subserviency to physiological knowledge is not sufficiently estimated.

The dark colour of the blood when not circulating in the arteries, was, of course, familiar before the occurrence of the above case, yet objects, which from their familiarity with our senses, too frequently pass unheeded, will sometimes arrest attention in a peculiarly forcible manner, and such was the case with me in this instance.

Here was a mass of blood in a shut sac, covering and investing the heart, which had escaped from the left ventricle, the immediate receptacle for the purified blood from the lungs, and yet it was as apparently venous as though it had gone the round of the circulation. It is still

further observed by Dr. Badham, in one of your late numbers, that if the current in a living artery be only interrupted by pressure on the vessel, that the blood so obstructed assumes the venous colour. This Dr. Prichard remarks, in the letter already alluded to, "is a curious circumstance, and difficult to be reconciled with the prevailing theory of the changes which the blood undergoes in respiration," whether we regard that of oxygenation, or the more satisfactory hypothesis of simple decarbonization.

I do not pretend to the accuracy necessary to a satisfactory induction from physiological phenomena, but I regard this as a delightful and promising subject for the attention of those who are competent to its investigation, and to such I would suggest, that experimentalists have relied too exclusively on the fascinating but abstract laws of chemistry. They have viewed arterial, as only chemically differing from venous blood, without examining what power may be exercised by the living vessels, which are thus too often degraded into mere tubes or hydrostatic instruments.

I have the honour to be, sir,
Your obedient servant,
JAMES HURD.

Cleeve Cottage, Yatton,
Near Bristol, Oct. 29, 1832.

CHLORINE AND THE ALKALOIDS.

To the Editor of the Medical Gazette.

SIR,

In the perusal of your excellent journal, I have observed some papers on that part of vegetable chemistry which concerns the alkaloids, and accordingly I have sent you an account of a few curious *facts* which I have observed in my experiments on them, and which you may deem worthy of insertion.

If chlorine be passed through sulphate of quinine suspended in water, it will soon be dissolved; and if ammonia be added to this solution, a beautiful green colour will pervade it, which in the course of a day or two will fall to the bottom of the vessel in the form of a precipitate. I likewise observed that potassa or soda being added, produced a light brown colour, which presently became almost black. The carbonated alkalies do not produce this effect. Chlorine passed through morphia suspended in water, and ammonia being added, when it is dissolved, produces a dark brown colour. In some instances this will answer as a test for the above substances, as it will detect with ease the hundredth part of a grain, and as chlorine produces no effect on any other of the alkaloids that I have as yet examined.—I am, sir,

Your very obedient servant,
ALEX. ROPER.

Guy's Hospital, Nov. 30, 1832.

CASE OF SOLUTION AND PERFORATION OF THE COATS OF THE STOMACH AFTER DEATH:

With Remarks.

To the Editor of the Medical Gazette.

SIR,

C. L. aged 2 years, a delicate looking child, of a scrofulous habit, has been declining in health for a considerable time. At first, his complaints were cough, deficiency of appetite, and great general debility, followed by loss of power in the inferior extremities. At the time medical advice was obtained, which was only ten days before death, he presented the following symptoms:—quick pulse, hot skin, a severe cough, attended with a copious muco-purulent expectoration and hurried respiration, arising evidently from the presence of tubercles in the lungs. The head also exhibited marks of congestion or subacute inflammation; and before the fatal termination, coma, dilated pupil, and other symptoms of effusion in the brain, came on. The usual treatment was employed:—leeches and blisters to the head, calomel, &c.

Sectio Cadaveris, thirty-six hours after death.—Body much emaciated. In the head, marks of congestion were observed: the vessels of the pia mater and those on the surface of the brain were loaded. The ventricles contained a little more than a drachm of serum. On slicing the substance of the brain, more red points than usual were seen. In the thorax, there were found considerable adhesions of the pleura, and a small quantity of serum in the cavities. A very considerable portion of both

lungs was studded with tubercles in an early stage of progress, which in some parts were coalesced together in large clusters. The divisions of the bronchiæ were filled with thick yellow mucus of a purulent appearance, and the internal membrane was reddened. Upon opening the *abdomen*, a large aperture was found in the larger extremity of the stomach. The edges of the opening were irregular, ragged, and very much softened; and the mucous membrane in some parts at the edge of the opening was almost in a pulpy state. There was not the least appearance of the deposition of lymph, any thickening or mark of inflammation around the edges of the perforation. In all other parts, the coats of the stomach were quite healthy, and of their natural appearance. The size of the opening was large enough to permit a small orange to pass through it. The stomach contained a little fluid like gruel, which had been taken a short time before death; and some of the contents had escaped at the opening into the cavity of the abdomen. The parts on which the fluid which had been poured out of the stomach was lying, were perfectly healthy and natural in appearance, and did not exhibit the least redness, or any sign of inflammation. There was no other morbid appearance in any of the abdominal viscera, except some of the mesenteric glands.

John Hunter was the first who took notice of the circumstance, that the stomach is occasionally found perforated on opening a body after death, although no symptom indicating any disease in that organ had existed during life. In his opinion, this solution and perforation of the coats of the stomach is owing to the solvent power of the gastric juice, acting on the parts after death, and although this explanation has not appeared satisfactory to some, yet it seems more probable than any other which has been advanced. He considered that the vital principle enables animal matter to resist the powers of digestion, as well as fermentation, &c.; but the moment the living principle is lost, it becomes subject to the digestive powers of the gastric juice. Perhaps one of the most powerful arguments against this explanation is the rarity of the occurrence in question; but it appears to me there is a combination of circumstances necessary for its production, all of which are seldom present, which satisfactorily accounts for the appearance being so rarely observed.

The fluid which is secreted by the stomach when empty, differs materially from that secreted when it contains aliment: indeed, the presence of food seems to be a necessary stimulus for the secretion of gastric juice of proper digestive powers. The gastric juice collected from the stomach of an animal fasting, is a transparent ropy fluid, without any alkaline or acid qualities. During the process of digestion, on the contrary, it possesses acid properties, depending on the presence of free muriatic acid, as was proved by Dr. Prout; and Tiedemann and Gmelin have remarked, that the secretion of acid begins as soon as the stomach receives the stimulus of food, or any foreign body. This effect is occasioned, for example, by the presence of flint, stones, or other indigestible matters; but it is produced in a still more remarkable degree by substances of a stimulating nature.

The liquid found in the stomach of an animal after long fasting, consists of the fluid secreted by that organ, as well as the mucus from the pharynx and œsophagus and the saliva, and in all probability does not possess solvent powers in a very remarkable degree; and I think we may thus explain the discrepant results obtained by different physiologists.

In the experiments of Spallanzani, alimentary matter was digested out of the body by the action of the gastric juice, when due precaution was taken to preserve the proper temperature. He obtained the fluid used in his experiments by means of a sponge introduced into the stomach, the presence of which is quite a sufficient stimulus to cause a secretion of gastric juice of full activity. Mr. Carswell, also, in a paper read before the Royal Academy of Medicine of Paris, states, that having procured gastric juice from the stomachs of living animals, he put some of it into the intestines, urinary bladders, and stomachs of dead animals, and found in every instance softening or perforation to take place. He likewise mentions that he produced perforations in the coats of the stomachs of rabbits at will. They were killed after eating, and according to the time which had elapsed after death, upon inspection the coats of the stomach were softened or completely perforated. In the experiments of Dr. Wilson Philip

upon rabbits, he found, in many cases, the great arch of the stomach dissolved to a considerable extent and perforated, especially when the animal had been killed a short time after eating fully, and when the body had been left for some time after death before it was examined. MM. Leuret and Lassaigne found the gastric juice of a duck, obtained by means of a sponge, capable of digesting bread crumbs, and that flesh was quickly softened and deprived of weight by the action of the gastric juice of a dog. The experiments made in the case of the lad who had a fistulous opening into the stomach, mentioned in the American Medical Recorder, January 1826, are also quite conclusive as to the capability of the gastric juice to effect digestion out of the body.

In the experiments of M. de Montègre, on the contrary, the gastric juice was incapable of digesting alimentary matter out of the body. This physiologist possessed the power of being able to vomit at pleasure the fluid which had collected in his stomach after fasting, and with this he performed his experiments. Now it is not at all surprising that he did not obtain the same results as the preceding authors have done, because the fluid he used was that contained in the stomach when that organ was not under the stimulus of food, or any other substance, which, as has been before stated, is totally different from that secreted by it after a meal, and is quite inadequate to effect digestion.

That the perforation occurs after death is, I conceive, quite certain, for, if that were not the case, there would most undoubtedly be marks of violent inflammation in the abdomen discovered on dissection, owing to the escape of the contents of the stomach into that cavity. Indeed, it is evidently totally distinct from any action going on during life, as there is no thickening around the edges of the opening, nothing like the deposition of lymph, no increased redness, nor any traces of inflammation whatever.

It might *à priori* have been supposed, that this perforation would have been most likely to happen when the stomach contained no food, as the gastric juice would then be applied more directly to its coats, but the reason why this is not the case is evident from what has been said. I am not aware, indeed, that the appearance in question has ever been observed in cases where the stomach contained no food or foreign body; and Dr. Gairdner states, that all the cases of erosion and perforation which fell under his notice, contained some portion of alimentary matter.

This perforation, of course, is not likely to be met with in affections of the stomach, because a healthy gastric juice is not secreted. Whether, however, it is possible that, from a disease of the stomach, a fluid may ever be secreted possessing greater solvent powers than ordinary gastric juice, is a question which it would be interesting to determine.

As it is now satisfactorily proved that the gastric juice is capable of digesting animal food out of the body, we must admit, that if the stomach, at the moment of death, contains some of this fluid of active qualities, it will be capable of digesting that organ itself, or any other with which it may come in contact. Hence, if a man in good health is killed suddenly after having taken food, the stomach becomes subject to the same laws as other dead animal matter, as soon as life is extinct, and is therefore as much under the influence of the gastric juice; and as the temperature of the internal parts of the body is kept up for some time after death, the digestion of the coats of the stomach is an occurrence which we should naturally expect to find. Accordingly, the cases mentioned by John Hunter were individuals who were killed under these circumstances. It is not, however, in cases of sudden death alone that this appearance has been observed; for instances are related by authors of its having presented itself in persons who have been ill a considerable time—as in the case of the child mentioned above: but then it is probable that, in these examples, the stomach participated but little in the disease, and was not incapable of secreting gastric juice of active properties. Still, however, we are not likely to meet with this perforation after death in common cases, because the low state to which the vital powers are generally reduced, renders the stomach incapable of secreting healthy gastric juice. Cases of capital punishment might be considered favourable for the production of perforation of the stomach; and as the bodies of those who suffer are generally examined, it might perhaps be expected they would afford numerous examples of it; and, in fact, one of the cases which occurred to John

Hunter was that of a man who had been hanged: but I apprehend the state of mind under which the culprit must labour is quite a sufficient cause to account for the rarity of the occurrence under these circumstances; for the effects of mental emotion on secreting organs are well known.

From the remarks which have been made, we may conclude that, in order that this perforation of the stomach may occur, it is requisite, in the first place, that food should be taken a short time before death; that death should take place suddenly, while the stomach is in a healthy state; or, at least, that if it occur from a protracted disease, there be no affection of that organ which shall prevent a secretion of active gastric juice; and that the temperature of the body be not materially reduced previous to death, nor suffered to decrease too rapidly after death.

The necessity of attending to this appearance, in connexion with medico-legal inquiries, is of the highest importance, as it is in cases of sudden death, where suspicion of poisoning might be excited, that it is most likely to be observed.

[The name of the author of this interesting paper has not been transmitted to us: we suspect it was omitted in the hurry of transcription.—E. G.]

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Epidemia Variolosa, del 1829, *in Torino*, &c. Per T. D. GRIVA. Or,

"*An Account of the Variolous Epidemic which prevailed in the continental dominions of his Sardinian Majesty during the years* 1828, 29, *and* 30." By T. D. GRIVA. Turin, 1831. Pages 250.

WE have been much gratified by the perusal of Dr. Griva's work, which is published by authority of the Minister of the Interior. It is drawn up with singular clearness, and is quite a model for similar reports. Indeed, we would strongly recommend it to the serious attention (and imitation) of the members of our own National Vaccine Board, whose official communications have hitherto been distinguished by a kind of epigrammatic brevity*. Here we have a goodly volume of 250 pages, which, mixed with some trash, contains a vast fund of very curious and instructive matter. The reports of the Italian vaccinators are particularly interesting, and testify an acquaintance with their subject which is highly creditable to them. Our limits forbid any attempt at a formal analysis of the contents of this volume. We can only hope to convey to our readers some general impression of the mode in which *Italian* physicians record the medical occurrences of their time.

The epidemic which it is the object of this volume to describe had previously devastated other parts of the world. It appeared in Sweden in 1824; in London in 1825; in Philadelphia in 1826; in various departments of France in 1826; in Marseilles in 1827; at Nice in 1828; from whence it spread to Turin and Genoa, ravaging the continental dominions of his Sardinian Majesty in 1829. A tabular view is given of the results of the epidemic in the 40 provinces composing that kingdom, of which the following is an abstract:—

Total population (in round numbers)	3,440,000
Annual number of births	103,000
Numbers attacked by small-pox in the epidemic of 1829-30	35,146
Total deaths by small-pox out of that number	6,052

This rate of mortality is low, being only 17 per cent. The disease appears to have prevailed *chiefly* among the juvenile portion of the population, though adults came in for a share of it. Turin suffered severely. Between March 1829 and March 1830, the capital (containing a population of 121,000) lost 785 persons by small-pox, of whom 528 died in three months (July, August, and September.) The following statements (at page 56) are very interesting:—

In Turin, 156 persons took small-pox a second time, while 57 only took it after vaccination. Of the former there died 9, and of the latter 5, but these 5 had only been vaccinated a few days, and the vaccination had not completed its course. The proportion of those who took small-pox after vaccination in the provinces, is not given.

* We have never met with the National Vaccine Report for the present year. Has it ever been published, or circulated?

The benefits of vaccination are placed in a very striking point of view in several parts of the work. The annual average of the vaccinated had been 52,000, but such was the dread of the disease, and such the confidence reposed by all ranks in the efficacy of vaccination, that in 1829, (during the prevalence of the epidemic) the total number of vaccinations amounted to 81,426, being in the proportion of 79 to 100 of the births.

The efforts of the government for the encouragement of vaccination were incessant. Notices were published in the newspapers recommending vaccination, and instructing persons how to proceed. Circulars were sent to the provincial administrations, and to the bishops of the several dioceses, recommending exhortations from the pulpit in favour of vaccination. The national schools were directed to insist upon certificates of vaccination from all pupils, and returns were ordered from all district vaccinators. The results of such strenuous exertions were highly satisfactory, and the mortality, though great, fell very short of what might have been calculated upon.

A large portion of Dr. Griva's book is devoted to a detail of the labours of the Piedmontese vaccinators. We can only touch upon a few of the many interesting topics suggested in their reports. At an early period of the epidemic, it was proposed to revert to *primitive* lymph, and various efforts were made in the Alpine pastures to find it. Three packets of the genuine lymph (fresh from the cow) were received in June and July. Sixteen persons were vaccinated from this source, which succeeded in four cases only. "In none of these was it possible to trace any difference whatever between the course of the *primitive* and of *humanized* lymph," (page 104.)

We read, (page 64) that under ordinary circumstances, the proportion of failures to successful vaccinations is as 1 to 10, or 12. This would appear to depend, in a considerable degree, upon certain conditions of the atmosphere, for as the season advanced, such failures became more numerous. Thus in February they were as 1 in 10; in April as 1 in 7; in June as 1 in 5; in August 49 failed out of 153, being in the proportion of 1 in 3.

Much research is displayed in the 11th chapter, with a view of explaining this singular fact. Three explanations of it are offered. 1. Alterations in the quality of the lymph itself, effected either *spontaneously*, or by the agency of heat, moisture, light, and electricity. 2. Conditions of the atmosphere operating by impediment to cutaneous absorption. 3. Idiosyncracies, or *anti-contagious* constitutions. It was observed by four vaccinators, that children who resisted vaccination, resisted equally variolous *infection*, a statement which we have had frequent opportunities of verifying. The repetition of vaccination under these circumstances, at distant intervals, in the belief that such unsusceptibility is only temporary, is strongly and most properly recommended, (page 157.)

One great object with the author is to prove (and this he does to our entire satisfaction) that one good *regular* pustule is just as effectual a preservative against small-pox as a dozen; and, further, that constitutional symptoms are not requisite to ensure ultimate security.

We must here take our leave of Dr. Griva and the Italian vaccinators. Their zeal and science are alike commendable; and we trust that the example here set of a *national* contribution to pathology will not be lost upon the practitioners of this country.

The Elements of Anatomy. By Jones Quain, B.M. Professor of Anatomy and Physiology in the University of London. Second Edition, revised and corrected. Taylor, 1832. Pages 812.

It would be mere affectation on the part of a reviewer to say that he had read much of a work like that before us. It is not intended to be *read*, but to be studied; and all that we can pretend to have done by it is to have looked at the chief points of its arrangement, observed the general style of the writer, and examined some individual points, to ascertain the degree of precision and clearness which he has given to his descriptions. Another portion of such works, too, to which we always give heed, is the table of contents and index; for a book may be a very good book as regards its general interior, and yet be defective for want of easy references, just as a country may be beautiful, and yet be inaccessible for want of roads and finger-posts to direct us on our way. Now applying these tests to Dr. Quain's

Anatomy, we find the results to be very satisfactory. The arrangement is good, and the language perspicuous—equally free from the vice of being too general, or descending into over-minute details, such as are sometimes to be found in works of this description, whose authors seem to have mistaken refinement and prolixity for precision and completeness of description. The various parts are considered according to the *descriptive*, *analytical*, *and historical* methods, and the manner in which the task is executed appears to us to constitute a highly useful and scientific elementary system of anatomy.

Lectures on Anatomy, interspersed with Practical Remarks. Vols. I. II. III. IV. By B. B. Cooper, F.R.S. Surgeon to Guy's Hospital, Lecturer on Anatomy, &c. Longman, 1831-2.

We have before alluded to this work while yet in progress, and have now to recommend it to our readers in its completed state. We decidedly disapprove of the method of publishing works in this manner: people do not like to obtain a system of any thing volume by volume: they like, and very naturally, to know the value of the entire article before they make the purchase. Now that they have it all before them, the many good points in Mr. Cooper's lectures will be better appreciated than they can have been heretofore. The plan of the work is different from that of most others which have lately appeared, and comes nearer to that of the Bells, now many years before the public. A great deal of theoretical and practical detail is mixed up with it, and in fact it is not a mere system of descriptive or general anatomy, but of anatomy in relation to physiology and surgery. Much of the dryness unavoidably connected with bald anatomical description is thus got rid of, and the consequence is, that it is far more *readable* than works on such subjects usually are. In keeping it within four thin volumes, Mr. Cooper has acted judiciously, and we perceive that he has also kept the price very moderate under the circumstances. It is handsomely "got up."

MEDICAL GAZETTE.

Saturday, December 8, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri: potestas modo veniendi in publicum sit, dicendi periculum non recuso."
Cicero.

THE LATE PROFESSOR SCARPA.

It is our custom, as our readers know, to preserve short biographical memoirs of eminent and recently deceased members of our profession: no apology, then, we conceive, is needed for introducing the following succinct account of the late illustrious professor of Pavia.

Antonio Scarpa was born at Friuli, in the year 1745. His family was obscure and humble. It was through the assistance afforded him by a distant relative, that he was enabled to pursue his early studies, but the death of his benefactor soon left him altogether dependent upon his own resources. Whatever may be the feeling of interest which the contemplation of the difficulties of rising genius usually inspires, in the present case facts are wanting by which such a feeling might be gratified: we only know that Scarpa "bated no jot of heart nor hope;" that he clung the firmer to the profession he had chosen, in proportion to the struggles which he saw it would be incumbent on him to make; and that in the proud consciousness of his powers, he persevered with an ardour which was soon crowned with the most encouraging success. His first work, a Treatise on the Structural Anatomy of the *Fenestra Rotunda*, was written at an early age, and excited general attention: it was followed up in a few years by the able Disquisitions on the Senses of Hearing and Smell; and the author was at once raised to the first rank among anatomists. He presently after published a series of memoirs on the

ganglions and plexuses, distinguished by the number of new facts and original views which they contained.

But it was his great work on the Nerves of the Heart which first conferred on him an European celebrity The anatomy of the heart, particularly as regarded its nerves, had been from the earliest period in an unsettled condition: the most contradictory opinions prevailed—the boldest assertions were hazarded; and even as late as the year 1792, a German anatomist, Behrends, of Mentz*, had the hardihood to publish, in the form of a dissertation, "*Cor nervis carere*," and to argue that the heart was a *stupidum et insensile viscus*. Scarpa would endure it no longer: he determined to set the question at rest, and in the course of a few months produced his magnificent folio, the *Tabulæ Neurologicæ*, which he dedicated, with a brief inscription, to the Royal Society of London. This undertaking cost him an infinity of pains, and was, in fact, composed in the short intervals of leisure which the duties of his professorship (for he was now a professor in the University of Pavia) allowed him. One is surprised in looking into the work at the immense industry which, under such circumstances, must have been requisite to effect it, but not so at the enthusiasm with which it was every where received.

Treatise after treatise now came from his pen, and among them the commentary on the intimate Structure of the Bones. Baxhmer, indeed, had the priority in attempting to shew the cellular structure of the bones, but he left much for Scarpa to do. Our indefatigable professor made new sections, employed fresh processes, and availed himself of others which were presented to him in the relics of an ancient cemetery with which time had long been busy. These, together with his drawings, and the admirable engravings of Anderloni, enabled him to put forth a volume scarcely less valuable than any he had yet produced.

High as was the talent of Scarpa as an anatomist, perhaps his abilities as an artist were equally so. Those who have seen the original drawings of the nerves of the heart, which he executed with his own hand, bear witness to how little remained for the engraver to do. Yet Anderloni had a difficult task to accomplish: he saw the necessity of giving much more relief than had ever been done before to the parts which he had to represent; and he determined, by the aid of black grounds, to bring out all the details and foreshortenings, in a superior manner. It was an era in descriptive anatomy. Anderloni succeeded to perfection in his design, and thenceforth worked after nature. All the subsequent productions of Scarpa were illustrated by the same artist; and it may well be conceived what a relief was thus afforded to the professor, most of whose nights used to be exclusively devoted to the labours of the pencil.

The Essay on the chief Diseases of the Eyes made its appearance in the first year of the present century: it has gone through several (at least five) editions in the original, and has been translated into almost every language of Europe. It was in this work that Scarpa so successfully advocated the propriety of depression in cataract—an operation which he rescued from disuse, if not oblivion. A method, also, it deserves to be mentioned, of operating for artificial pupil, which he proposed about the same time, he presently after abandoned, in consequence of being convinced of the superiority of that of M. Maunoir.

When the Parisian Society of Medicine proposed to have the question de-

* M. Carron de Villards, to whom we are indebted for many particulars in the text, gives the credit of the dissertation to an *English* anatomist: had he consulted Scarpa's preface, he would have found the fact to be as we state it.

termined relative to the operation for aneurism, the professor of Pavia did not disdain to enter the lists: he immediately commenced a series of experiments concerning the ligature of arteries, the result of which he published under the title of Reflections and Observations on Aneurism. It is well known that he gave the preference to a peculiar form of pressure for procuring obliteration; and in operating for aneurism, that he confined himself to Anel's process, which has been improperly confounded with that of John Hunter. In Italy, it is said that the process in question has been crowned with such brilliant success, that malignity alone would suggest a doubt of its excellence. The failures have been attributed to neglect of some of the fundamental precepts, or to the omission of certain indispensable precautions. In his memoir on Temporary Ligature of the Arteries, and in his Letters to Vacca-Berlinghieri on the same subject, Scarpa enters into the fullest detail of proofs to establish these facts.

About this time it was that, France and Italy being now under one sceptre, it was contemplated to naturalize reciprocally the most valuable productions of each country. Baron Heurteloup (father, we believe, of the celebrated lithotritist of that name) proposed to undertake a French edition of Scarpa's work on Aneurism: the Italian professor gladly consented, and offered the use of the copperplates in his possession. But M. Delpech, who was either naturally more prompt, or less burthened with business at the time than M. Heurteloup, and unacquainted with the design of that gentleman, unexpectedly produced a translation of the work, and had the plates copied and reduced by a French artist. The project of M. Heurteloup was in consequence dropped.

We need not dwell upon the other well known works of Scarpa. In 1809 appeared the splendid folio on Hernia; and it may suffice to say of it, that in every line is displayed the hand of a master. Not only have we here a clear account of the mechanism on which each kind of hernia depends, but a lucid arrangement of the several dispositions of the ring, the spermatic cord, the epigastric, crural, and obturator arteries: there are also rules for practice laid down in it, which leave little to be desired by the operator. Subsequent editions have incorporated several collateral memoirs by the professor; and a Supplement to the latest contains his researches concerning Hernia of the Perineum.

The operation of lithotomy by the recto-vesical method, which was adopted and defended with warmth by some of the most eminent Italian surgeons — among others by Vacca-Berlinghieri and Brabantini, gave rise to a brisk controversy, in which Scarpa distinguished himself, by proving that in every case the perineal or lateral method ought to be preferred. Truth, however, compels us to add, that the professor did not spare any exaggeration that occurred to him, in order to set in the strongest light the dangers which he thought might arise — those, for example, of the spermatic cords. The controversy was cleverly conducted by various adversaries; but the exactness of his details, and the depth and force of his objections, procured for Scarpa a decided superiority: nor have all the successes of Giorgi of Imola been since able to reinstate recto-vesical lithotomy in its once popular condition.

With respect to the professor's own mode of performing the operation, it may be mentioned that he employed an instrument which was a modification of the cutting gorget of Hawkins, one devised for the purpose of making an oblique incision, and at the same time avoiding the branch of the pudic artery which runs along the ischium; and this is the in-

strument which has been employed in almost all the cases of lithotomy which have occurred in Italy within the last ten years. Scarpa, however, never insisted upon his friends or pupils using his gorget: Professor Cairoli, one of his chief favourites, and now his successor, has operated more than once in his presence with the knife of Monro.

Hydrocele was a malady which engaged much of Scarpa's attention; and his work on Hydrocele of the Spermatic Cord will be found to embrace every essential in the diagnosis of the disorder.

Deformities, also, were a favourite subject with him. One of his earliest, and one of his latest, memoirs were devoted to the management of such affections: in the first of these, by directing attention to the anatomical relations of the tarsus and metatarsus in clubfoot, he much simplified the method of treatment; and in the last, he has shown that most deformities of the knee may be cured by patience, time, and proper bandaging. It would be needless to particularize a variety of other papers which he published from time to time, such as those on Aneurism by Anastomosis, Nævi Materni, or his memoirs on Scirrhus and Cancer: they are well known to every practitioner who is familiar with the medical literature of the continent.

Scarpa was a member of the Italian Institute, a foreign associate of the Academy of Sciences of Paris, and a fellow of the Royal Society of London; he was a chevalier of the Legion of Honour, and of the Imperial Order of Leopold; he might also have had, like his colleague Moscati, a senatorial robe, had it not been for his avowed attachment to the house of Austria. When the professors of the University of Pavia threw themselves at the feet of the conqueror of Marengo, Scarpa alone was absent; but it was observed that Buonaparte did not resent this open neglect of homage. By the house of Austria, indeed, his talents as well as his loyalty seem to have been duly valued. When one of the first wives of the present Emperor was attacked with scirrhus of the uterus, a flag of truce (for it was war time) was sent to demand the services of Scarpa. The surgeon of Italy crossed the Tyrol occupied as it was by the two hostile armies: the French outposts put him into the hands of the Austrians; and a similar formality was observed on his return.

To an enthusiastic love of his profession, Scarpa united an exquisite taste for the fine arts, and he was the possessor of a noble collection of paintings by the Italian masters. The museum of Pavia also owes to him much of its valuable contents.

In person he was tall, his figure graceful, and to the last, notwithstanding his great age, perfectly erect. In his manners, he was gentlemanly and amiable.

He spoke several languages, but the Latin he decidedly preferred. Simple in his mode of living, he had few wants to gratify, and he is understood to have died in possession of a large fortune. Yet the failure of his sight, amounting, we believe, in his latter years to total blindness, must have been a great drawback upon his felicity,—though, as in the case of Huber, this only seemed to redouble his industry, and to stimulate him to employ the eyes of others. The death, too, a few years ago, of Professor Jacopi, his especial pupil and protegé, at the early age of 32, afflicted him severely: he felt his loss as that of an only son.

No man was better acquainted with the actual state of the profession than Scarpa. In the circle of his friends and favoured pupils, he used to discuss freely every alleged improvement in surgery. Only a few months before his death he brought out the third volume

of his *Opuscoli di Chirurgia*, in which may be seen his admirable letter to Weber on the ganglions.

Perhaps, after all, it may be said that the works of Scarpa are more useful and exact than they are original: if by original be meant fanciful, we fully concur in that opinion: utility, positive usefulness, was the great end and aim of all his labours. In this and in his prodigious activity are his distinguishing characteristics to be found: in the latter attribute he had probably no rival in modern times except Cuvier: both these extraordinary men seem to have been ever urged by an irresistible necessity of working, and both were perhaps as surprising for the multiplicity of their researches, as for their perfect freedom from mere hypothesis. Scarpa was the author of no system—no theory that had its supporters, or ever gave rise to a revolution in science: the sciences, indeed, with which he was conversant afforded him little scope for this: but what he did accomplish had what was real in it, and shews that he was worth a whole host of speculators.

The school of Pavia, it is natural to suppose, has suffered an irreparable loss in Scarpa: even during the most active period of her great professor's career, owing to a variety of circumstances chiefly political, and affecting the state generally, this ancient seat of learning has not flourished; and in spite of the longing lingering hope still, it would seem, entertained by some of her alumni, it is to be feared she must sink ere long irrecoverably. Above ten years ago, John Bell, in the course of his Italian tour, of which we have so interesting an account in his posthumous Observations, visited Pavia, and conversed with Scarpa. It is tantalizing not to have the particulars of this interview; but as the following passage apprizes us of what were *then* the hopes of this once famous place, we give it at length, leaving the reader to draw his own inference as to what they must *now* be, now that their great light is extinguished.

"The University of Pavia is supposed to have existed as early as the year 794, having owed its first establishment to Charlemagne. It is amazing how soon a college may rise to distinction, and in how short a period it may fall into decay. Only thirty years since, Pavia was the first school for law and physic. This may be said to be the sort of body politic which the soonest rises and soonest perishes, since its fame often depends upon the life of *one man*, and dies with him. Perhaps Pavia herself may shortly give proof of the truth of this observation. I have reason to believe that she *may* again in no long period rise to her former celebrity. Such, at least, is the language held by the scientific men of this city with whom I enjoyed a short conversation while in the company of the venerable and distinguished man (Scarpa) who has such claims to admiration, not only from his brethren of the same profession, but from all who value science: nor shall I easily forget the feeling of gratification which my interview with him left on my mind*."

TRIAL FOR MANSLAUGHTER.

Mrs. Spiller, against whom a Coroner's Jury found a verdict of manslaughter, on the 19th ult. (see Medical Gazette for the present season, vol. i. p. 266), was tried at the Old Bailey on Wednesday last. The same evidence as before was adduced against her, while, to prove that she had not caused the death of the patient, several persons were brought forward who were alleged to have been cured by her. One of them was a man whose hand she had restored from some complaint—we know not what. He struck the witness-box with great energy, exclaiming, "The hand that strikes the blow *were* the one she cured." The argument was convincing to the enlightened jury, who, without retiring or suffering the judge to sum up, returned a verdict of—*not guilty!*

* Bell's Observations on Italy, page 88.

MEETING OF MEDICAL STUDENTS.

In our last leading article we anticipated a meeting, which has since taken place. It is impossible to deprecate such proceedings in too strong terms: they are certain to do mischief, and cannot possibly do good. We believe that the so-called public meeting originated with a school which does not contain a dozen pupils, and that the others who were present went for the purpose of opposing and putting it down: in fact, there was a strong disposition manifested to inflict summary punishment on the mischief-makers. We repeat the caution we gave last week—"Nothing can have a more injurious effect, in the eyes of the public, than variance and disunion; which, on such a subject, would excite no sentiments but those of ridicule and disgust."

HOTEL DIEU.

CLINICAL OBSERVATIONS ON HARE-LIP,

By M. Dupuytren.

Double Hare-Lip—Excision of the Bony Tubercle—Hæmorrhage—Death.

A child of three months old was lately brought to the Hôtel Dieu, presenting a double, and rather complicated specimen of hare-lip. On the right side the division occupied the whole depth of the lip, all the palatine vault, and the velum pendulum; on the left side the fissure was neither so profound nor so extensive. The middle portion had its base so near the nasal spine that it was thought possible to make it assist in the removal of the deformity. It was therefore separated from the bony tubercle, and this was extirpated with a pair of scissors: it included the germs of two incisor teeth. The rest of the operation was postponed till another day. There flowed at first a little blood, but this appeared in a short time to have ceased; however, the child continually performing the act of suction, gave rise to its recurrence, so that it was found necessary to apply the cautery. Some blood, which had been swallowed, was voided by stool, and on the day appointed for the completion of the operation, the child was too weak, so that it was again deferred. Nevertheless, the exhaustion continued to increase; the middle portion of the lip sloughed; and the child rapidly sunk. No autopsy was made.

M. Dupuytren observed, that notwithstanding the progress of science, and perhaps even in consequence of that progress, there are very few diseases whose history is so clearly made out as not to give rise to constantly renewed discussion on important circumstances connected with it. The course of his clinical investigations had led him to discuss two capital, and as yet undecided points in the history of hare-lip, viz. the period most fit for operating, and the treatment most applicable to a complication of the disease, as yet but ill understood.

It is well known how much the opinions which have been given on the first of these points differ from each other: some operate immediately after birth—others wait till the fourth or fifth year, to afford time for the intellect of the child to be developed; yet others trust little to the degree of reason possessed at this period, and postpone it still longer.

According to M. Dupuytren, the flesh is so soft at birth that it is easily torn by the needles, and the operation thus rendered uncertain; besides which, the mortality being greater at this age than any other, it would be imprudent to add a new source of danger to those which already exist. Such are the inconveniences; and it becomes a question whether they be counterbalanced by the advantages. Doubtless it would be desirable by the performance of the operation to give the infant an increased power of sucking, so that it might be able to take the breast; but this instinctive desire to be suckled, and the act of suction which it occasions, is one of the very circumstances most opposed to the success of the operation. If by any means this could be got over, then the earliest possible period would gain a powerful argument in its favour; but the tendency to suck is manifested from the moment of birth, and is unconquerable.

The one alluded to, however, is after all not the most objectionable that can be selected; and it is difficult to conceive what can have led so many to give the preference to four or five years of age as the time of operating. On the allegation that the child was then old enough to be conscious of the necessity, and to anticipate the advantage of the means adopted; so that it would thus consent to the proceeding, and submit with more fortitude to the pain? Experience might well have undeceived them. At this age, children have just intelligence enough to anticipate—to feel and to remember pain, but without their reason being of any avail in assisting them to bear it; they endeavour to escape from it as much as depends on them, and do every thing in their power

to embarrass the operation. At the very most is it possible occasionally to gain a short stillness and tranquillity in girls, to whom coquetry is already not unknown, and who are easily flattered; but as to boys, with them this motive goes for nothing, and they are completely intractable. Recently, said M. Dupuytren, I have verified this by experience.

At a later period, reason and courage are both more developed; but if the bone participates in the affection, their increased compactness leaves less room to hope for their re-union. Under every circumstance it is advantageous to operate early: thus the entire deformity is less, and that which depends upon the separation, or displacement of the bone, may be entirely overcome. For these several reasons, M. Dupuytren prefers operating at three months: life is then less precarious, and the chances of mortality more favourable than at birth: the infant feels the pain, indeed, but does not dwell upon it, and has no anticipations to distress it. Many surgeons already select this period, but more apparently by custom than calculation: at least, said M. Dupuytren, I know of no one who has recommended it on this ground.

M. Boufils, of Nancy, who has had extensive experience in such cases, operates immediately after birth. At this time he says the infant suffers little—scarcely cries during the operation, and becomes quiet when it is over. He states that the instinct of sucking, if not strengthened and confirmed by the infant being put to the breast, subsides, and that the inconvenience abo e alluded to is thus to a certain extent overcome. The infant is to be nourished by milk poured into its mouth. His plan is to lay the patient on a table, forming an inclined plane by means of pillows, and to have him confined by bandages: the edges of the division are then pared with the scissors, and the bleeding is restrained by compression applied with the fingers of an assistant to the maxillary artery; and, subsequently, simply rubbing the cut edge is sufficient to arrest the bleeding. It is desirable to prevent bleeding as much as possible, because the blood being swallowed is apt to cause vomiting, which seriously interferes with the success of the operation. The divided parts are then brought into apposition, and retained by means of two needles. No bandage is used, but an intelligent nurse is made to place the babe on her knees, and sit with the parts gently pressed and approximated between the fore-finger and thumb: when tired she is relieved by another, and thus the juxta position of the divided edges is maintained and adapted to the circumstances, being especially directed when the infant cries, laughs, or takes food. Three or four days suffice for the union to be accomplished. The needles are then removed, but the thread, which by this time has become as it were glued to the skin, is left undisturbed. Small adhesive plaisters are now applied. Should circumstances induce us to prefer the early operation, this is the manner in which it may be conducted with the best prospect of success.

But whether the operation be performed sooner or later, another important question is involved in the complications which sometimes present themselves. When there is a projecting tubercle in the middle, with two deep lateral fissures, an attempt is made either to remove the portion of bone which supports this, or else we endeavour to force it back into its proper place; and those writers who have vaunted of their success, have doubtless thought but little of the degree of deformity produced—at least they have passed it over in silence. When the labial tubercle projects forwards, said M. Dupuytren, it is necessary to give attention to the point at which it is inserted into the partition of the nose, for on this often depends both the degree of the projection and the proceeding to be adopted. When the insertion is near the point of the nose, if the tubercle be attached to the lateral portions of the lip by an operation, these have a tendency to pull it backwards, and the point of the nose follows the movement; the alæ of the nostrils are thus separated, and the entire nose remains flattened, having a very disagreeable appearance. I have more than once had to regret, said M. Dupuytren, having substituted one deformity for another in the children operated upon in this manner, and that, too, scarcely inferior to the natural disfigurement. What would it be, then, if the tubercle were inserted actually at the point of the nose?—a circumstance by no means very rare, and several times witnessed by M. Dupuytren. In a recent instance of this kind, where he was called upon to operate, he contrived the following method:—The fleshy tubercle was separated, with a bistoury, from its bony support, and this last cut out with sharp pincers; the fleshy part was then easily carried horizontally backwards and converted into a partition for the lower part of the nostrils, between them and the mouth. Then, whether the union of this part was allowed to take place first, or whether the hare-lip operation was completed at once, it was reduced to one of great simplicity, and performed with needles in the usual way.

M. Dupuytren tried this plan some time ago, on a child—unfortunately a very in

docile little patient, and whose struggles involved the operation in much difficulty. The bony tubercle having been removed, and the skin carried backwards to form the floor of the nostrils, it was maintained in its position by a bandage, and the farther steps delayed till union had occurred. On removing the dressings the adhesion appeared to be complete, but the movements of the infant caused some slight hæmorrhage. The assistant thought he could not do better, with a view to arrest this, than lay hold of the tubercle with his fingers; and this was sufficient to break down the connexion, which was still very weak. The hare-lip operation was performed, nevertheless; the needles were placed in their proper situations, though with extreme difficulty, owing to the incessant struggles of the child. Below, adhesion took place very satisfactorily; but above, there remained an opening as large as a pin's head. In a second case, M. Dupuytren has carried the plan successfully into effect.

It is only when the labial tubercle is inserted near the nasal osseous spine that it ought to be preserved as an intregral part of the lip. In this case, also, M. Dupuytren reserves a portion of the adjacent bony tubercle: an operation, however, which he admitted, as in the preceding instance, not to be free from danger. He stated, that the blood which is swallowed in these cases never became digested, and that, in general, it is returned by vomiting. In the present case it remained longer than usual, and as, under such circumstances, it is apt to become more or less decomposed, he advised the application of laxative clysters for its removal.

MILITARY HOSPITAL OF INSTRUCTION, ALGIERS.

CLINICAL OBSERVATIONS ON WOUNDS FROM FIRE-ARMS.

By M. Baudens,
Surgeon-in Chief, and Professor to the Hospital.

WOUNDS OF THE NECK.

We have had many cases in which balls had traversed the integuments and superficial muscles of the neck, without occasioning bad consequences: we have always been able to manage them by topical refrigerants, bleeding, low diet, and repose. But the following examples are worthy of detail:—

Lesion of the Primitive Carotid — Fatal Hæmorrhage.

A soldier received a shot before my eyes, which was followed by a tremendous and mortal hæmorrhage: it was from laceration of the primitive carotid. I secured both ends of the artery in a moment with ligatures; but in vain: the man sunk exhausted. Same day a soldier of the 30th regiment received a shot in the popliteal nerve and artery, which proved fatal from the immense hæmorrhage that ensued in a few moments. Probably transfusion might have been employed in these cases advantageously; and whenever I have an opportunity again I shall try it. But though I might have restored the latter individual by such an operation, I should have had to amputate his thigh after all, in consequence of the simultaneous lesion of the artery and nerve.

Ball lodged between the transverse Processes of the fourth and fifth Cervical Vertebræ—Lesion of the Brachial Plexus—Paralysis—Cure.

A soldier was struck with a ball, which traversed laterally the soft parts of the middle of the neck, and lodged between the transverse processes of the fourth and fifth cervical vertebræ of the right side, where I recognized its presence with my finger. The shot had probably torn the nervous branch of communication between the cervical plexus and the brachial, the latter being itself the seat of considerable injury, appreciable in the occurrence of a sudden paralysis of the whole thoracic extremity. I dilated the orifice of the wound to above two inches, and succeeded in extricating the ball, though not without great difficulty. I removed also a small splinter, the point of which might have occasioned the worst consequences, by pressing upon the plexus. The wound healed well; after which, by the diligent application of stimulating liniments and of moxas at the origin of the brachial plexus for several months, the arm, which was somewhat spent, resumed its nutrition, and recovered eventually the perfect exercise of all its functions.

As I knew by experience that the ball, left to itself, would probably, as it does in many cases, make its way out in the process of suppuration, I should not have been so anxious to extract it, if I had not dreaded the possible occurrence of tetanus which its pressure on the plexus might occasion. And although we sometimes find these foreign bodies remaining for an indefinite period in the human body, wrapt in cysts, and producing no ill consequences, yet it is more frequent to find them productive of suppuration, and even of caries, which can be relieved alone by extraction.

Perforation of the Œsophagus—Cure.

I found, at the ambulance, a soldier of

the 28th regiment, who had several hours previously been wounded with a bullet, which passed through the middle of his neck from left to right. By the exit of whatever he drank through the wound, it was easy to perceive that the œsophagus was injured. The man did not complain of much beside the intolerable thirst which he felt, and was not able to satisfy. I introduced a tube into the stomach with much care, and with the help of a syringe injected some emollient drinks; then, having suppressed the inflammatory symptoms by means of antiphlogistics, I ventured to give him some soft and nutritive food. The poor creature could only appease his thirst by sucking some morsels of orange. In a short time, by the employment of a methodical system of compression with caustics, the fistulous opening was closed, and the patient could himself introduce the tube without assistance. The œsophagus, in consequence of the cicatrix, presents a manifest contraction, which will oblige the patient to avoid all food that is not liquid or soft. But how are we to account for this extraordinary wound and its cure? How did the trachea, the front of the vertebral column, the arteries, and the nerve of the eighth pair, escape all appearance of injury? I can only suggest the unequal retractility of the different tissues, the attitude of the individual at the moment he was shot, perhaps also the change of form which might have been undergone by the projectile, flattened by some hard substance against which it previously struck, the deviations of the bullet, and the great elasticity of the trachea, as possibly capable of throwing some little light on a very difficult question.

ST. BARTHOLOMEW'S HOSPITAL.

Case of Retention of Urine and great Tumefaction of the external parts, produced by a Calculus, impacted in the Urethra of a Child.

John Jacques, a fine boy, aged 4 years, was brought to the hospital about nine o'clock on Friday morning, the 26th of October, and placed under the care of Mr. Earle: on his arrival the whole scrotum and skin of the penis were found to be very œdematous, and much increased in size: the woman who accompanied him, knew nothing further of the case than that the swelling had suddenly made its appearance early the same morning. Numerous scarifications were made with the point of a lancet, to relieve the excessive tension, after which, warm fomentations were continually applied. At two o'clock, P.M. the tension had rather increased than diminished, notwithstanding that a considerable discharge of blood and serum had been kept up by the warm applications. On examination, no stricture of any kind, or other exciting cause, could be discovered; the affection was therefore attributed to irritation, produced by some acrid secretion under the prepuce, which was exceedingly œdematous, and in a state of phymosis. A weak solution of sulphate of zinc was ordered to be thrown up under the prepuce by means of a small India-rubber bottle.

At seven, P.M. the boy having made no water since the morning, and the œdema having increased to a frightful extent, an attempt was made to pass into the bladder a very small elastic gum catheter, but without success: a slit about three-fourths of an inch in length was then made in the upper part of the prepuce, but as the glans penis did not then make its appearance, some slight doubt arose as to the nature of a tumor, which resembled somewhat in shape and even in colour the glans penis in a state of disease: a slight puncture was made into it, but as no thing but pure blood oozed from the wound, no light was by this means thrown on the nature of the enlargement. The penis was again carefully examined, the œdema having somewhat diminished by the bleeding, &c.: a slight irregularity was discovered by pressing firmly the penis between the finger and thumb, at about three-quarters of an inch from the pubis; and as this was the only irregularity felt, it was presumed to be the glans. The director was again inserted under the prepuce, and the incision continued to this point, when the tip of a small calculus was discovered at the orifice of the urethra, which was removed without much difficulty. In shape, the stone is a long square, about the third of an inch in length, a quarter in width, and two lines in thickness: one extremity forms a kind of wedge-shaped head, the very tip of which was the only part discoverable at the orifice of the urethra. A small elastic gum catheter was immediately introduced into the bladder, when about sixteen ounces of urine were drawn off: some further scarifications were then made in the prepuce and scrotum; a hip bath was ordered to be used immediately; and the parts to be enveloped in a bread and water poultice during the night.

27th.—A considerable quantity of water is stated by the sister to have dribbled away during the night; and the boy appears to be doing well.

29th.—Yesterday a small dose of castor oil was given. The water is made freely, but still in the bed. The belly this morning appears distended, but no external examination can give an exact idea of the state of the bladder, as the boy cries immediately on turning down the bed-clothes. The catheter has been introduced into the

bladder, which was found to be empty. The scrotum is still swollen and much inflamed.

Ordered a hip bath, and to continue the poultices.

30th.—The scrotum still inflamed; has not passed much water during the night; the catheter was again introduced, and a large quantity of highly-coloured urine drawn off.

Repeat the bath and poultices.

31st.—A considerable quantity of matter had formed around the root of the penis, which has been let out by a free incision: a large arterial branch was wounded, which required to be tied.

Nov. 2d.—Another incision was made to-day on the opposite side of the root of the penis, as there was still a small collection of matter. The boy is rather blanched and weak.

Ordered to have meat diet, and a little beer.

6th.—Since the 2d, no unfavourable symptoms have appeared; the boy now makes his water freely into a vessel, and none escapes through either of the wounds; in the urine there is a considerable deposit.

Fear was for some time entertained from the suppuration in the cellular tissue of the scrotum, that ulceration of the urethra, and consequent effusion of urine, had taken place, from the irritation caused by the passage of the stone, and the introduction of the instruments; but the mischief has been so limited, that all fear on this head is dissipated, and especially as no water has passed through either of the wounds.

This case shews of how much importance it is to investigate minutely every case as soon as it presents itself to our notice, and of what value may be the statement of the friends, should the patient from age, the disease itself, or any other cause, be incapable of answering rationally those questions which it is necessary to put to him. Had the mother fortunately accompanied this little patient to the hospital, and given the subjoined statement, which she made the following Sunday morning, no doubt could have been entertained of the propriety of at once having recourse to those means which were resorted to ten hours afterwards, and thus the patient would have been saved much unnecessary pain and suffering, and the risk of his life.

The mother stated that on Thursday morning, (the morning previous to the boy's being brought to the hospital,) immediately after going to stool, he ran in, crying, and saying that "he had run a nail in." As no wound was discovered, she thought nothing more of it, although he complained more or less of a pricking sensation during the rest of the day. The following morning, about six o'clock, on again going to stool, he again returned with the same exclamation: on examination, the parts were discovered to be slightly swollen. The swelling increased very rapidly, as at nine o'clock he was brought to the hospital in the state above described.

ROCHDALE DISPENSARY.

To the Editor of the Medical Gazette.

Sir,

If you consider that the following cases, with the observations attached to them, merit a place in your widely circulated and valuable journal, they are at your service.

Yours respectfully,

Robert Barker,

House Surgeon to the Rochdale Dispensary.

Nov. 21, 1832.

Cases of Phlegmasia Dolens in the Male.

Charles Brearley, ætat. 17, a carter, was admitted as a patient on the 17th of April. He stated that about a week before he was seized with a pain in his right groin, followed by shiverings, thirst, and other febrile symptoms, for which he took a purgative powder. At the period of his admission, the upper third of the right thigh was immensely swollen, tense, and elastic; extremely hot and painful, but of a natural colour. Violent re-action; the pulse strong and full; stomach rejecting every thing.

An attempt was made to ascertain the state of the absorbents and lymphatic glands in the groin, but from the rigid condition of the integuments and painful state of the limb, no accurate information could be gained.

He was twice bled, generally and locally, and freely purged, &c. A cold lotion was afterwards applied to the limb.

21st.—The swelling of the limb extending downwards towards the knee, and upwards round the hip. Fluctuation is indistinctly discernible in the upper third of the thigh; the integuments are very much distended, and elastic, and present a smooth shining appearance, without the slightest discolouration.

Perstet. in usu medicament. (ten grains of Dover's powder at night); Imponatur Catapl. Lin. part affectæ.

22d.—Has passed a good night, and experienced great relief from the poultice; is better in other respects, but his pulse is 110; fluctuation a little more distinct, and is not confined to one part of the limb, but is perceived all round. The leg and

foot considerably swollen. The flexor muscles of the leg, as also the adductors and flexors of the thigh, so contracted as to form right angles; the former with the thigh, and the latter with the body.

℞ Tinct. Digitalis, ʒj.; Mist. Camph. Aquæ Puræ, a.a. ℥iij.; Syr. Rhæados, ʒij. M. ft. mist. cujus coch. duo ampla. quartâ quâque horâ sumantur.

℞ Pul. Ipecac. comp. gr. x. ft. Pulv. hora somni. sumend.

Diet to be nourishing, with wine or porter.

23d.—Has rested tolerably during the night; vomits the mixture; thigh much as yesterday. Pulse still very quick. Appetite very good, and abundantly supplied with nourishing diet.

Contin. Catapl.

℞ Hydrarg. Submur. gr. x.; Opii in Pulv. gr. iij.; Antim. Pulv. gr. vj.; Acaciæ Mucil. q. s. ut ft. massa in pilulas viij. dividenda quarum sumat unam tertiâ quâque horâ.

29th.—The fluctuation more evident, and equally felt round the whole limb; pain upon pressure very acute.

A large abscess lancet was pushed into the centre of the anterior aspect of the thigh, about one-fourth from the upper part, and an opening two inches long was made, but nothing followed the withdrawal of the lancet. The integuments immediately retracted, making the incision appear circular instead of longitudinal; under this tissue the opening was entirely closed. In a few minutes a very thin pus began to ooze from the opening, and, during the next twenty-four hours, twenty ounces were evacuated: external pressure did not increase the discharge. The tension and pain were considerably diminished by the evacuation of matter, and, upon examining the limb, an irregular knotted character was distinguishable. Any attempt to extend the limb was attended with the most acute pain.

The treatment, for the following three weeks, consisted of anodyne fomentations and poultices to the thigh, and nourishing diet as before. During this period, two other openings were made similar to the first, with like results; only that the matter, when discharged, was of a bad odour.

He was ordered Quina, with Sulphuric Acid.

From this time the patient gradually improved, the extensive thickening about the hip daily lessening under the use of anodyne frictions; towards the middle of July he was able to sit up, and there is now every hope that the use of the limb, to a great extent, will be restored.

I have been induced to draw up this case from the rareness of its occurrence in the male, it being the same or very like the disease designated "phlegmasia dolens," and described as nearly peculiar to the puerperal female. The case of the late Lord Liverpool, published by Sir Henry Halford in a late number of the Medical Gazette, is the only undoubtful case in the male I have been able to find on record, save one mentioned in Dr. Mason Good's Study of Medicine, which happened to a Dr. Booty, and is described as having been very similar to phlegmasia dolens.

Mr. Bower, a highly respectable surgeon of this town, informs me that two cases similar to the above have occurred in his practice, which I shall give in his own words.

John Travis, æt. 58, farmer, of spare habit, and exposed to all vicissitudes of weather, was seized, on the 24th of May, 1828, with violent and deep-seated pain in the left groin, shooting down the thigh in the course of the femoral vessels as far as the ham, with a sense of coldness of the leg and foot. He had a severe rigor in the early part of the day, followed by heat generally diffused over the body except the leg of the affected side, which preserved its natural temperature, although the patient complained of a sense of coldness in it. On a careful examination of the limb, not the least swelling or induration could be perceived, but some tenderness on pressure along the upper and inner part of the thigh. He was bled from the arm, had leeches applied to the seat of the pain, was freely purged, and at bed-time took ten grains of Dover's powder.

25th.—Passed a restless night; pain increased; thigh and leg enormously swollen, tense, shining, perfectly elastic, and of a natural colour.

Temperature of the whole limb somewhat less than the rest of the body; complains of great debility, and the fever assumes a typhoid character.

Ordered leeches to be repeated; afterwards a large cataplasm to the groin, and frictions, with stimulating liniments, to the leg and foot. To take Dover's powder at bed-time.

26th.—Limb still swollen, but preserving the appearance of yesterday.

To continue frictions, with Dover's powder.

He continued much in the same state during the ensuing ten days, with slight delirium during the night.

June 6th.—Improved in every respect; limb somewhat diminished in size, and the skin slightly puckered; no pain; fever abated; appetite improving.

9th.—Limb has nearly recovered its usual size; patient feels stronger, and wishes to get up. He progressively im-

proved; and, on the 20th, resumed his occupation.

The other case occurred in a young man, 24 years of age, of leucophlegmatic temperament, and of dissipated habits. His case presented the characters of the preceding, except that a small abscess, formed in the middle and inner part of the thigh, was healed very slowly. The same treatment was pursued, but his recovery was more protracted. He afterwards died of phthisis. His body was not examined.

If the preceding are admitted to be cases of *phlegmasia dolens*, of which there can be little doubt, if phenomena are allowed to be the characteristics of disease in both sexes alike, they tend to disprove all the theories of the French writers, as also of the English, which are founded upon the existence of some derangement of the pelvic or other functions connected with generation in the female; whilst they strongly corroborate that of Dr. Hull, which does not imply the disturbance of any function that may not occur to the male as well as female; and it also adequately explains the phenomena of the disease.

"THE FACULTY OF MEDICINE" AND DR. ELLIOTSON.

We stated last week, in reference to the solitary point in our answer to Dr. Elliotson which it has been attempted to refute, that the opinion of his colleagues on the questions which have been the subject of his discussion with this journal, had not been expressed by them, *quasi* the "Faculty of Medicine." Nevertheless, the Doctor has addressed the Dean of his Faculty, hoping to obtain something more to the point than the meagre statement of the Secretary, which we mentioned in our last. The first answer having proved unsatisfactory, Dr. E. wrote a second time. His notes have not been published; but Dr. Thomson's, which we find have appeared elsewhere, we subjoin:—

"Tuesday Evening, Dec. 4, 1832.

"The Dean of the Faculty of Medicine, in the University of London, presents his compliments to Dr. Elliotson. No such determination as that stated in Dr. Elliotson's note, namely, 'that henceforth no opening address shall be permitted to be delivered until it has been laid before the Faculty, in order that the nature of its contents may be previously ascertained,' has been adopted *by the Faculty*. No proposition for such a resolution has been made *in the Faculty;* and, consequently, no resolution of the kind *stands on the minutes of the Faculty*."

"Dr. Thomson presents his compliments to Dr. Elliotson. He does not exactly comprehend Dr. Elliotson's question. He knows of nothing which occurred *in the Faculty of Medicine* which could authorize the statement made by the Medical Gazette.

"3, Hinde Street, Wednesday Morning."

Considering the quarter from which it proceeds, we are perfectly at a loss to account for the publication of these notes, or to discover the object it is intended to serve. They strongly corroborate the view we have already given, and given correctly, of the sentiments which prevail in Gower-Street. No one can read them attentively without perceiving how the matter really stands. Their form, and the words which we have placed in italics, afford a key to the whole.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 4, 1832.

Abscess	9	Hernia	1
Age and Debility	79	Hooping-Cough	35
Apoplexy	10	Inflammation	58
Asthma	38	Bowels & Stomach	4
Cancer	8	Brain	1
Childbirth	9	Lungs and Pleura	9
Cholera*	21	Insanity	7
Consumption	109	Jaundice	5
Constiption of Bowels	2	Liver, Diseases of the	6
Convulsions	44	Measles	22
Croup	4	Mortification	7
Dentition or Teething	5	Paralysis	5
Diabetes	1	Rheumatism	1
Dropsy	29	Small-Pox	30
Dropsy on the Brain	19	Spasms	3
Dropsy on the Chest	3	Stone and Gravel	1
Fever	26	Stricture	1
Fever, Scarlet	17	Thrush	2
Fever, Typhus	4	Unknown Causes	1
Gout	2		
Heart, Diseases of	1	Stil born	21

Increase of Burials, as compared with the preceding week . . . 161

* Of the deaths by Cholera, 17 were reported this week by the clerk of St. Mary, Haggerston, being the only report made by him since Aug. 17.

METEOROLOGICAL JOURNAL.

Novermber 1832.	THERMOMETER.		BAROMETER.	
Thursday . 29	from 34 to 45		29·52 to 29·56	
Friday . . 30	30	45	29·75	Stat.
December	42	56	29·72	29·64
Saturday . 1				
Sunday . . 2	50	57	29·52	29·42
Monday . . 3	37	47	29·39	29·45
Tuesday . 4	41	47	29·45	29·89
Wednesday 5	32	43	30·06	30·14

Wind, S.W. and N.W.

Except the 29th ult. and 4th instant, generally cloudy, rain frequent, and wind tempestuous; a heavy shower of rain in the evening of the 2d, accompanied by two or three peals of thunder and vivid lightning.

Rain fallen, ·575 of an inch.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 15, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

CUTANEOUS DISEASES.

DISEASES CHARACTERIZED BY BOILS.

The inflammatory and pustular diseases, gentlemen, of which I have to speak to-day, are two, and both are derived from brutes.

MALIGNANT PUSTULE.

The first is what is called by some writers the malignant pustule; by the French it is called *pustule maligne;* and I rather think it is this disease, but I am not sure of it, that is called by the Germans *milz-brand.*

Symptoms.—In this affection there is a carbuncle produced, very similar to the carbuncle of plague. I do not imagine that the disease is by any means well understood, but its existence is an undoubted fact. Occasionally it has happened, when animals have been skinned after dying of a particular disease in which there are pustules tending to gangrene, that the individuals who have skinned them have had carbuncular pustules of a dark colour take place on the surface, and from which they have perished. It is said occasionally to have arisen from persons having merely touched the blood of an animal which was killed while labouring under this disease; indeed, one instance is recorded, of a butcher being seized with a gangrenous inflammation in the face and speedily dying, after having put a knife, with which he had killed a bullock labouring under this disease, between his lips. Some suppose that disease of this description—a carbuncle tending of course to gangrene, and which bears a resemblance to the carbuncle of plague, is never produced but by the contact of the blood, or the secretions, or the body, or something which the body has touched, of brutes who have died of this disease; but Rayer considers that now and then it occurs spontaneously and sporadically; however, I should hardly think that he is correct. It is possible that the person may have touched something which had been in contact with the animal previous to having its skin off. The animal may have been sent to market, and contact is possible, just like the infection of scarlet fever and small-pox, without our being able to trace it.

Contagious, not Infectious.—I never saw an instance of this disease. I believe that in general it is not infectious, but merely contagious; it has been described by Morand, a French surgeon, in the History of the French Royal Academy for 1766. He there gives the cases of butchers and others, who have been affected with gangrenous erysipelas and carbuncles. He thinks it can arise even without an abrasion of the surface, if the blood of the animal be applied. Enaux and Chaussier described the pustule maligne in their work on the Treatment of Bites, published in 1755, and which is followed by a short account of malignant pustules. Two instances are mentioned in Hufeland's Journal for 1822, of diseases of this description, which proved fatal to two men. They had been wetted in the performance of venesection, with the blood of a cow labouring under the disease. In each case the chief inflammation found after death was peritoneal, and they had also bubo.

The pustules, or carbuncles, of this disease, have generally been observed among veterinary surgeons, shepherds, tanners, blacksmiths, butchers, and labourers—in fact, all those persons who were most likely to come in contact with brutes la-

bouring under the affection. It is said usually to display itself on those parts of the body which are uncovered, such as the face, neck, hands, shoulders, or arms—all those parts being uncovered in many descriptions of work.

There is an account of many people being seized with a disease in 1818, at Ostiano, in Italy. Thirty-five persons visited an ill-ventilated stable, which contained three cows and ten horses, one of which had laboured under an offensive discharge from the nostrils for twelve months. Eleven of them were seized with the disease, and all but one died. Violent pyrexia, pains, spasms, and boils, and at last a large carbuncle, characterized the first stage; gangrenous vesicles, and a typhoid fever, were the chief features of the second. Whether this was the same disease I do not know; but if it be, it would appear that where there is a want of ventilation, and many animals are crowded together, it may be infectious. You will find in Rayer an account of the disease. It is at present rather an object of curiosity than of practice, because I believe that no treatment does good; some persons, however, recommend the application of the actual cautery to the carbuncles when they appear. It is supposed by Rayer to bear a very great resemblance to the plague in human beings; but it is very likely, notwithstanding, to be a different disease.

GLANDERS.

The next disease is glanders. You are aware that this is a disease of horses, and that it is chiefly characterized, or very much so, by a profuse discharge from the nostrils, and that it occurs in two forms, the one acute, and the other chronic. When it occurs in the acute form, there is violent inflammation of the face of the animal, and gangrene very soon supervenes. In the chronic form there is little more than discharge from the nostrils, and the animal will continue to labour under this for a great length of time, though in general the disease, I believe, is not susceptible of cure. Some persons now say that they can cure it; but at any rate, up to the present time, it has been considered an incurable disease. It is a highly contagious, but, I believe, not an infectious disease. I believe no horse ever gets it unless the matter from another horse comes in contact either with an abraded portion of the surface of the body, or the mucous membrane of the nostrils, and some say not even then, unless the mucous membrane is abraded. That, however, I cannot speak about.

Farcy.—The disease sometimes appears in another form, and then, instead of being called glanders, it is denominated *farcy*. I do not know that I am quite right in dwelling on these matters, especially as I am not conversant with them; but as the disease may occur in the human subject, and as I have seen two cases myself, I think the glanders ought to be enrolled among the diseases of the skin. When the affection assumes the form called *farcy*, there are small tumors which farriers call *buds*, or small ulcers, about the legs; sometimes on the lips, face, neck, or other parts of the body. Sometimes these are so small, so few in number, and create so little inconvenience to the animal, that for a time they escape observation; at other times they are larger, more numerous, painful to the touch, and spread more rapidly; and in these instances a general swelling of the limb often takes place, particularly when the hind legs are attacked, and some degree of lameness ensues. These tumors or buds are at first hard, but soon become soft and burst, degenerating into foul ulcers of a peculiar appearance. The lines of communication between the buds or ulcers are generally very observable, and they consist of what the farriers call *corded veins*; but, in general, I believe they are enlarged lymphatic vessels, running from one ulcer to another.

I believe the term *glanders* derives its name from a gland under the jaw, which is supposed to be the seat of the disease. I do not know the origin of the term *farcy*. However, when glanders and farcy occur in horses, they are the same disease; for Mr. Colman says that he has inoculated a horse with the matter from farcy, and it has produced glanders, and *vice versa*.

Glanders in the Human Subject.—Now the disease has appeared in the human subject in both forms—farcy and glanders; and it has also appeared both in the chronic and acute character, but the chronic, I believe, has been noticed more frequently than the acute. In the chronic form there has been no tumor produced on the body; but in other cases tumors have arisen in succession, and have suppurated, and the patients have most of them died at last completely worn out. I believe in one or two cases patients have got better. You will find three cases mentioned in Mr. Travers's work on Constitutional Irritation; and though he does not seem to have been aware that they were glanders, yet it is proved that one of them was, because Mr. Colman took matter from a man and inoculated two asses, and they were seized with acute glanders; mortification and sloughing took place, and both of them perished. I will read one of the cases related by Mr. Travers:—"Nimrod Lambert, a healthy hackney coachman, æt. 32, in January, 1822, infected a chap on the in-

side of the right thumb, by inserting it into the nostril of a glandered horse, to pull off a scab. He remembered to have afterwards wiped the thumb with a wisp of hay. In the space of six hours he was seized with violent pain and swelling of the thumb; it inflamed rapidly, upon which he applied a poultice to it, and took some salts. On the third day he was suddenly taken ill whilst driving, with cold shivers and giddiness, and states that he entirely lost the use of his limbs for seven hours. At this time his arm pained him much all the way up, and on the following day it was streaked with red lines, and excessively swollen; the arm-pit was also much swollen and tender. In the evening of the fourth day he was carried to Guy's Hospital, where he lay during twenty-four weeks. Superficial collections of matter formed successively in the course of the absorbents. The corresponding portions of the integument sloughed, leaving extensive ulcers, which discharged an unhealthy and fœtid matter. The glands at either angle of the lower jaw, and those of the groin, became swollen, and he was much afflicted with pain between the eyes, and down the nose, and exulcerations of the membrana narium, attended with discharge. During the progress of the local disease, he had much constitutional illness. He totally lost his appetite, and was oppressed with nausea; complained of severe pains, with swimming in the head,"—and so on. An ass was inoculated by Mr. Sewell with the matter of this man's sores, and died glandered. This was proof positive of the nature of the disease. The termination of the case is not given; but the patient considered his constitution broken, and despaired of ever being again the man he once was.

Another case is mentioned in the same book, which happened to a veterinary student who slightly injured his hand in examining the head of an ass which had died of inoculated glanders. An ulcer ensued, and pain and inflammation of the superficial absorbents took place in a few days, and soon ceased. But the absorbents of the opposite arm became affected, and an abscess formed in it, and another at the lower part of the back. He became hectic; and at length suppuration occurred also in the lungs, in one of the kidneys, and successively in each knee-joint; after which he died.

Now this might have been a mere inflammation of the veins and absorbents; but Mr. Colman inoculated an ass over the maxillary gland, and at the margin of the nostrils, with the matter of the abscess of the arm, and likewise rubbed some upon the Schneiderian membrane. Glanders and farcy were the result, and the animal died on the 12th day of the experiment. Precisely the same was done with another ass, by the patient's brother, but no effect ensued, as the matter was not employed for several days, and had been left exposed to the air. He repeated, however, the experiment upon the same animal with fresh matter, and it perished of glanders and farcy upon the fourteenth day.

The possibility of the occurrence of the disease in the human subject is certain; but all these facts I was perfectly ignorant of when a man was brought to St. Thomas's Hospital with some inflammation on one of his cheeks, and gangrene of one side of his nose. He had been perfectly well, excepting some common ailment which he had experienced a day or two before. Small pustules were forming around his nose, and upon his cheeks; his face was very much swollen; one eye was nearly closed, and the other completely so, and he was a little delirious. There were soft tumors on different parts of the extremities, and, I think, on the trunk; they were red and hot, and I saw that there was evidently fluid. There was a profuse discharge, as in horses, from one nostril—I think only from one, but at any rate infinitely more from one than from the other, and that was the right nostril. The pustules on the face were phlyzacious, large well fed pustules, with a hard base. They existed on, and around the nose, but principally on the right side, where the gangrene, and also the discharge from the nostrils took place. The parts which were red were hot, dry, and shining; but the nose was dark-coloured, and on its right half, black, cold, and senseless. He died before twenty hours had passed. With respect to the treatment, it was inefficacious. He was bled—for his pulse seemed to justify bleeding—and the blood was buffed. The preceding history of the case is this:—Twelve days previously he was attacked by pain in the right hypochondrium, for which he took ten grains of pil. hydrargyri, and the next day felt quite well. Then, five days before his admission, a pimple appeared upon the right side of his nose, and while this increased and suppurated, the surrounding parts swelled and grew red, and the state of things became such as I have described. Five weeks before his admission he had gonorrhœa, for which he had taken mercury; but the affection for which he was brought to the hospital began only five days before his admission.

The nature of the disease was a perfect mystery; some called it one thing, and some another. I did not venture to give it a name, never having seen any thing of the kind before, nor read of such a case.

This occurrence took place in March, and the patient was under the care of Dr.

Roots; and it so happened, that on the following June I found a young man lying in one of my beds, who had been brought in an hour before, in precisely the same state. The nose and surrounding parts were exceedingly swollen, so that the left eye was closed completely and the right nearly. The tumefied parts were hot and of a bright red, with the exception of an inch of the left half of the nose, which was of a mulberry colour; precisely the same state of things that occurred in the other young man. A profusion of deep-yellow tenacious mucus, with a few streaks of blood, exuded from each nostril, but particularly from the left. Several hard phlyzacious pustules existed on the nose and adjacent parts—on the arms, thighs, and legs—and each was surrounded, in the latter situation, by a blush of red. A patch of the same colour was observed on the left elbow. His pulse did not justify bleeding; it was rather an undulation than a pulsation. I ordered him beef-tea, wine, and sulphate of quinine; but he was dead in a few hours. A drawing was made of each patient. [They were exhibited.] That of Dr. Roots's patient was executed by Mr. Solly, apprentice to Mr. Travers; and the other, which contains two representations (the one before, and the other after death), by Mr. Alcock. The nature of the disease not being suspected, no experiments were made, or we might have inoculated an ass, which is much cheaper than a horse. An ass will sometimes serve the purpose of a better animal; and as it is as easily affected as a horse, of course I should have preferred it for making the experiment.

This disease is not described by either Willan or Rayer; the knowledge of its occurrence in the human subject being quite new. Each of these patients was opened, but not very satisfactorily: the father of each boy was present at the time, and forbad us doing any thing which would disfigure the head, so that the Schneiderian membrane could not be examined throughout. We were not allowed to cut the arms and legs, to see if there were tubercles down on the periosteum. It is found in horses, that tubercles are formed deep in various parts of the body.

The disease would have remained a mystery to me, only that I was satisfied it was a specific eruptive fever depending on some specific cause: so far I went, and no farther; till I was one day shewn, some little time afterwards, a case in the MEDICAL GAZETTE, headed "Fatal Case of *Acute* Glanders in the Human Subject;" and I found that the case was precisely one of this description. It is described by Mr. Brown, a surgeon in the second regiment of dragoons. This man was seized, on the night of the 16th of April, with rigors, headache, and slight irritability of the stomach—all the symptoms which usher in an eruptive fever. However, he had great pains and stiffness of all the large joints, and these increased to an alarming degree. The left shoulder was rather swollen, though not inflamed; but the tumefaction became considerable, and of a livid hue. Similar swellings, but smaller, took place on the arms, legs, thighs, and sacrum; exactly as in these cases in the hospital. The tumors were insensible and hard; but in the cases in the hospital the tumors were soft. They were of a chocolate-colour, but acquired a deep vermilion, and soon became of a dark brown. One appeared upon the left temple, and the eye-lids became tumefied. The right nostril was gummed up with an inspissated discharge. The posterior fauces were much inflamed, and nearly of a purple hue. Several warty pustules, (which I have termed phlyzacious,) rose above the skin, in various situations around each of the tumefications, exactly as I have shewn you in the drawings. A cluster of tubercles was found in the cellular membrane—a perfect examination was possible here—a cluster of tubercles was found in the cellular membrane exterior to the pericranium of the left superciliary ridge, and in the right frontal sinus, exactly (according to the veterinary surgeon of the regiment) similar to those observed in the frontal and other sinuses of the horse after acute glanders. On dividing the various livid tumors down to the bone, the muscles appeared perfectly decomposed, and of a dark livid colour; and under each was a cluster of grey circular tubercles. The existence of these tubercles is so common in the glanders of horses, that one French writer takes this for a tubercular disease; and it is described under that name in a French Veterinary Dictionary. Now this gentleman adds—"It appeared that the patient had had the sole charge of a glandered horse for some time, which had been destroyed on the very evening of his attack; and that he had skinned him, and exerted himself a good deal in cutting up and burying the carcase. But these circumstances did not at first create the least suspicion, and his complaint was considered a very severe case of acute rheumatism, and treated as such."

I saw that the two cases in St. Thomas's Hospital were similar, and must have been glanders; and the difficulty was to ascertain whether the parties had had any communication with glandered horses. I had a great deal of trouble in endeavouring to ascertain the fact, and I could not prove it at last; but I found that each of these men, although they were in an

occupation that one would suppose would never lead them near horses, yet they had actually been in the neighbourhood of glandered horses. Further than that I could not prove; but it is a very singular circumstance that this was satisfacto ily proved. I found, with respect to my own patient, that he was a whitesmith, at Lambeth. I went there, and inquired whether he had any thing to do with horses; taking it for granted that, as a smith, he had. They told me that he had never been near horses – that he was a *white*-smith. However, I went to the workshop, and I found it situated in a mews. I then asked if there had been a glandered horse in the mews?—to which the father replied, "No;" but one of the men immediately said, "Why, don't you recollect there was a glandered horse in the stable for six weeks, just next the corner where Tom used to work?"—and then shewed me that the boards which separated the stable from the whitesmith's shop were so defective that the discharge from the animal's nostrils had come through, and occasioned so great a stench that the young man frequently said he should not be able to work unless the horse were taken away. I learned, that when this horse was being led to the knacker's, about a month before the commencement of this disease, it fell down exhausted at the door of the forge; that he went and patted it about the head as it lay, and took hold of the head while the rest endeavoured to make the animal rise. I also found that he had a number of pimples on his face, which were raw; and his father said that he recollected he had got a habit of continually wiping his nose with the back of his hand. So far I went; and though this is not proof, yet these are singular facts.

With respect to the man that came first to St. Thomas's, he was a tailor; and tailors not being famous for horsemanship, I almost despaired of being able to trace any connexion between him and a hors —had it been a goose, there would have been no trouble about the case. I had to go to Woolwich, and at last I found that the next door neighbour of the man to whom this lad was apprenticed had had a worn-out pony, and kept it in a filthy wretched shed opposite the two houses. I ascertained that the animal had the glanders, and was afterwards killed on this account; that this youth was in the habit of harnessing it, and getting into a little cart which it dragged, to have a ride. Nothing is more likely than that he had some of the matter from this horse brought in contact with him.

It so happened, that among the different persons to whom I mentioned these cases, was a general practitioner at Clapham. About a fortnight or a month afterwards, he told me of a case which he thought was of the same description. A young man (a pupil of the Veterinary College, and the son of a veterinary surgeon at Clapham) had been seized with a very severe acute affection of the knee-joint—apparently rheumatic—and with severe pains, just like the other cases. He proposed that I should see the patient, but the father put it off till the next day, and in the interim the son died. The symptoms before death were a copious sero-mucous discharge, occasionally a little bloody, from the eyes and nose; the Schneiderian membrane was excessively red and nearly excoriated, and the eyes closed. A pretty abundant eruption, very similar to small-pox, that is, phlyzacious pustules, but larger and hard, appeared in different parts, but particularly the neck. There was scarcely any sleep, but occasionally delirium, and at length convulsions; and the patient died. Unhealthy pus was found in the absorbents of the arm; the bursa of the knee contained a large quantity of pus, with flakes of coagulable lymph. He appeared to have had under his care, at Clapham, a horse affected with the farcy; I suppose he meant glanders. The ring-finger of the right hand, and the absorbents and axillary glands, became all at once inflamed and painful; but whether after any wound or abrasion could not be satisfactorily ascertained. The finger suppurated and was opened, and a few days afterwards he was seized with headache and pains in his limbs, which were considered rheumatic. Then, afterwards, there were pimples on the face and a profuse discharge from the Schneiderian membrane. No experiment was made in this case; but as experiments were were made by Mr. Colman and the brother of another veterinary pupil who perished of this disease, there can be no doubt, whether this was a case of glanders or not, that the disease does occur in the human subject.

You will find a paper of mine on this subject in the 16th volume of the Medico-Chirurgical Transactions. Unfortunately the Society would not publish the drawings, and therefore the cases are not so interesting as they would have been.

These are all the pustular diseases of the skin. It is true, some persons give that name to those produced by a blister or a tight shoe, and to those which are brought out by tartar emetic ointment; but there is no occasion for me to say any thing of them. This therefore

concludes all that I think it necessary to say on inflammatory diseases of the skin.

CONGESTIONS OF THE SKIN.

PURPURA.

I will now speak of those affections which consist in extreme congestion of the skin without any inflammation, and of this description are petechiæ, vibices, and ecchymoses. There is a particular disease in which spots appear on the skin; *petechiæ*, small spots—*vibices*, large spots—and *ecchymoses*, extravasations, which occur throughout the body, on the conjunctiva, even within the mouth and the body, so that blood will actually be poured forth on the various viscera. This disease is called at present in this country *purpura*. It was formerly called *petechiæ sine febre*, or *hæmorrhagia petechialis*. It bears a great affinity to scurvy, and some fancy it is the same diseases, but I cannot subscribe to that opinion.

This is a disease that frequently happens without any constitutional affection. I have seen persons going about with it, and yet quite well in other respects; and in other cases, persons have died *with* it. There is no such affection of the limbs, no sponginess of the gums, as is the case in scurvy. The disease, too, has often arisen without any evident cause, whereas scurvy, I believe, never takes place except from a deficiency of proper food.

Species.—If the disease occur merely on the surface of the body forming patches, it is called *P. simplex*. But frequently there is a bleeding from the mucous surfaces—bleeding from the mouth, from the stomach, and from the intestines. I once had a patient who died from bleeding within the head—died of apoplexy, and a clot of blood was found under the arachnoid membrane, which had oozed from the vessels of the pia mater. Sometimes the spots are large, and sometimes there is ecchymosis. There is no inflammation nor tenderness of the particular parts: it appears to be a mere congestion of blood. Rayer, I think, has very properly separated it from inflammatory diseases, and placed it in the order *congesta*. It is a very singular disease: I have no idea of its nature; I cannot comprehend its pathology. You will frequently see the white of the eye spotted, and the same circumstance occurs within the mouth. The discharges of blood from the mucous surfaces are sometimes very great. It is a disease, too, which occurs under the most opposite circumstances; occasionally with great debility, weakness of pulse, exhaustion; and sometimes with the most inflammatory state of the system, so that if you take away blood, it is buffed and cupped, and the patient is greatly relieved by it, and most probably gets well. In other cases, such treatment would be death. You frequently see similar patches on the stomach and liver. In severe cases, the patient is pale; he looks as if he were in a state of anæmia, and I dare say the blood is deficient. On the other hand, I have seen children with many hundreds of these spots upon them, and yet running about perfectly well. Sometimes there would appear to be a little inflammation connected with this congestion. It is sometimes attended with great tingling, and even little wheals, and it is then called *P. urticans*, to shew that it bears some affinity to urticaria. You will frequently see—though it is not this disease—such tenderness of the vessels in old people, that if they rest upon their arm, or knock their hand against a door, so as to produce the slightest bruise, ecchymosis will take place, and that has been called *P. senilis*. It conveys the idea that it is the same disease, but it is merely such a tenderness of the vessels that the slightest contusion produces ecchymosis. A person may have the disease for many years at the latter part of their life, and yet be perfectly well. You will often be consulted by patients on this occurrence, and it is right to know that it is ecchymosis, and should not be called purpura. It is merely a bruise, and may be produced on old persons with the greatest facility.

You know that petechiæ take place under many circumstances—frequently in typhus fever; frequently in small-pox between the pustules; sometimes in scarlet fever; it is very common to meet with them in dropsy, where there is great debility; they very often occur where there is extreme dyspnœa; sometimes in phthisis, where there is extreme difficulty of breathing. But there may be such debility of the vessels that the blood oozes forth; they allow it to escape, or there may be an impediment to the return of the blood, and the blood may be forced out. Frequently, however, no reason can be assigned for the disease: the person may be living as usual, when all at once the disease makes its appearance. The pathology is to me a perfect mystery.

Frequently Inflammatory.—It was at one time supposed that this disease always occurred with extreme debility; that the proper treatment for it was wine and brandy, good nourishment, opium and bark; but there is no doubt whatever that there is frequently an inflammatory state: although the skin is not in a state of inflammation, although these spots are not inflammatory, yet the system is in an inflammatory state, which is proved by the buffy and cupped state of the blood.

Treatment.—In regard to the mode of

treatment, I do not think there is any satisfactory or universal way of conducting it; but you must treat it according to the particular circumstances in each case. In mild cases moderate bleeding, or mere purging, answers very well, and I think I have satisfied myself that purging with colchicum answers better than other things. I have made observations upon this medicine in other cases: I have purged with colchicum and other things, and the difference has been very greatly in favour of colchicum. I am sure you will get rid of this disease sooner if you purge with colchicum than if you use any other means. Where there is strength of pulse, it is necessary to bleed, and bleed freely. I have seen patients lose two or three pints in a few days with great relief, and they have got well. A great number of cases are of this inflammatory nature, but by no means all. Others are of a different description, and wine, bark, and good nourishment, must be given. I recollect a case which occurred in a child where there was merely moderate debility, and the child was out every day. The disease was not intense, but these petechiæ existed, and under good nourishment and tonics it got well. But in extreme cases it is necessary to do more than this: to give wine and opium, and treat the patient as you would if he were sinking under typhus fever, or confluent small-pox, with typhoid symptoms. Where there is hæmorrhage, I have no doubt it would be best treated by oil of turpentine. I have no doubt, as it restrains hæmorrhage from the alimentary canal better than any other medicine, that it would restrain it under this particular affection. One of the most severe and successful cases that I ever saw treated was at St. Thomas's Hospital, by Dr. Roots. There were petechiæ, vibices, and ecchymosis, in every part of the body; great congestion of the liver, so that the right hypochondrium was distended, and blood was poured forth from different cavities. The patient was bled, and took oil of turpentine, and he got rapidly well. Certainly every one who saw him must have supposed that he was near death. I was much disappointed in a case of my own, which I treated in the same way: apoplectic symptoms came on; and on opening the patient, a clot of blood was found on the brain.

DISCOLOURATION OF THE SKIN.

Before I proceed to those affections which are of a structural nature, I may perhaps say a few words on those diseases which consist in a discolouration of the skin. Some of these are really not affections of the skin itself: for instance, in jaundice the skin is yellow; in chlorosis the skin is exceedingly pale; and likewise in anæmia: but on other occasions the skin is really itself discoloured; and among these are mentioned sun spots, and that blackness or blueness of the surface which is induced by the continued exhibition of the nitrate of silver.

ORGANIC AFFECTIONS OF THE SKIN.

The organic affections of the skin are for the most part of a tubercular nature: they are what is called lupus, or noli me tangere, cancer, and elephantiasis.

LUPUS.—Lupus is a disease more frequently treated by the surgeon than by the physician, and is an affection that is particularly seen upon the face, around the nose, and upon the upper lip. It is exceedingly intractable. There is a kind which occurs in scrofulous children which will frequently give way, perhaps spontaneously; and sometimes also to one application and sometimes to another. But there is another description which produces deep ulceration and extreme pain, and frequently appears to be somewhat allied to cancer. This is called *noli me tangere*, from its generally becoming worse if interfered with by medical men.

Symptoms.—Lupus is characterized by tubera, which are rather oval, and frequently flat, of a brownish red or livid colour, which increase and terminate in ulceration, and an ichorous discharge is then poured out, which concretes into crusts. It appears on the nose and cheeks, and sometimes upon the ears and chin, but it is calculated that eighty times out of a hundred it attacks the nose. The parts around become harder and harder, suppuration goes on to ulceration, till at last there is a great degree of destruction produced.

Treatment.—Some cases have been cured, it is said, by the application of caustics, and particularly by arsenic, but there is no rule for the treatment; and I believe in a great number of cases the disease resists all means.

CANCER.—With respect to cancer, I need say nothing, because I have already spoken of it when speaking of structural diseases at large. The particular treatment of cancer falls under the care of the surgeon.

ELEPHANTIASIS.—The next disease, of which I will speak briefly, is one of very rare occurrence in this country, and of which I have only seen two or three instances, viz. elephantiasis. It has been termed the elephantiasis of the Greeks, to distinguish it from another form which is local.

Symptoms.—In this disease the features become extremely altered, the lips very thick, the whole of the face and a great

part of the body beset with hard tubercles, so that a person could not be recognized by those who knew him previously to the appearance of the disease. It receives its name from the skin becoming as rough and as hard as the back of an elephant: the face is particularly rough.

It is considered by Rayer to be a chronic inflammation, and you may either call it so, or an organic disease of the skin, just which you choose.

It is characterized by numerous independent tubercles, of a livid colour, which are particularly developed on the face and ears, the upper and lower extremities, and likewise on the arch of the palate. The tubercles terminate either by resolution or small ulcerations, which seldom extend in depth or breadth. They are covered by adherent crusts, under which a cicatrix is formed. It may occur in any part of the body, but it occurs, like lupus, much more in the face than other parts. It has been said by a great many writers that the sexual desire becomes insatiable in this affection, but others deny this; and not only so, but go to the other extreme, and say it is extinguished. The only case which I have seen occurred in a person who came from Madeira; but it is also found at St. Domingo, and in the Isle of France.

Treatment.—It has been cured, I believe, by the exhibition of arsenic. Many cases have been improved by this medicine, and slight cases have been absolutely cured by it: for the most part, however, the treatment is very unsatisfactory.

Barbadoes Leg.—There is another disease which is called "elephantiasis," but it is local, and does not spread throughout the body, nor form tubercles; and as it commences in a thickening of the parts below the skin, it is mentioned by Rayer as a disease not of the skin itself, but as one of those diseases which extends from other parts to the skin.

This affection is what is called *Barbadoes leg*, and it is also called *the elephantiasis of the Arabs.* It is a local disease, occurring in the scrotum and at the lower part of the leg. The skin becomes diseased, but the cellular membrane beneath is the chief seat of the affection. It becomes excessively thickened and indurated; and at Barbadoes it affects sometimes only one leg.

Causes.—A friend of mine says it is produced by a kind of flea, which is not satisfied with being on the surface, but forms a bag beneath, in which it lays its eggs, from the continued irritation of which, he says, the disease is produced. How that may be, I do not know. The blacks suffer the affection in the West Indies, and they are very dexterous, by means of a needle, in dragging out the bag, so that no harm ensues; but if any portion be left, an egg usually remains, and the disease proves very troublesome.

ICTHYOSIS.—The next disease of which I will speak, and which is classed by Rayer in organic diseases of the skin, is one which you will every now and then see, and it is termed *icthyosis.* This is a disease not so rare but what every one may in the course of his life see perhaps a few cases.

It is classed by Willan with scaly diseases, but as the scaly diseases I have mentioned have been all classed with a number of others in the list of inflammatory affections, this could not come in with them. It is, moreover, although a scaly disease, necessarily separated in the arrangement of Rayer from pityriasis, lepra, and psoriasis, because all those scaly diseases are of an inflammatory nature.

Symptoms.—Now in this disease there is no inflammation whatever; the skin is neither red, tender, nor hot, but it is covered by a large number of scales. These scales have been supposed to resemble the scales of a fish, but they are not imbricated—they do not lie one over another, like the scales of a fish; indeed, in many parts, the skin looks more like the feet of cocks and hens than any thing else. This will give you the best idea of it. At a little distance from a person labouring under the disease, you would suppose that the skin was dirty, the scales which lie upon it being of a sort of bluish colour. Of course it exists in various degrees of intensity, and to various extent.

The constitution is not in the least degree disturbed; the health is not at all affected; there is nothing to be seen but this organic affection of the skin, the cuticle being formed with this diseased character.

Causes.—The cause of this affection is not known, but it occurs sometimes from original constitution. I had two brothers under my care last year for this complaint, (Med. Gaz. vol. vii. p. 636,) in each of whom, although they were living at a distance from each other, one at Greenwich, and one at Woolwich, it made its appearance without any obvious cause. It seemed to be constitutional, and occurred in the progress of their age. It has sometimes been known to be hereditary. The skin feels dry and rough, and there seems to be no perspiration; in general, the skin ceases to secrete a watery fluid. If the affection be more intense, it exhibits exactly the appearance that Alibert has represented as occurring on the knee, in plate xxxvii. and which he calls *icthyose nacrée.* You observe that none of the scales are imbricated, and they look more like the skin of a hen's foot than any thing else. This, at a distance, looks

like a very dirty leg. The affection will sometimes cover the whole body. It is said in books that it is not seen exactly over the furrow of the spine; but in the cases which I had in the hospital last year, or at least in one of them, that part was covered with scales exactly like the rest. The face in these boys was very little affected, but the back of the neck suffered pretty severely.

Treatment.—Now the disease is generally thought, I believe, to be incurable, at least that internal medicine has little power over it; pitch, however, is said to do good. Dr. Willan says, that he cured a lady by giving her pitch. The pitch was made into pills, and she took as many as she could swallow in a day—altogether one or two ounces. I gave each of these patients, certainly not so large a quantity as they could have taken, but each boy swallowed forty or fifty pills three times a day. One of them put them into his hand, and swallowed them as children do sugar-plums: he must have taken nearer two ounces of pitch every day than one. At the same time that I employed this treatment with one of the boys, I had him oiled with olive oil. He was sent to the warm bath, and when he came out he was regularly oiled, and in this way he got well. I of course was in perfect uncertainty as to whether it was the internal or external medicine that did him good—whether it was the pitch within, or the oil without; and being told that he had a brother in a similar state, I requested that he also might come and be cured. I gave him pitch only, and in a larger quantity than Dr. Willan had done, but he was no better for it. I then left it off, and had him oiled, not all over, but one extremity only, and that extremity recovered its natural texture, while the other parts remained as they were. It was singular, that if a part which had been oiled by chance touched one that had not, that is to say, if one leg touched the other, this last immediately improved, though not to the same degree. In this way the boy was perfectly cured. These two brothers went out of the hospital with their skins as smooth and as soft as any girl's, and for the time they were certainly cured, but whether the disease will return I do not know. The free application of oil in these cases answered perfectly. With regard to the latter boy, I made careful experiments with the pitch, the warm bath, and the oil; and such intervals elapsed between the various modes of treatment, that I was perfectly satisfied it was the oil which effected the cure.

In these boys the disease was quite of the intensity represented in Alibert's 37th plate. At one period I used linseed oil, but that did no good, it dried directly; the olive oil, however, retained its moisture for some time, and that answered completely.

Species.—The ordinary form of the disease is called by Willan *I. simplex*; but now and then it occurs in a much severer form, and then it is called *I. cornea.*

Now the latter of these species is a rare disease, and is of an hereditary nature. Several instances have occurred of it in the children of parents who had laboured under the disease, not perhaps appearing at their birth, but occurring, like *I. simplex*, at a certain time afterwards.

There is a family in Suffolk in whom it has appeared for several generations—three or four; and what is singular, always in the male line: no female has been known to have it. Every part of the body is covered with the disease excepting the face, the palms of the hands, the soles of the feet, and the glans penis. I saw one of these men, the grandson of the person who is described in the Philosophical Transactions. It was a famous family, called "the porcupine family" from the roughness of the skin. This man told me that the scales were shed every year. I saw him again the other day, and then they were in the act of falling off. The scales in this form of the affection all stand side by side, do not overlap each other, and when the limb is put in a certain position there is a pretty smooth surface, on which you may make a noise just like striking horn; but if the part be stretched, so as to separate it a little, you see the divisions between the scales. This plate [exhibiting one] contains an exact representation of the arm of the man when I saw him a little while ago. He described himself as the descendant of an American savage: I suppose he wished to make himself appear very wonderful. He every now and then comes to London to shew himself for what he can get. There is an instance of the hereditary form of this disease, published in the ninth volume of the Medico-Chirurgical Transactions, by a gentleman residing in Sussex, and which occurred in a female.

Treatment.—In regard to treatment, nothing, I conceive, can be done.

DISEASES OF THE APPENDAGES TO THE SKIN.

As to diseases of the appendages to the skin, such as of the nails, I must leave them to the surgeon; but there is one disease of the appendages of the skin which is very interesting; and although we do not see it in this country, we have specimens of its effects—I mean the hair.

TRICHOMA.—It sometimes appears that the bulbs of the hair become inflamed, a quantity of acrid stuff is poured out, the

hair becomes very much entangled, and grows, it is said, sometimes to a great length. This disease is properly called *trichoma*, and sometimes it is called *plica*; and having been common in Poland, it has received the appellation, *plica polonica*. From the inflammation that exists, the scalp becomes excessively tender. It is found that the bulbs of the hair are gummy, and filled with a great quantity of liquid, and the least touch of the hair induces very great pain. The fluid which is discharged is gelatinous, and sticks the hair together. Some have considered that the disease is contagious, but I believe that is not the case.

Causes.—The causes of this affection are not known. Some ascribe it to the cessation of the perspiration, but any disease may be ascribed to that. Why it occurs more particularly in Poland than other northern countries, is also inexplicable.

Treatment.—Then, again, as to the treatment;—you may recommend the warm bath, and all kinds of things. If antiphlogistic regimen be indicated by the strength of the system, and the heat of the part, we may suppose that it will do good: the treatment, however, is very unsatisfactory.

DISEASES OF THE SKIN AS A SECRETING ORGAN.

The diseases of the skin as a secreting organ have either been already mentioned, or will be mentioned hereafter. As to excessive perspiration, that I spoke of when speaking of intense secretions generally; and as to dryness of the skin, that is rather a symptom of other diseases. Dryness of the skin occurs particularly in ichthyosis, in diarrhœa, and in fevers. As to diseased secretions of the skin with regard to quality, it is very common, as we shall find in rheumatism, for the skin to secrete an exceedingly sour fluid, so that the perspiration smells something like sour whey. Occasionally parts of the body will sweat, as an idiopathic disease—either the hands or the feet. Many people are troubled with sweating hands, so that whatever they touch they moisten. This state, however, occurs particularly in the feet, and it is very liable to be of an exceedingly offensive character. Some persons are tormented with this only at certain periods of the year, but some have always very offensive feet, from the diseased nature of the secretions that take place there. Many servants, I believe, have lost their places on account of this misfortune: they have been discovered to have offensively smelling feet. I had a letter not long ago from a medical man, residing at a considerable distance from London, stating that he was in this condition. He was distracted—in a state of extreme melancholy, indeed, on account of the copious and offensive sweating which he experienced in the feet. He had consulted every one within his reach, but had derived no benefit. I advised a number of things that occurred to me as likely to prove beneficial, but I have had a second letter from him, telling me that they have done no good. I endeavoured to alter the secretion by purging, and by applying astringents to the feet; and I advised a number of other things, which I now forget, but which appeared to me rational: I was not, however, sure that they would do him good, and so far as I know they did not; for the second letter which I received betokened the same agony of mind as that under which the first was wrote.

This is all I think it necessary to say respecting diseases of the skin. I am afraid that I have detained you too long on the subject, and that you must think me tiresome; but I have skipped several, some of which are trifling: with others, again, we are so conversant that they do not require any observations, and some of them are not common in this country. For sound and practical information on the subject of cutaneous diseases, I cannot do better than refer you to the work of Rayer.

ON SOME EFFECTS OF INFLAMMATION OF THE MEMBRANOUS LINING OF THE LARYNX.

By John Wood,
Late House-Surgeon to St. Bartholomew's Hospital.

Inflammation, with swelling and thickening of the mucous membrane of the larynx, and of the subjacent cellular tissue, is not very uncommon; and it strongly claims our attention, from the suddenness with which its alarming symptoms often appear, and the rapidity with which a fatal result is frequently produced. This disease occurs chiefly in adults. In many cases it comes on almost insensibly, and proceeds slowly. It is not usually complicated with inflammation of the tracheal or bronchial lining, or with inflammatory fever. In its acute form it is generally attended with complete dysphagia, and in milder cases with impaired deglutition in a less degree. By these peculiarities it may

be distinguished from croup; and, when examined pathologically, its effects are found to differ from those of croup, inasmuch as the change of structure consists of interstitial deposition, and not of effusion, in the form of an adventitious membrane, upon the surface of the inflamed mucous coat.

Little doubt can be entertained that the writers referred to by Dr. Goelis as authorities that croup may attack persons of the age of forty and sixty, were mistaken in the nature of the affection which they considered to be croup. This talented physician, in deference to the opinions of certain authors, and not in consequence of having himself seen any case of croup at so advanced a period of life, states that no age is exempt from this disease ("nilli vitæ periodo hic morbus pareit.") Dr. Goelis adds, however, "præprimis tamen ætas infantilis a primo ad septimum ætatis annum ad eum est proclivis." He mentions that he treated a child at the breast, five months old, and refers to other instances of croup in sucklings. Dugès states that he has seen this disease in an infant eight days old.

"In no part of Britain, I imagine," says Dr. Cheyne, "is croup more prevalent than in Leith and its immediate neighbourhood; yet, in the course of nearly fifty years of extensive practice, in which he has attended many hundred cases of this disease, my father has not seen one instance of croup occurring after puberty, while he has attended many cases between the tenth and fourteenth year, both in delicate and robust children." Mr. Double, who never had occasion himself to observe croup in an adult, admits, after a careful examination of recorded facts, that it may sometimes happen after puberty, but that the occurrence is much rarer than has been supposed. Dr. Mills records a case of croup which proved fatal, in a Miss ——, aged twenty-six. "The lining membrane of the trach a and bronchi was found inflamed, and covered with coagulable lymph." On dissecting the body of a girl, aged twenty, who died suffocated after a few days' suffering, Mr. Latour found a membranous coating (couenne membraneuse) extending from the larynx to the division of the bronchia. Such unequivocal examples of the occurrence of croup at so late a period of life are, I believe, extremely rare.

The specimens of croup which I have seen in collections of morbid anatomy induce me to mistrust the statements of Dr. Craigie, that "it rarely affects the laryngeal membrane;" and that "the inflammation is seated in the tracheo-bronchial membrane solely." Bichat and other French pathologists have come to a very different conclusion respecting the seat of croup. Dr. Desruelles contends that it is essentially a disease of the larynx. Messrs. Roche and Sanson maintain that croup affects, almost always, the larynx and trachea. Dr. Bland, who, like myself, adopts the latter opinion, has accordingly denominated this affection *laryngo-trachéite*, a name which Dr. Desruelles has, I think, decried unreasonably.

The distinction of croup from other forms of inflammation of the larynx, and an accurate knowledge of the seat of obstruction in each instance, are essential to successful treatment of the different affections. General bleeding, so highly beneficial in croup, seems often to have aggravated the sufferings, and hastened the death, of those affected with œdema of the glottis. Had the pathology of croup been better understood, laryngotomy would never have been declared to be the most efficacious means of relief.

In parts where cellular tissue abounds, without any admixture of adipose substance, swelling is produced by different degrees of inflammation. The scrotum, for instance, may be thickened and enlarged by slow inflammation; or it may become tense and swelled by serous effusion, from active inflammatory affection. The like changes are observed in the prepuce and conjunctiva. They seem to exist also in the analogous submucous membrane of the glottis, according as it is acutely or slowly inflamed. "In many instances," says Dr. Craigie, "the margins of the glottis are occupied by an œdematous or puffy swelling, similar to that which occasionally affects the eye-lids, prepuce, and female *labia*,—from sero-albuminous infiltration of the submucous filamentous tissue, and the effect of which is to diminish, or in some instances to obliterate, the aperture which regulates the admission of air into the trachea."

To prevent obstruction in the mucous passages from accumulation of fat, the submucous membrane is reticular. This tissue is in small quantity and com-

pact where it unites a mucous membrane to cartilage or bone,—more abundant and loose between such a membrane and other soft parts. In the larynx, where it abounds most at the root of the epiglottis and near the vocal ligaments, it was stated by Bichat to be susceptible of serous infiltration, which might rapidly cause suffocation. In every such instance seen by Andral, a well-characterized chronic inflammation had existed, and the œdema was a mere secondary phenomenon. The previous disorder of the membrane may here, perhaps, have been merely increased by the supervention of a fresh exciting cause of inflammation, such as exposure to cold, improper diet, or any such source of aggravation. In other instances the chronic forms of the disease may supervene to the acute. Œdema of the glottis seldom occurs as a primary acute inflammatory affection. It is generally preceded, sometimes followed, by a mild form of inflammation.

The swollen membrane may be indurated, or softened, or have its usual consistence. Dr. Cheyne has found it "like a thin layer of flexible cartilage." Softening of the aerial mucous texture is much rarer than of the intestinal, but frequently occurs in the larynges of phthisical subjects.

It is often impossible to determine, during life, whether acute inflammation has caused serous effusion into the submucous tissue, or whether this part is swollen and thickened by gradual interstitial deposition. In his valuable "Observations on the Surgical Pathology of the Larynx and Trachea," Mr. Porter states, that the symptoms of chronic cynanche laryngea resemble in every respect those of laryngitis œdematosa; that the former inflammation commences so insidiously, and proceeds so slowly, as often to produce an incurable disease before the patient's attention is roused to the perilous nature of his condition; and that the latter is also occasionally very insidious in its approach. Two young men who had retired to bed at night without complaining, were found dead from this affection the next morning.

A modification of inflammatory action may produce a combination of both affections, and thus constitute an intermediate distinction (LARYNGITIS CHRONICA ŒDEMATOSA)—a variety described by Mr. Lawrence in the sixth volume of the Society's Transactions.

Inflammation of the membrane of the larynx may end in suppuration: this occasionally happens in the genuine unmixed form of the complaint. It is more frequently seen where laryngitis is complicated with erysipelas or some other disease.

It appears to me, that the term SPASM is often used unwarrantably to explain the deaths of persons who have shewn symptoms of diseased larynx, and that the common notion of spasmodic asphyxia is dangerous, as it leads to the use of opiates and antispasmodics in disorders essentially inflammatory, and only to be treated with success by those who early discover and appreciate their nature and tendency. Dissection, certainly, seldom discloses in the larynx a complete obstacle to the transmission of air: this is not necessary to produce death. If the passage be gradually narrowed, so as to prevent at each inspiration the ingress of a proper quantity of air, the properties of the blood are consequently altered. The circulation of the fluid in an unhealthy state, produces a general debilitating effect: this is augmented by the fatigue resulting from the increased exertions which breathing requires. The imperfect expansion of the lungs causes in them a state of vascular congestion and consecutive serous effusion, which impedes the return of blood from the head, and gives rise to turgescence of the vessels of the brain with effusion into the cerebral cavities. "Although," says Dr. Cheyne, in his remarks on Croup, "apparently the first of the vital functions which is arrested be respiration, yet this seems to arise from a want of muscular strength in consequence of failure of the sensorial power, the invariable result of defective supply of pure arterial blood in the brain." These patients, I believe, die more frequently from cerebral disorder and gradual exhaustion than from sudden or spasmodic suffocation.

Moreover, the effects of disease upon living structures are often materially modified, and occasionally obliterated, by death. As, on the one hand, necroscopic researches frequently reveal lesions which the symptoms had not caused to be suspected; so, on the other hand, these same symptoms do not permit a doubt that an organ is sometimes seriously diseased, although it may not appear so on dissection. Inflammatory

swellings, which in the state of life are red and prominent, disappear almost entirely after death. In watching a child, dying of erysipelas of the head and face, I was struck by the rapid disappearance of the swelling and redness. This case impressed on me the justness of the remark, that it is not right to infer that inflammation has not existed in a part, because it is found of a pale white colour on examination of the body. Andral, who states that the morbid conditions of the aerial mucous membrane are identical in its whole extent, has found it perfectly white in individuals who exhibited all the symptoms of inveterate bronchitis. The failure, therefore, to discover after death a change of structure, explanatory of the previous symptoms, is not a satisfactory criterion that no such change has existed. I do not, however, remember any instance, in examining the bodies of persons who have died, apparently in consequence of laryngeal, bronchial, or pulmonary disease, in which organic lesion was not found. Respecting laryngitis, Dr. Armstrong observes, that "respiration always grew more and more difficult, till at last death seemed literally to occur from suffocation, most probably occasioned by tumefaction within the larynx and about the epiglottis; as dissection shewed that considerable inflammation had invariably existed there, without any other appearances sufficient to account for the fatal issue."

The frequent absence of pain in chronic laryngitis is considered by Andral to be the more remarkable, as the healthy larynx is exquisitely sensible. Inflammation of the iris may close the pupil without spasm, or the sufferer be conscious of the loss of vision The changes which narrow the urethra, do not usually excite any serious symptoms in their early stage: the patient is often first alarmed by the diminution of the stream of urine. With respect to what has been denominated spasmodic stricture of the urethra, it is remarked by Mr. Lawrence, that in this case there is probably no real stricture in any part of the canal, but only an obstacle produced in some situation or other by the inflammatory tension, a partial enlargement in consequence of inflammation of some portion of the lining membrane.

The phenomena of asthma have been attributed to sudden involuntary contraction of some part of the air passages; and that kind of difficulty of breathing which is considered to be periodical, (although the recurrence of the paroxysms is very irregular,) has been designated spasmodic or convulsive asthma.

Whether we examine the phenomena presented during the paroxysms of asthma, or in the intervals between them, we shall in neither case find the least necessity for inferring that this disease is of a spasmodic nature. On the other hand, various circumstances concur to show, that this peculiar variety of dyspnœa results from vascular congestion of the lungs, and particularly of their mucous membrane. The increased determination of blood to the lungs may be accompanied with, and is, I believe, in many cases, a consequence of, some permanent alteration in the structure of the heart or large thoracic blood-vessels. This view of the pathology of asthma, and a due regard to the influence produced on the economy by that fear and agitation which are inseparable from great oppression of breathing, will enable us to account for the leading features of the disorder, both in its active and passive stage: during the former, for instance, the pallid surface of the body; the anxious and haggard countenance; the coldness of the extremities; the small, frequent, and occasionally irregular pulse; the copious flow of limpid urine, which does not begin until after the invasion of the paroxysm, and which, therefore, ought not to be said to occur "as in hysterical diseases;" the relaxation of the bowels, which have been described as acting with somewhat of the impatient hurry and imperfection of spasm; the excessive difficulty of breathing; the patient's eagerness to inhale cold air; the deficiency of respiratory sound, ascertained by auscultation; the gradual decrease of the severity of the attack; and the augmented secretion from the bronchial membrane, which marks its revolution. What better proof can be furnished of the unloading of gorged vessels, than the relief the asthmatic experiences by a spitting of blood, or by a copious mucous expectoration? In the intervals between the paroxysms, patients are apt to contrast present ease with former distress, and represent that they are quite well. "But in almost every case," says Dr. Forbes, "there will be found, on examination, some permanent local disease of the organs of respiration, or of some other organ." Dr. Forbes likewise admits (and this admission is the more

remarkable as emanating from a believer in the opinion, that the asthmatic fit consists in a spasm of the muscular fibres of the bronchi,) that "diseases of the bronchi, which produce a similar contraction of the air-passages by mere swelling of the membrane, namely, bronchitis, and an affection producing nearly the same physical condition of the parts from a sudden congestion of the blood-vessels, give rise to a state of respiration very like that which obtains in the asthmatic paroxysm." If we further consider that this class of patients cannot endure the slightest unusual bodily exertion or mental emotion; that errors of diet, exposure to cold, in short any of those causes which disturb the balance of the circulation, especially such as produce irregular internal distribution of the circulating fluids, will commonly bring on a relapse; that asthma (like diseases of the arterial system, and unlike those of a spasmodic nature,) is more frequent in men than in women; that its obstinacy is proverbial; and finally, that, while narcotics and antispasmodics more frequently do harm than good, those remedies which determine blood to the surface of the body, diaphoretics, (particularly the ipecacuan,) the vapour bath, warm pediluvia, and warm diluents, are the most efficacious means of averting the attack;—we cannot but see reason to conclude, that this is neither a "*pure*," nor a "*sympathetic*," nor a "*symptomatic nervous affection*," but that it is essentially a disorder of the pulmonary vascular system.

Dr. Rostan, physician to the large hospital at Paris for infirm and aged women, has had peculiar opportunities of investigating this disorder, and has taken considerable pains to show that it proceeds from a surcharge of blood in the lungs. In all the dissections of asthmatic subjects made at the above institution during several years, changes of structure were observed in the large thoracic vessels, heart, or lungs.

When a permanent lesion exists, it is difficult to explain how the symptoms should be, as they sometimes are, only occasional, the intervals of the attacks being quite free from suffering. How, for instance, a person with an aneurism pressing on the windpipe, shall experience only now and then a paroxysm of difficult breathing; or another with a tumor encroaching on the brain, shall present merely occasional indications of cerebral derangement. If, as far as the larynx is concerned, this phenomenon be explicable by spasm, how are we to account for it when the brain is affected, unless by irregularity of the circulation?

The rapidity with which blood may flow to, or leave, a part of the body, and the rapid influence of the mind upon the circulating system, are both displayed in the act of blushing, and in the erection of the penis. In the latter case we can further observe, how suddenly the magnitude of an organ may be altered by a change in the action of the blood-vessels. The momentary dizziness and obscurity of vision, produced by placing the head in a position in which the return of blood is obstructed, show how quickly important functions may be disturbed from an unusual fulness of certain vessels, and how soon restored, as the repletion subsides, without the occurrence of any change of structure.

In whatever textures inflammation occurs, we notice periods of exacerbation and remission. May not, then, the occasional aggravation of the symptoms in laryngitis be as fairly ascribed to a temporary increase of the inflammation as to an extraordinary action of the muscles of the larynx? Are the distressing paroxysms in peritonitis ever attributed to spasm of the abdominal muscles? In tetanus, or in hydrophobia, where violent spasms in the throat are remarkable, do they every produce asphyxia? To conclude these desultory remarks on spasm, I have only to say, with the late Dr. Albers, of Bremen, "Neque adhuc vidi tracheitidem spasmodicam."

The early symptoms of certain forms of laryngitis are liable to be mistaken for a slight cold. This error caused the death of a patient who was entrusted to my care. Active measures were adopted as soon as breathing became oppressed, but were insufficient to counteract the mischief, occasioned by insidious inflammation.

A remarkable connexion is observed in the exanthemata, between the cutaneous disease and inflammation of certain parts of the mucous system. The throat, in particular, is apt to suffer in eruptive fevers. It is therefore in no wise extraordinary, that in some cases of erysipelas, the lining membrane of this part should be inflamed; and that, if this peculiar kind of spreading inflammation be allowed to proceed unchecked, it should affect the larynx and produce

suffocation. Rosen observed, in Sweden, the coincidence rather than the complication of croup *(laryngitis?)* with eruptive diseases. Rush frequently noticed the coincidence of croup with acute exanthematic eruptions. Dr. Albers states, that scarlet fever is very frequently accompanied with inflammation of the larynx; and that in small-pox and measles this organ is also apt to suffer. Yet, in the course of several epidemic scarlet fevers which Dr. Bretonneau had an opportunity of observing during twenty years, and some of which were so serious that a great number of patients died, it never once happened to him to see death caused by closure of the glottis from propagation of the inflammation to the larynx. Among the cases of œdematous angina related by Dr. Bouillaud, is that of a sempstress, who, in consequence of over-eating, became affected with erysipelas of the face, which extended to the neck and scalp. On the fifth day the erysipelatous inflammation was much increased; the throat was painful, deglutition difficult, and respiration accelerated. She died in a state of asphyxia on the seventh day from the commencement of her illness. Venesection was not employed, nor were leeches applied until two hours before death. On examination, the cellular tissue of the neck and of the larynx was found to be the seat of abundant serous infiltration.

Latour twice saw inflammation of the larynx in connexion with erysipelas; he found blisters very beneficial in these cases. Forestus mentions, that he attended upon a baker, who was nearly suffocated by cynanche of the throat occurring at the same time with erysipelas of the face: but whether the larynx was the seat of inflammation in this instance is uncertain, as the treatment was judicious, and the patient recovered. Dr. Stevenson has given an abstract of some cases of erysipelas affecting the face and head, and accompanied with inflammation of the fauces. In many of these instanses the disease terminated without extending further than over the soft palate, uvula, and back of the pharynx; but "in a few it spread to the larynx, producing a state of respiration very like that of idiopathic croup."

Of seventeen cases of œdematous laryngeal angina, observed by Bayle during six years, only one ended in recovery. This intelligent physician warned the profession not to be deceived by the apparent mildness of the disease, and recommended a prompt recourse to laryngotomy; although he appears to have possessed, at the time his memoir was published, no personal experience of the efficacy of this proceeding.

Dr. Baillie, after relating three fatal cases of inflammation of the larynx in adults, states, that the disease had a strong resemblance to croup, but is still to be considered as different from it; and that both general and topical bleeding when employed early and strenuously were of no use.

Dr. Armstrong witnessed a far greater mortality in laryngitis than in any other inflammatory disease. One of his patients died in eight hours, and another in seven, from the commencement of the symptoms. In another case, the loss of 160 ounces of blood, within six hours, gave temporary respite to the difficulty of breathing; yet, so far from arresting the inflammation, death took place within twenty-four hours, in despite of antimonials employed towards the close.

"Since my appointment to the Fever Hospital, I have seen," says Dr. Tweedie, "four individuals die from cynanche laryngea; *two of these were convalescents from scarlet fever*; and from what I observed in these cases, I am satisfied that when the larynx is attacked with acute inflammation, which generally terminates rapidly in œdematous swelling of the glottis, and the subsequent death of the patient by strangulation, the only chance of saving the unfortunate sufferer is by having immediate recourse to the operation of laryngotomy. This is more especially imperative when the disease occurs in connexion with fever, because, although the cases I have seen in the hospital, came on during the period of convalescence, yet the powers of the patient were not sufficiently recruited to admit of the active treatment a disease so truly alarming instantly demands."

Since bloodletting and other antiphlogistic and internal means, even when employed under auspicious circumstances, have generally failed to relieve that inflammatory affection of the laryngeal membrane which is attended with interstitial effusion; and since the few instances in which tracheotomy has been tried have been marked by signal success, it is to be hoped that the experience obtained by the loss of numerous patients,

will rescue from premature death many future sufferers from this insidious and destructive disease*.

CASES OF

OBSTINATE CONSTIPATION

SUCCESSFULLY TREATED.

To the Editor of the Medical Gazette.

SIR,

CONCEIVING that the following cases of obstinate constipation involved an interesting pathological principle, and a practical fact of some value, I send you them for insertion in your excellent periodical.

CASE I.—S. B. a female, aged 35, of the highly nervous temperament, who had suffered severely from spinal irritation, stated that her bowels had been confined for five days; that she had taken aloetic pills, senna and salts, and castor oil, without effect; and that she experienced a sense of fulness in the abdomen, with pain and tenderness, increased by pressure at the sigmoid flexure of the colon. Finding that active purgatives of every kind, whether saline or drastic, not only failed to operate, but aggravated the pain and tenderness; that enemata, even to the amount of two quarts, returned without effect; and that opiates and antispasmodics only occasioned confusion of head, it was determined to desist from purgatives; to counteract inflammatory tendency by small general bloodlettings, and by leeches, poultices, and epithegms of flannel wrung out of hot water, to the abdomen. Drachm doses of castor oil in mucilage, to promote a constant, but gentle peristaltic action of the intestines, were administered, every four hours; a slop diet was enjoined, a tea-cupful only at a time; and perfect rest in bed. On the *sixteenth day*, an evacuation was procured, preceded by the sensation of something having given way in the bowels; after which they resumed their regular action, and the patient recovered without any untoward symptom. She has for nearly five years enjoyed freedom from a similar attack.

CASE II.—E. P. a female, aged 23, subject to pain and tenderness along the spinal column, had suffered inconvenience from an irregular state of bowels. Evacuations were rarely procured without aperients, before obstinate constipation took place. She complained of pain and tenderness at the splenic flexure of the colon. The same expectant mode of treatment, guarding against inflammation, was pursued; and *on the tenth day*, a large, hard, dark-coloured stool was passed, after which convalescence proceeded without any untoward symptom; and the bowels, for a year and a half, have acted with greater regularity than formerly.

CASE III.—C. L. a female, aged 23, has suffered from spinal irritation, from obscure enlargement of the abdomen, and difficulty of bowels: at length, total obstruction ensued. Purgatives of every kind not only failed to operate, but occasioned pain in the abdomen, chiefly in the region of the sigmoid flexure of the colon. A moderate bleeding was practised, leeches were applied to the seat of irritation in the spine, and leeches and fomentations to the seat of pain in the abdomen. Under a similar plan of treatment to the preceding, at the expiration of *twenty-one days*, a copious evacuation of several pounds weight took place from the bowels.

The *pathological* principle which these cases illustrate is this:—that when spinal irritation exists, (indicated by firm pressure, percussion, or by the application of a sponge squeezed out of boiling water, occasioning pain in some part of the spinal column,) spasmodic contraction of the muscular fibres of the intestines, and consequent constipation may ensue; that the removal of this irritation, by means of leeches and blisters to the spine, is not alone sufficient to produce relaxation of the spasm, but that the dilatation of the contraction requires the slow and graduated pressure of the contents of the bowels, on the same principle as the bougie for the relief of stricture.

The *practical* fact is this:—that constipation of the bowels, unattended by any pathognomonic symptoms, is by no means dangerous; that the danger to be apprehended and guarded against is

* This is the valuable paper to which Sir Charles Bell alluded, in his lecture on Laryngotomy, in our last No. but one. By omitting only a few cases, and the references, we have been able to give the first part unimpaired, though it occupies more than 31 pages of the Medical and Chirurgical Transactions, from which it is taken.—E.G.

from inflammation, or from an attack of ileus; that the danger is augmented by the administration of active aperients, as evidenced by the increase of pain and tenderness, requiring vascular depletion, which purgatives occasioned, partly by stimulating the mucous surface of the intestine, and partly by forcing the contents too violently against the stricture.

But, by subduing the inflammatory tendency as it arose; by promoting the regular, but moderate peristaltic action of the bowel; by a slop diet, and that only in small quantity; by rest, and the uniform temperature of the bed, at length the stricture yielded, admitting of a free passage; whereas, under the heroic plan of treatment, increasing the strength and frequency of the purgative doses for the purpose of overcoming the resistance, *vi et armis*, a fatal termination of these cases might have been the result.—I am, sir,

Your obedient servant,
J. PIDDUCK, M.D.

87, Great Russell-Street,
Nov. 28, 1832.

VARIOLA AND VARICELLA DIFFERENT DISEASES; &c.

To the Editor of the Medical Gazette.

SIR,

IN Dr. Elliotson's Lectures on the Cow-pock, p. 307, of your last No. he is stated to have said that one of the surgeons to St. Bartholomew's Hospital "used to give gratuitous lectures against the cow-pock, in which he advised all the students not to resort to such a practice." Several other unseemly things are reported of this surgeon; but it is a mistake to suppose that he belonged to St. Bartholomew's. The surgeons of St. Bartholomew's were wiser men. The worthy alluded to was John Birch, Esq. surgeon to St. Thomas's.

Having the pen in my hand, I cannot avoid expressing some surprise at an opinion which seems to be gaining ground, that there is an identity between the two diseases, small-pox and chicken-pock—that varicella is only a modification of variola.

The period of infection—the first appearance and progress of the eruption—the variance of the inflamed base—the acuminated pustules in the one, the flattened pustules in the other—the difference of the fluid secreted—the manner of drying away of the disease, and the after consequences; all shew so much distinctness as, in my apprehension, clearly establishes two diseases.

Varicella seems to have been formerly a more severe disease than at present; or was rendered so by improper management; for the bills of mortality of the last century generally enumerated some deaths by it every year. The writer of this recollects to have attended several cases which created much alarm: one patient was with difficulty saved, and in one case death ensued. In both these cases, though the number of pustules was by no means excessive, several of them degenerated into black sloughs, with great general debility and exhaustion. One of the patients was the child of very poor and very dirty parents, who were unable and unwilling to do much for it; the other, which recovered, was the daughter of parents in a high rank of life.

S. M.

December 10, 1832.

ANALYSES & NOTICES OF BOOKS.

"L'auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

POISONING WITH COPPER.

Journal de Pharmacie et des Sciences accessoires, &c. Octobre 1832.—*Considerations sur l'emploi du sucre dans les empoisonnemens par les matières cuivreuses.* Par M. POSTEL, D.M.P.

THE paper, of which we are about to present our readers with an exact analysis, contains an account of some very important experiments performed by M. Postel, for the purpose of ascertaining the value of sugar as an antidote in poisoning with copper. Sugar has long enjoyed the reputation of being invaluable in this way: Marcellin Duval proved it by his experiments on animals; and Orfila, in the first edition of his Toxicology, confirmed its efficacy, as he also did in several articles contributed to the Dictionnaire des Sciences Medicales: he pronounced, in fact, that sugar, either in

the solid or liquid form, was productive of the happiest results in poisoning by copper. M. Orfila, in subsequent examinations of the chemical action of sugar on the acetate of copper, saw that it produced a rapid decomposition at the temperature of boiling water, disengaging the acetic acid, and leaving protoxide of copper, of an orange yellow colour. About the same time, M. Vogel proved that sugar exerted no chemical influence on verdigris except when the substances were brought in contact at 212 degrees; and that then protoxide of copper was disengaged, leaving some of the metal dissolved in the form of a brown liquid, in which ammonia could not detect its presence, but with which prussiate of potash formed a brown precipitate. How was it to be accounted for after this, that sugar could act as a counter-poison to salts of copper, when it did not decompose verdigris at the temperature of the stomach? The conclusion at which M. Orfila was induced to arrive was, that sugar did *not* act chemically on verdigris in the stomach, nor prevent it from acting corrosively, but that its utility was derived from its effect as soothing the injured parts after the poison was removed by vomiting. He and M. Bertrand, moreover, now proposed albumen as a proper antidote, in consequence of the property which this substance possesses of precipitating the oxide in solutions of salts of copper, and then combining with the precipitate, and producing an insoluble compound, destitute of noxious effects to the system.

M. Postel now took up the inquiry, and made various experiments both with sugar and albumen. By means of an œsophagus tube, he conveyed into the stomach of a dog a drachm of verdigris, dissolved in four ounces of water. And he did the same with another dog, of equal size and strength. Some instants after the introduction of the poison, the animals began to vomit, and passed some fæces, tinged with blue. M. Postel now introduced into the stomach of one of the dogs a large quantity of albumen, and into that of the other a large quantity of syrup. The vomiting and evacuations continued a little longer, but the animals became tranquil: they drank water which was set before them. The dog which got the albumen died in the night; and upon examination, the digestive tube and stomach were found considerably inflamed, with some ulcerations also in the stomach; but the other dog got well in a few days.

The experiment was tried a second time with the same result; but upon a third trial, matters turned out just the reverse: it was the dog which got the syrup that died, and similar lesions were found in his intestines. M. Postel's inference was this; that if, after poisoning with copper, animals be able to vomit, and have sugar or albumen administered to them, the chances of recovery are as three to two in favour of those treated with sugar.

Still M. Postel was puzzled about the cause, and was anxious to determine whether the sugar had not really the chemical effect on verdigris at the temperature of the stomach which MM. Orfila and Vogel found it to have only at the temperature of boiling water. He made several mixtures of verdigris and syrup, which he exposed to the temperature of 30° or 36° centigrade, (or 86° and 96° F.) and scarcely had he done so, when he perceived a remarkable change of colour, and presently after some points of reddish yellow. The latter tint soon became uniformly diffused through the mixture, and there was found at the bottom of the glass a powder of the same colour. In repeated trials he obtained the same results. He found, also, that if he used crystallized, instead of common verdigris, at the temperature of 36° cent. the result was the same, but the precipitate was of a deeper tinge. At the ordinary temperature, the same phenomena occurred, but not so quickly —the result required more patience.

He took a solution of pure verdigris in distilled water, and added a quantity of purified syrup, and then shook the mixture well for some time at the ordinary temperature: the result was, a precipitate, which was slowly formed, and of a deep red. The addition of larger quantities of syrup changed the colour of the whole mixture.

But what was the precipitate? Was it the same as that obtained by MM. Orfila and Vogel? M. Girardin, of Rouen, undertook the analysis, and found it to be protoxide of copper.

M. Orfila says that he always found animals to sink under a dose exceeding twelve or fifteen grains of pure verdigris; at least they could not resist its influence for an hour. M. Postel performed the following experiments:—

1. He injected 30 grains of crystallized verdigris, dissolved in 2 oz. of water, into the stomach of a healthy bitch; and shortly after, 4 oz. of powdered sugar dissolved in 4 oz. of water. He tied the gullet. The animal betrayed nothing unusual for twenty minutes, but then made violent efforts to vomit: some fæces were passed of a blue colour. In two hours the creature was manifestly sinking, and in three was dead. The carcass was stiff. The gullet, to within a short distance of the ligature, exhibited appearances of violent inflammation. The liquid in the stomach was of a bright green colour, but the viscus itself was not inflamed, except slightly about the cardiac orifice. The mucous membrane, however, was thickened and easily separated; the rest of the alimentary canal was normal. Nothing particular was observable about the trachea or bronchiæ; but the lungs were choked up, and the heart was full of clot. The uterus, which was impregnated, was strongly coloured with blue, as were also the placentas, which also were easily torn.

2. The same dose of verdigris was given to a dog, and afterwards four whites of eggs diluted with 3 oz. of water. The gullet was tied as before. The same symptoms of a strong tendency to vomit were observed as in the last case; the fæces were less blue; but the animal lived for five hours after the poison was administered. Upon examining the body twelve hours after death, the gullet was found red and inflamed; the stomach contained alimentary substances strongly tinged with green; the greater curvature was very red; the mucous membrane thickened, and easily detachable; but there was no other remarkable appearance about the viscus. Intestines sound. Lungs inflamed, full of blood, and easily torn. Cavity of the chest contained an abundance of clear watery liquid, and there was an albuminous layer, like false membrane, lining the serous tissue. Heart filled with clot of firm consistence.

Upon analysis, the substances in the stomachs of both animals shewed the presence of coppery salts: copper was even detected in the liquor amnii of the bitch.

The following are M. Postel's conclusions:—

1. Sugar decomposes verdigris, not only at the boiling point, but at the ordinary temperature; the decomposition is more or less rapid, according to the concentration of the liquids; and in both cases, the salts are reduced to the state of protoxide.

2. Sugar has a similar power in the stomach; for animals to which it has been administered last longer than those to which it has not; and the appearances after death are very different from those where there has been only the copper poison administered.

3. The changes effected by sugar and by albumen are nearly the same.

4. It ought, consequently, to be accounted an antidote to coppery poisons, inasmuch as it decomposes them, not only at the temperature of the stomach, but at the ordinary temperature of the air: besides that, it has been employed on many occasions with decided success.

Medical Botany. With coloured Figures. By Dr. Stephenson and Mr Churchill. Edited by Mr. Gilbert Burnett. Churchill, Princes-Street, Soho.

The numbers of this work for October, November, and December, are now before the public, and cannot fail to have made a favourable impression on those who have examined them. Each number contains four coloured plates—not of the kind often so called, which resemble nothing in nature—but well-executed, and, in some instances, highly-finished engravings. Some of them are really excellent: nothing, for instance, can be better than the representations of the Hyoscyamus Niger, and the Taraxacum. The Belladonna, too, and several others of the twelve before us, are beautifully executed. Each plate is accompanied with a botanical, chemical, and medical description of the plant, which is clearly and succinctly given, and followed by formulæ for its exhibition. The price is amazingly moderate (2s. 6d. per number), and the work deserving of every encouragement.

MEDICAL GAZETTE.

Saturday, December 15, 1832.

" Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

FRENCH AND ENGLISH CHOLERA COMMISSIONS.

In the summer of 1831, when the cholera had fully established itself in the north-eastern parts of Europe, and appeared to be steadily advancing towards the south and west, two French and two British physicians were sent by their respective governments to Russia, to study the disease on the spot, and to communicate such information on the subject as they might consider best calculated to protect their countries from its ravages, by being made the basis of useful sanitary measures at home.

The objects and the destination of both missions were the same; the time of their setting out nearly so. The French physicians were chosen from the Academy of Medicine, the *élites* of the Parisian faculty—the British from such of the Army and East India Company's medical staff as happened to be in London at the time.

As both these embassies have published upon the St. Petersburgh epidemic, we have taken up their *Reports*, for the purpose of comparing them with each other, and of contrasting the conclusions at which they arrived; the data, as stated by themselves, upon which their conclusions were founded; and, finally, the results to which these conclusions appear to have led in their respective countries.

With respect to the French mission, we are informed in the preface to their report, that they were appointed medical commissioners to Russia in May; that on the 14th June, they were *en route* for Berlin, and that the whole code of their instructions was comprised in one sentence—short, indeed, but strongly characteristic—communicated to them by the Minister for Foreign Affairs:—" Follow," said he, " in every thing, the inspirations of your own intelligence and zeal!"

After an interview with Goethe, at Weimar, in which they endeavoured to borrow inspiration from " the intellectual king," by conversing with him upon the Madrepore islands of the South Sea, the mission traversed Germany, Denmark, Sweden, and Finland, (where no cholera was,) and at length arrived at St. Petersburgh on the 10th of August, two months after their departure from Paris, and nearly three months subsequent to their appointment. A patriotic aspiration is breathed, *en passant*, to the glorious recollections of Jena, Austerlitz, and Wagram. The poetic city of the north (Moscow, we presume, though the name be no where mentioned) is admired from the tower of the great Ivan; and the commission, after declining an invitation to the court of Sweden, returns to Paris in the spring of 1832, by Prussia, Austria, Bavaria, and Wurtemburgh.

Such is the programme of the journey performed by the French mission; and from the extraordinary circuitous route which they pursued, one can scarcely help suspecting, that they had a lurking hope that the disease might have ceased before they arrived at the place of their destination. It was known in Paris, long before the mission set out, that the cholera was at Riga: why, then, did not these gentlemen proceed direct to that place, through Lubeck, if the study of the disease was their sole or even their chief object? In this last city both missions might have met, and from thence proceeded together to St. Petersburgh. Very little explanation is given in their report relative to these

points, and this is the more remarkable, as we have seen that they were bound by no official ties, but left entirely "to the inspirations of their own intelligence and zeal."

The official reports of the British mission, on the other hand, are prefaced by no programme, nor do they afford any information, either as to the date of their appointment, or the events of their journey from London to St. Petersburgh and back; neither is there a syllable of poetry or pathos from beginning to end. We happen, however, to know that these gentlemen were first spoken to on the subject of their mission on the 17th of June, and that the next morning they were already on their way to Hamburgh, on board the steam-packet: and we perceive by the reports before us, that they arrived in St. Petersburgh on the 29th of the same month, just eleven days after their departure from London.

They appear to have gone to their work at once, for by their first letters we find, that on the evening of their arrival, they visited two of the earliest cases which had occurred, and had seen and examined eight others before the departure of their first despatch, dated July 1; accomplishing thus early one important object of their mission, by settling the identity of the Russian with the Indian cholera.

We shall now consider the conclusions of the two commissions *on the subject of contagion.*

One of the most important points connected with the investigation of any disease, viewed in its relations to public health, is the mode by which that disease is propagated. Accordingly, we find that this forms a most prominent subject in the communications of both commissions. But the conclusions respectively arrived at are diametrically opposed to each other. MM. Gerardin and Gaimard assert, that the cholera of St. Petersburgh was not communicable from one human being to another, either directly, by near approach, or indirectly, through the medium of inanimate matter.

Drs. Russell and Barry hold the converse of this proposition to have been clearly demonstrated at St. Petersburgh last year, by events which they themselves witnessed on the spot.

The French mission appeal to documents in support of their opinion, but we regret to observe that they allude only to such documents as are favourable to their own views. Our readers will judge for themselves.

The British physicians, again, send home their dry daily journal of the events which they had witnessed, giving dates, and names of persons and places; and although the non-contagionists in this country have thought fit to question their accuracy, they have not hitherto done more than shew that they felt the necessity, while they wanted the ability, to refute them.

It must be confessed, that the evidence appealed to on such occasions as the present, is but too often selected or prepared for a particular purpose; and its value must always be a good deal influenced by the character, the views, and the interests of the parties. It is, however, quite obvious that it cannot be necessary to send an embassy expressly to fetch documents which might as easily be forwarded by any other courier as by a medical commissioner; while, on the other hand, facts indiscriminately noted on the spot, can be had genuine only by actual observers and at the place where they have occurred: the nature, then, of the evidence which was sought by the English commissioners was greatly to be preferred, and, unless it can be shewn to be inaccurate, must be looked upon as infinitely more trust-worthy.

The leading document brought for-

ward by the French commission, was given them by Dr. Markus; being his history of the progress of cholera in a particular quarter of the Russian capital. Now Dr. Markus was a physician from Moscow, and editor of a medical journal in that city; in which, during and after the epidemic of the previous year, he most strenuously espoused the views of the party concerned in trade, as to the non-contagiousness of cholera, with reference both to persons and goods. By the merchants, Dr. Markus was sent to St. Petersburgh, in 1831, for the avowed purpose of supporting their views at the seat of government, and of leading the medical opinion of that city to a decision similar to that which he had been mainly instrumental in procuring at Moscow. He failed, however, in the object of his mission, the medical council of the capital having decided in favour of contagion, in the face of the Moscow Doctor and his documents, by a majority of not less than thirty-eight to two—Dr. Markus himself being one of the minority; so that he had gained only one proselyte.

Into the hands of this Moscow physician the French commissioners had the misfortune to fall, and from his statements, or papers furnished by him, almost exclusively, do they derive their information. The following are the grounds of their argument in favour of non-contagion:—

"Notwithstanding the most minute inquiries, the first persons attacked by cholera in the district have furnished no indication of the transmission of the disease, either by means of clothes or merchandize, or by communication with infected individuals. The temporary cholera hospital was established in a vast space, on a second floor, magnificently endowed, and provided with every thing necessary for the comforts of the sick. The elevation of the apartments, and a well-regulated ventilation, kept up a constant supply of pure air. The beds (fifty) were widely separated, and the most perfect cleanliness was maintained. There were treated in this hospital 119 cases, of whom 53 died. Of 58 hospital attendants*, one only was seized with cholera." (p. 35.)

From another document, furnished to the French commission by Dr. Seidlitz†, and forwarded to their government, it appears that, in the cholera hospital appropriated to the marine service, not one attendant, of 43, was attacked by the disease.—(p. 57.)

A third document is quoted for the assertion, that, of 44 persons attached to the Demidoff hospital, only two women and one apothecary were attacked; and MM. Gerardin and Gaimard conclude their History of Cholera Hospitals at St. Petersburgh, with reference to the communicability of the disease, in these words:—

"It would be superfluous to multiply quotations. If, to the importance of these facts collected in the hospitals, we add permanent activity on the part of the presiding physician, promptitude in the application of curative measures, and a continued zeal in the external treatment of this ever dangerous disease, we shall have all the positive notions which ought to serve as a basis for the formation of cholera hospitals."—(p. 58.)

From this extract, it would seem that the *three documents* which we have just mentioned as having been sent home by the French physicians, were considered by them quite decisive against the doctrine of contagion, and to be all that was necessary to guide their government in the adoption of sanitary measures.

At page 139, a statistical return of the cases and deaths at the Temporary Cholera Hospital of the Abrucoff is given, and signed by Dr. Schklansky, of that

* Supposing half the sick to have been in the hospital at once, a circumstance not very probable, the proportion of attendants would have been one attendant to each patient!!

† Dr. Seidlitz is the author of some Observations on the Epidemic of Astrachan, written to prove that cholera was not propagated by contagion in that city, in 1823.

establishment: yet, though the document is quoted and remarked upon at considerable length, not a syllable is said as to the number of attendants seized. In the detailed classification, however, of the cases (313 in number) treated for cholera in that hospital, from 21st June to 1st September, we find 12 *Gardes Malades*, but we are left to seek for information elsewhere as to whether these had been actually servants of the hospital or nurses sent in from other places.

How forcibly is the reflection here pressed upon our minds, that it is the solemn and sacred duty of medical commissions, not only to give scrupulously faithful details of the facts and documents which may have come to their knowledge, but also to seek for and record all evidence, with equal zeal on either side, touching that most important question—the communicability of the disease—which their country sends them to investigate.

We should naturally conclude, from the above extracts, that the attendants of many other cholera hospitals, besides those mentioned, had remained exempt from cholera during the St. Petersburgh epidemic, and that no examples whatever had occurred there of the contagious spread of cholera amongst that class of persons; else surely MM. Gerardin and Gaimard would have reported, instead of suppressing such facts; nor would they have left their government to the possible adoption of useless or improper measures, founded upon the faith of culpably partial statements.

Let us now turn to the official reports of our own countrymen, and see what they say with reference to the propagation of the disease amongst the hospital attendants.

"July 12th. Merchants' Hospital.—Superbly fitted up; some of the rooms small, and not freely ventilated.

"Attacked—one purveyor, two *feltchers* or barber-surgeons, four servants—one dead.

"13th. Hospital of the Semenoffsky regiment.—Attacked by the disease, three feltchers, seven servants—two dead.

"This hospital took in civil as well as military sick, towards the middle of the epidemic. The whole number admitted, three hundred and fifty-two.

"21st. Aboucoff Summer Hospital, converted into a temporary Cholera Hospital.—Servants attacked, eight—died, three.

"24th. Cholera Hospital at the School for the Sons of the Clergy.—Of eight servants employed, two attacked.

"August 9th. Hemp Merchants' Hospital—Of twelve servants employed, three attacked—two dead.

"12th. General Military Hospital, Vibourg quarter.—Physicians, three attacked—one died. Servants, twelve attacked—four died. Of twelve medical students employed *pro tempore*, all had diarrhœa and other slight symptoms.

"This hospital, at first purely military, and in the most perfect state of cleanliness and discipline (as, indeed, all the Russian military hospitals are), had few or none of its attendants taken ill. It was only after it had begun to admit civil cholera sick, and had become somewhat crowded, that the above casualties took place.

"14th. Naval Cholera Hospital.—Dr. Seidlitz, chief physician, states, that of forty-two attendants (two physicians), none were attacked. This hospital is composed of two detached buildings, standing in the middle of a field of about two hundred yards square, perfectly ventilated, and unembarrassed by other buildings on either side.

15th. Cholera Hospital of the Foundling Hospital.—Of forty-two attendants, fifteen were attacked, four feltchers included, of whom three were seized.

"Hospital for the Imperial Stables at St. Petersburgh.—Sick admitted, seventy-seven: of seven servants employed, three were attacked.

"Sept. 10th.—Rogistevensky Hospital, established in two inconvenient houses.—Physicians, five, and all the attendants of every description attacked*.

"Of two hundred and sixty-four physicians, the whole number in St. Petersburg during the epidemic, above forty

* This hospital is farther alluded to at page 79, and fourteen attendants enumerated who had taken the disease.—E. G.

were attacked by cholera, of whom nineteen died*."

The reader will perceive that two of the only three hospitals mentioned by the French commission, namely, those of the Abrucoff and the Marine, are included in the above catalogue, but that the hospital presided over by Dr. Markus is not noticed. In estimating the importance of this omission, it will be necessary to recollect, that Dr. M. being the avowed champion of non-contagion, and a violent partizan, unprejudiced information could not be expected from him, though otherwise a most respectable physician. This, however, is no excuse for the fact of the statement of his experience, whether correct or not, being altogether passed over; and the only circumstance which can exculpate our commissioners is, that we believe the hospital in question was established at a late period, and not till Dr. Markus' arrival from Moscow, so that the report of his observations, opposed as they were to those of his brethren, had not been made when Drs. Russell and Barry left St. Petersburgh, though they proved "a God-send" to the French commissioners, whose visit was considerably later.

Let us now give every reasonable degree of credence to the events recorded by the French from documents, and to those noted for themselves by the British commission, and what is the most rational conclusion for us to form as to the communicability of the disease? The answer will be found at page 92 of the "Official Reports;" and we must say, that to us it appears in no one respect overstrained, or such as is not entirely borne out by facts, which have not, and we believe cannot, be shaken:—namely, "That the epidemic of St. Petersburgh did not possess those absolute and indiscriminating communicable qualities attached to plague and small-pox; and that the risk of infection, incurred by the healthy who approached the sick, was in direct proportion to the want of cleanliness, ventilation, and space, around the latter."

In the foregoing comparison between the materials for sanitary measures transmitted by the two commissions to their respective governments, we have confined ourselves to the epidemic of St. Petersburgh, because it was there only that both had gone over the same ground. It is true that the French physicians did not arrive until after the disease had nearly ceased, having, as we have shewn, spent two months by the way, following "the inspirations of their intelligence and zeal"! For that, perhaps, we ought not to blame them, as it was not at variance with their instructions. But we cannot avoid smiling at the childish simplicity with which they formed their conclusions on so few and such slender data; and we know not which most to admire—the slowness of their journey, or the rapidity of their reasoning. We might speak in stronger terms of the manner in which they suffered themselves to be crammed by Dr. Markus, neglecting to inquire into the results at any, except two, of the hospitals established in St. Petersburgh; or, if they did inquire, suppressing the information they obtained, and transmitting to their government not one syllable of evidence concerning the northern capital, except what they derived from two physicians — the known and avowed champions of non-contagion.

If the suggestions of MM. Gerardin and Gaimard were adopted as the guide of the sanitary measures at home, and recent events in Paris and other parts of France be taken as the tests of their

* Some of the non-contagionists having called the accuracy of this statement in question, we applied for, and procured an official list from St. Petersburgh, containing the names and addresses of the physicians who had died, which will be found in a former volume of the Medical Gazette. —E. G.

influence and expediency, we shall only say that they afford some reason to doubt the "inspiration" of the commissioners.

ANATOMY.

A DEPUTATION connected with the meeting of pupils, to which we alluded last week, waited on Mr. Phillips, at the Home Office, a few days ago; having in contemplation to present a memorial to Lord Melbourne. We again repeat our warning: let public attention be directed to the subject of their complaint, and the evil in question will be multiplied ten-fold. The Bill has worked with astonishing facility, considering the very short period it has been in operation; and if those who have been most fortunate would but assist those who have been less so, and all parties would keep quiet, we are convinced that, in a very short time, there would no where exist any cause of complaint. The students have been urged on by a knave who said beforehand that the Bill would not answer, and is now trying various expedients to make good his words, which the results were quickly falsifying. *Since the riotous meeting referred to, the number of subjects has undergone a marked diminution.* He who makes appeals, addressed to the public, and tries to bring such questions into notice, is a professional renegade, and most treacherous to the cause of the students, whom he deceives by affecting to be their friend. The Secretary of the Home Department is in communication with the principal teachers, and we believe a little time and patience are all that are required to make the Bill work to the satisfaction of all parties.

DR. SPURZHEIM.

THIS indefatigable follower of Gall died last month at Boston, United States, of "brain fever," in the 58th year of his age. We know not on whom, if on any, his mantle will descend: but we hope nobody will be foolish enough to bring it across the Atlantic.

Dr. Spurzheim commenced his career about the year 1800: he joined Dr. Gall, and travelled with him over a great part of Europe, visiting gaols, schools, and every place which could furnish them with variety of human character: and about 1810 appeared their joint work on the Functions of the Brain. Dr. Spurzheim visited this country, but met with very limited success—little more than mere curiosity being elicited. In 1825, he again came to England, and gave lectures in the principal towns. He ultimately sailed for the United States, to try his fortune in the new world, and arrived at New York in June last.

CHOLERA.

IN London, cholera seems wholly to have subsided, and we understand that the Central Board of Health is to be immediately broken up. We regret, however, to state, that the disease has again made its appearance in Paris, and the various hospitals are once more receiving a certain number almost daily. The disease has also at length reached Norway, notwithstanding the utmost rigor of quarantine: it is remarkable, too, that in the opposite coast of Scotland, particularly at Aberdeen, the cases have recently become more numerous.

CURE FOR THE BITE OF A MAD DOG.

WE perceive that Sir Anthony Carlisle has addressed a letter to the *Times*, to announce his being in possession of a reputed remedy for hydrophobia: it has come to him, it appears, in sundry quart bottles, from the natives of South America.

HEREDITARY DEFORMITY.

A FRENCH lady (Mad. D.) has had twelve children—nine boys and three girls. One of the boys has a supernumerary toe on the left foot; another has six toes on each foot. The eldest brother, who has no superabundant toes, has six children: one of them has the additional toe. One of the daughters had a supernumerary finger on the hand; it was amputated when she was an infant. A sister of Mad. D. had several children; one of them had the supernumerary toe, she (the mother) being free from it.—*Gazette Médicale.*

SHOWER OF FIRE.

A SINGULAR phenomenon presented itself lately in some parts of France, particularly in the department of Orne, in the neighbourhood of Argentau. Several times, and during two whole hours, the atmosphere, which was calm, became filled with an innumerable quan-

tity of vivid sparks, forming a sort of shower of fire. The appearance was most striking between four and five o'clock in the morning. The same phenomenon was witnessed about Caen, where, however, it excited less apprehension than at Argentan, in which place the inhabitants were under the greatest terror. It is said that, in some places, the sparks were seen to alight upon the ground; but no traces of them have any where been found, and it is probable that the phenomenon really took place in the upper regions; the appearance of having descended being most likely an optical illusion.—*Ibid.*

NOTE REGARDING SCARPA.

In our memoir last week of this eminent surgeon, we should have stated more correctly that the danger which he most strongly urged to the recto-vesical method of lithotomy, was that of cutting one or other of the *ejaculatory ducts*; as may be seen from the following passage or two, from among many in his papers on the subject. "I cannot think that the recto-vesical deserves to be preferred to the lateral method, and that for these reasons: in the first place, it is impossible to cut the membranous portion of the urethra and the prostate vertically, without dividing the *ejaculatory duct* of the left, or perhaps the right, side; and, secondly, such a wound is constantly exposed to the contact of fæcal matter." And again: "Who can be sure, in performing the recto-vesical operation for the extraction of a large stone, that he shall divide vertically and equally the verumontanum, with such exactness as not to cut either of the *ejaculatory ducts?* &c."

GUY'S HOSPITAL.

To the Editor of the Medical Gazette.

Sir,

An accident unluckily arose respecting the signature to the letter treating on the experiments on Quinine and Morphia.

The author, who is Mr. H. Muson (*and not Mr. Roper*), being very much engaged, requested me to copy the above; which I did, and inadvertently signed my own name.

By inserting this note, or explaining more concisely its intention, you will greatly oblige

Your very obedient servant,

A. Roper.

December 13, 1832.

LECTURES ON CASES OF DISEASE,

Treated in the Dispensary of the University of London.

By Anthony Todd Thomson, M.D.

Jaundice—Intermittent Cephalea, the sequel of Cerebral Inflammation—Chronic Bronchitis.

Gentlemen,—Since I last had the pleasure of addressing you, we have witnessed the beneficial result of the treatment resorted to in a case of Jaundice, to which I directed your attention, on account of the obscurity of the cause.

Mary Lacy, the subject of this attack, an apparently healthy woman, aged 28, left Somersetshire to come to London about ten days before she was admitted a patient in this Institution. She says that she was in perfect health when she left home; that she travelled on the top of the stage, and thus caught a slight cold, but felt no other ailment. Two days after her arrival in town her skin acquired a yellow hue; she felt unusually weak, lost her appetite, and her bowels became costive. You saw, on the examination of the patient, that the skin, nails, and albuginea of the eye, were deeply tinged with bile: the tongue was furred, the pulse small and quick, and her expression was that of much anxiety. She described her stools as being nearly white, and the urine of a deep orange colour, tinging linen put into it. She complained chiefly of languor. Pressure on the region of the liver did not indicate any derangement of that organ; she felt no pain there nor elsewhere; had no sickness; she slept well; and the catamenia was regular. She had never been ill before.

From the history of this case no satisfactory idea could be formed of the cause which had led to the obstruction of the common duct, and the consequent retention of the bile in the hepatic ducts, so as to admit of its absorption into the circulation, and its suffusion upon the surface. As there was no pain in the right hypochondrium, even after taking food, there was no reason for thinking that a gall-stone had dropped into the common duct; and it was as difficult to imagine that inspissation of bile, sufficient to plug up the duct, should take place in so healthy a person. To what, then, are we to attribute the obstruction? It is more easy, gentlemen, to ask such a question than to answer it; and the only light that I can throw upon the case is, to suppose, from the absence of pain, and from the sudden manner in which the disease appeared in this young woman, that it is probable the resistance to the free passage of the bile

existed at the very extremity of the common duct, where it passes obliquely through the substance of the duodenum. We frequently find that opium, and other substances which cause torpidity of the intestinal canal, produce temporary detentions of bile, and white stools; and as frequently also, that the same effect is produced by defective chymification, if the food which passes the pylorus be incapable of affording a due stimulus to the duodenum. Now in this young woman, the length of the journey, the sitting for so many hours on a stretch, and a confined state of the bowels, may have acted on her, accustomed as she had been to active bodily exertion, in a manner similar to the foregoing causes, and produced such an atony in the ducts as to prevent the free passage of the bile into the bowels. I am of opinion that the orifice of the common duct resembles the pylorus in its functions; it requires the application of a certain stimulus to open it so as to permit the bile to flow.

Whether this opinion be correct or not, I informed you that, from the nature of the attack, the disease would not be of long duration, but would readily yield to medicine. The first object was to clear the stomach of crude undigested matters, not to force, as is generally supposed to be the result of an emetic, the passage of the common duct, by pressing into it the bile contained in the gall-bladder; but, by removing irritating matters from the stomach, to improve the character of the chyme, the natural stimulus of the common duct. For this purpose a scruple of powder of Ipecacuanha was ordered as an emetic; and this was followed up by eight grains of Calomel and six grains of powder of Colchicum, while a brisk purgative, consisting of Infusion of Senna and Tincture of Jalap, was directed to be taken on the following morning. My object in ordering the Colchicum was to aid the Calomel in its stimulant action on the orifice of the gall-duct, as I have had ample opportunity of observing the effects on the liver which always follow the administration of Colchicum; and I am of opinion that much of the benefit derived from it use is to be ascribed to this influence which it exerts on the biliary ducts. The result of these remedies was an evident improvement in the colour of the skin, and of the alvine discharges and the urine; but as the Jaundice continued for a week afterwards, although the Calomel, Colchicum, and purgative, were twice repeated, she was ordered to take five grains of blue pill every night, and three table-spoonfuls of the following mixture three times a day: in the morning, at noon, and at four in the afternoon.

℞ Sodæ Subcarbonatis, ʒij.; Ammoniæ Carbon. ʒj.; Decocti Aloës Comp. fʒvj.; Solut. Extracti Glycyr. fʒij. M.

In three days the beneficial effects of this plan were obvious; the skin and eyes recovered their natural hue; the tongue became clean, the pulse filled, the appetite improved, the stools were bilious, and, at the next visit, three days afterwards, the patient was discharged cured.

In judging from these results, it is evident that whatever was the original cause of the biliary obstruction, the liver had assumed a torpid state, and required to be roused to renewed action. This was effected by the excitement of the capillary system by the blue pill and the alkaline mixture; and the result has fully justified the treatment.

Intermittent Cephalea.

Another case of considerable interest is that of Elizabeth Haynes, who was admitted on the 29th November. The patient, you will recollect, is a woman of a pale, sallow complexion, much emaciated, and nearly exsanguineous. I find the following account of her symptoms in the case-book:—"Elizabeth Haynes, æt. 33, was confined seventeen weeks ago with a five months' child. Three days afterwards, although the secretion of milk was scanty, it suddenly left the mammæ, and violent pain of the head followed. She was bled with leeches and blistered between the shoulders, but with little relief. The head was then shaved and blistered, and this was several times repeated: she also took purgative and other medicines. A Spanish doctor, to use her own words, made an incision through the scalp, and applied caustic to the wound; but these means were productive of no beneficial effects. The headache still continues; she also complains of pain of the right hypochondrium; the bowels are irregular, the feet cold, there is occasionally great tightness across the chest, and she vomits almost every thing she takes into the stomach. The pulse is 108, small and intermitting; the evacuations are dark coloured and offensive; the urine is not high coloured, but deposits a pinky sediment. There is a regular exacerbation and remission of symptoms twice in the twenty-four hours. At three o'clock in the afternoon, chilliness, but not actual rigor, comes on, followed by severe headache, and then burning heat of the skin, but perspiration rarely succeeds; and the same symptoms recur at three in the morning. When she perspires she feels relieved. The following medicines were ordered:—

Applicetur Emplastrum Cantharidis, scrobiculo cordis.

℞ Calomelanos, gr. viij.; Micæ Panis, q. s. Pilula quamprimum sumenda.

℞ Misturæ Purgantis, ℥ij. horâ post pilulam capiendos.

℞ Quiniæ Sulphatis, ℈j.; Infusi Gentianæ Comp. ℥viij.; Acidi Sulphurici diluti, ℥j. M. Sumatur cochl. ij. majora, 2da quâque h rá inter paroxysmos.

She was also ordered an emetic powder, to be taken at the accession of the chilliness, should no improvement of the symptoms take place in forty-eight hours.

We have not seen the patient since the above plan was begun; but I have been informed that she is evidently improved; the sickness has abated; and although the headache still continues, yet it is much more supportable than before.

Now, gentlemen, the peculiarity in this case is, the intermittent type which an attack of apparent inflammation of the brain has assumed; for as I did not see the case in its commencement I can only form my opinion from its history; and looking at that, I should regard it as a case of metastasis, from the recession of the mammary secretion. The practice, in the first instance, seems to have been sufficiently active, and probably, but for the depleting measures which were adopted, the disease would soon have terminated fatally. It is difficult to account for its having taken on the periodic character; but it is thereby rendered more manageable; and I take this opportunity of impressing practical a truth upon your minds; that whenever an intermittent type is taken on, there is only one way of managing a disease, call it whatsoever name nosologists please:—it can only be cured by antiperiodic remedies.

The large dose of calomel was intended to allay the irritability of the stomach; and experience will teach you that there is not a more effectual method of effecting this, especially if at the same time its influence be aided by the counter-irritation of a blister on the scrobiculus cordis. With respect to the mode of prescribing the sulphate of quina, as an antiperiodic, some diversity of opinion exists. You will find that some physicians prefer giving a large dose immediately before the accession of the paroxysm; others adopt the plan which I follow, of giving it in more moderate doses at short intervals. I have subjected both methods to the test of experiment, and have found the latter most effectually to fulfil every indication for which the remedy is prescribed. In this instance the emetic was not taken; but, in general, its influence in breaking the catenation of morbid associations which keeps up the disease, is most striking and salutary. We have still to look after this case; and I have no hesitation in prognosticating a favourable issue.

If it be at all allowable to reason with respect to the nature of the affection of the encephalon in this case, as it did not come directly under our cognizance, I should consider it as a case of acute meningitis. The symptoms were violent headache, quick pulse, vomiting, delirium, but no convulsions—symptoms which point out the seat of the inflammatory action; for when the substance of the brain is the seat of inflammation, convulsions generally supervene, and the stomach becomes so torpid that frequently it cannot be excited even by the strongest emetics. But in making these remarks, I am willing to allow that any importance which might belong to them in this instance is much lessened by our not having seen the patient till the acute symptoms had subsided, and the disease had assumed the periodic character.

Chronic Bronchitis.

Many cases present themselves at this, as well as every other Institution of a similar description, under the name of "colds;" and which, from the frequency of their occurrence, and the slight nature of many of them, are little regarded. Some of the instances have lately, however, been of a more serious nature; and, as I have pointed out to you, gentlemen, some of them have displayed symptoms closely resembling those of humid asthma; others have been attended with these, which have led several of you to regard them as cases of phthisis: these are examples of that species of bronchial inflammation which has been so well described by Dr. Badham and Dr. Hastings under the name of Bronchitis. Those cases which have presented themselves here have belonged to the *chronic* variety of the disease.

The account which these patients give of themselves is that they have caught cold, and their constitutional cough, as they term it, has increased. On inquiry, you generally hear that they are liable to such attacks every winter. There is frequently some degree of dyspnœa, slight pain, or tightness of the chest, quickness of pulse, and other febrile symptoms, which increase towards evening; the digestive organs are affected, the tongue is coated, the bowels are irregular, and the cough is severe. In general there is no difficulty of expectoration; and in many instances the discharge of sputa is so copious as greatly to weaken the patient. It is in these last-mentioned cases that to an inexperienced observer the disease assumes the aspect of phthisis, especially when the sputa displays a muco-purulent character: often, in such cases, also, there is an evident hectic tendency, night sweats are complained of, and diarrhœa wears down the patient.

On inquiring into the causes of the at-

tack, it is generally referred to cold; but sometimes it appears to have followed, as a sequel, some other disease; and in a few instances it can be referred to the occupations of the sufferers. Thus, when the stone-masons were occupied on the columns of the portico of the University, several of them became patients of the Dispensary, owing to the dust of the stone entering with the air into the lungs. In these cases, the dyspnœa was much greater than that which you have seen in the instances lately before you. The greatest number of cases, however, is referred to cold. Now it is not cold, but sudden changes of temperature, whether from hot to cold, or from cold to hot air; but more generally it arises from entering hot rooms after long continued exposure to cold damp air. In these cases the abstraction of heat, or rather caloric, from the system is facilitated by the dampness of the air; the excitability of the system is thus so greatly augmented, that the reaction, produced by the elevated temperature into which the patient enters, is excessive, and inflammation is set up in the mucous membrane of the bronchial tubes, and this more readily from the existing state of that membrane and its predisposition to take on the inflammatory state. This effect of change of temperature is considerably increased by the use of ardent spirits, to which many of the patients who present themselves here are addicted. Among those who are thus affected, we seldom find cooks, and others who are much exposed to alternations of heat and cold; habit in them modifies the susceptibility of impression which others feel when exposed to the exciting causes which I have just enumerated.

If the stethoscope, or the ear, be applied to the chest in these patients, we find that a mucous rhonchus, as it is termed, is present, but not accompanying the whole of the respiratory effort; but although it is not universal over the chest, yet the respiration is not interrupted in any particular part of the lungs. Percussion does not detect any defect of the hollow sound, or resonance of healthy lungs.

When the attack is severe, or has continued for some time, and dilatation of bronchi has taken place, the most expert in the use of the stethoscope will find some difficulty in pronouncing with confidence on the absence of phthisis, or the presence of a tubercular cavity; and this difficulty is still added to by the fœtor which often affects the breath and taints the sputa, in dilatation of the bronchi.

In the treatment of these cases, you have witnessed the little benefit which results from the use of the lancet, and the great prostration of strength which often follows. On this account, I have relied more on large doses of Tartar Emetic than any other antiphlogistic means; and this antimonial, in conjunction with blisters, has constituted the chief part of the practice under your observation. When I say large doses of Tartar Emetic, I mean from one to two or three grains, according to circumstances, repeated every second or third hour. I have rarely exceeded three grains for a dose, for the best of all reasons—that it has effected all that I could anticipate from the use of the medicine. The first and the second dose usually causes vomiting; and this, perhaps, aids much the after influence of the remedy, by the impulse given to the capillary system by the act of vomiting. In severe cases, when it is requisite to maintain a counter-irritant effect on the surface of the chest, or between the shoulders, I have preferred the Emplastrum Calefaciens, or the Tartar Emetic ointment, to the perpetual blister, for fulfilling this intention; as experience has taught me that the common issue ointment, made either with Cantharides or Savine, although it excite more pain, yet is less beneficial than the suppurative irritants. From the copious expectoration which almost always attends these attacks, you will readily perceive why I so seldom employ expectorants; but when they are required, I have found a combination of the Oxymel of Squill, and the solution of the Muriate of Morphia, answer better than any other. Indeed the solution of the Muriate operates most kindly in allaying, not only the severity of the cough, but the general irritability of the system; and the slight constipating effect which accompanies its use becomes advantageous when the attack, as is often the case, is attended with diarrhœa. In the cases of Chronic Bronchitis which present themselves at this charity, there is seldom any necessity for ordering Ammonia as an expectorant; but you will have many instances in your future practice, gentlemen, in which—in severe cases, where the powers of life are depressed to an alarming degree, and suffocation is threatened—you must rely on this excitant as your sheet-anchor. It is often combined with antispasmodics, such as Assafœtida and the Gum Resins, and balsams; but I think that it is better to administer it in the simple state, in doses of from five to eight grains, sheathed with almond emulsion. These doses, repeated every hour, seldom fail to afford relief, if relief can be obtained by any medicine.

Tonics are sometimes indicated, after the violence of the attack has been brought down; and nothing is more useful, in such cases, than three or four grains the Sul-

phate of Quinia, combined with one-sixth of a grain of Calomel, and two or three grains of Extract of Conium, administered twice a day.

HOTEL DIEU.

CASE OF LUXATION OF THE LOWER END OF THE ULNA, WITH CLINICAL OBSERVATIONS,

By M. Dupuytren.

Luxation of the Ulna forwards without Fracture —Reduction.

M. Blot, aged 32, an officer of the Gendarmerie, of athletic form, was riding in the dark, when his horse took fright, wheeled round, and fell. M. B. being accustomed, as he said, to such accidents, disengaged himself from the animal in the act of falling. His right arm, however, got entangled, and was confined between the horse's head and the ground in such a manner as to receive a violent shock. He experienced acute pain at the time, and imagined that his arm was broken. Nevertheless, he gathered himself up, made a sort of sling for his hand, and walked home, leading his horse to Gisor's, a distance of nearly three leagues. M. Fournier saw him four hours after the accident, and recognized a dislocation of the cubitus. He had two persons to assist him, one of whom made counter-extension at the elbow, bent to a right angle, while the other pulled by the hand, the surgeon himself meantime endeavouring to effect the reduction by manual efforts. These attempts, continued for about half an hour, had no other effect than that of causing horrible pain to the patient. M. Fournier then ordered a bread poultice, with a view of allaying the swelling, which was now considerable, and withdrew. M. Dufay, another surgeon, who had in the first instance been sent for, arrived an hour after the above efforts had been made, and he now renewed the attempt at reduction, but without persevering very long. At nine in the morning, the two practitioners met, when they and their assistants made a strong pull, a long pull, and a pull altogether, but without any beneficial effect; and at the end of three quarters of an hour, they gave it up, and recommended him to go to Paris. Blot took their advice, and came to the Hôtel Dieu on the morning of the 23d of November, having travelled all night in a carriage, in which he declared that he suffered less than when he attempted to lie quietly in his bed. He presented himself at the consultation at ten o'clock, being thirty-four hours after the receipt of the injury. The symptoms were then as follow: —

The fore-arm was swollen; the hand in a positi n intermediate between pronation and supination; the inferior part of the fore-arm was rounded, and consequently lessened in its larger diameter; an unusual projection raised the skin at the middle and anterior part of the wrist; on the inner side the internal malcolus could not be felt; behind, a hollow occupied the situation of bulging usually produced by the head of the cubitus; if this bone was traced with the fingers from the elbow to the hand, it would be perceived that it was directed obliquely forwards and outwards, crossing and passing above the lower part of the radius. The dislocation of the ulna forwards was therefore evident.

The radius had remained in its place, and the hand followed this bone as in the natural state. The wrist neither projected forwards nor backwards. In making some movements, M. Dupuytren believed that he perceived an unnatural degree of mobility at the lower end of the radius, but without being absolutely certain of its existence; no crepitation could be detected; pronation and supination were completely destroyed; and, finally, two bruises were seen, one corresponding to the lower third and inner side of the ulna, the other on the outer surface, and at the union of the radius with the hand.

These points having been distinctly ascertained, M. Dupuytren proceeded to the reduction. The patient was seated at an angle of the wall, where there is fixed a ring, used for such operations; a sheet, which was passed under the right axilla, and through the ring, afforded a fixed point of counter-extension; another sheet was applied at the bend of the elbow, and given to the assistants in such manner that the fore-arm remained bent at a right angle on the arm; a napkin was attached to the wrist, and three assistants made extension. The reduction, however, was not thus accomplished. Perceiving the inutility of this mode of extension, it struck M. Dupuytren to extend the limb himself by the hand, inclining it strongly towards the radial side, whilst with his two thumbs united, he endeavoured to force the ulna inwards and backwards. By this means the reduction was accomplished. A slight noise was heard as the bone slid into its place, and the patient exclaimed, "I am cured." All the deformity had disappeared; the movements of pronation and supination were performed with freedom; the apparatus for fracture of the fore-arm was applied to guard against injury, and the patient sent to bed. He slept well the following night, and next morning the swelling had begun to decline. The bandages were re-adjusted; and in the course of the day he was again *en route* for Gisors.

Here then (observed M. Dupuytren) is one of those facts which you ought to seize and appropriate when they occur—for they are at once rare and important. I have looked through all my experience for analogous cases, and I have found but one. A builder, raising his hand to protect himself from a portion of wall which was falling upon him, had the wrist-joint dislocated, and came to the Hotel Dieu with all the symptoms of a luxation of the ulna forwards—such as we have seen in this patient. The reduction was accomplished in the same manner, and proved equally successful. Thus, reckoning that which is before you, here are the only two cases of the kind which I can call to mind as having occurred during the twenty-four years that I have been surgeon to this hospital. It is of importance that they should not be lost, for in surgery it is, especially with respect to dislocations, that precise details are wanting. If every author, in treating of this subject, had thought fit to speak of what he had seen, instead of copying the descriptions of others, we should ere now have had a multitude of accurate cases, which have been lost from negligence, while we should have been spared many of our present inexact and erroneous notions.

The skin, you perceived, was not torn. In the luxation of the ulna forwards, this, indeed, must be very rare, for it would require enormous violence to effect it; it would, in fact, be necessary that the radius should have been fractured severely, if indeed it were not comminuted, and the strength of the ligaments and the thickness of the fleshy parts, and even of the integuments in front, would present an impediment to external projection of the bone, which it would be very difficult to overcome. It is different with the luxations backwards—there the ligaments are not so strong; the bones are almost immediately covered by the integument, while the sharp projection of the styloid process forms a ready means of tearing through the parts. Have you not observed, after certain wounds from fire-arms implicating this joint, or its immediate neighbourhood, how, when chronic inflammation supervenes, the thin delicate skin about the outer and back part of the wrist becomes ulcerated? I have seen it perhaps twenty times; and it depends upon the projection of the styloid apophysis.

I have referred to the observations of Sir A. Cooper, and to those of M. Breschet; and I have looked into all the cases I have, and can only find two which are analogous. Now then comes this question: suppose there were dislocation with rupture of the integuments and protrusion of the bone—what should be done? Ought we to attempt reduction, or to cut off the projecting part, or to amputate? I would prefer immediate and exact reduction—making free incisions; for the chief danger lies on the side of inflammation and strangulation of the parts beneath the aponeuroses. I would not cut of the projecting bone unless the necessity for doing so were conspicuous; still less would I have recourse to amputation.

GUY'S HOSPITAL.

Strumous Phagedænic Ulcer of the Face.

Sarah Cobbins, æt. 36, of a sallow, unhealthy complexion, was admitted into Guy's Hospital, under Mr. Key, on the 12th of September, with a deep strumous excavated ulcer of the upper lip, of two years standing, which had extended to and nearly destroyed the septum nasi: had been under the care of a surgeon in the country during that time, but derived no benefit from the remedies which were employed. She was ordered on her admission Acid. Nitric. Dil. gtt. xl. ex Decoct. Sarsa. ter die sumend.; and the following lotion to be applied to the sore:—R Ext. Opii gr. v. Argent. Nitrat. gr. iij. Aquæ ℥j. M.—which treatment she continued to the 13th of October without any beneficial result. Subsequent to her admission, a small abscess formed on the anterior surface of the cartilage of the nose, which, on being opened, ulcerated, and destroyed a considerable portion of its substance.

Oct. 14th.—Ordered to continue the mixture, with the addition of 10 drops of the Acid. Nitric. Dil. to each dose; and to apply the following lotion to the sores:—

R Acid. Nitric.
Acid. Muriat. aa. gtt. xij.
Ext. Opii ℈j.
Aquæ ℥vj.

Under the latter treatment, the ulcer has rapidly improved up to the present time, and she is now (Nov. 30th) sufficiently recovered to be enabled to leave the hospital.

This woman had evidently suffered severely from syphilis; the throat had been formerly ulcerated and the velum injured. Her constitution was now in so impaired a condition, that mercury could not be exhibited, even supposing that the disease in the nose had a venereal disposition. Mr. Key, therefore, put her under a course of dilute nitric acid, which he commonly prescribes when mercury is indicated, but cannot be exhibited, on account of the

patient's general ill health. The effect of this remedy, together with the local application of the nitro-muriatic acid lotion has been most satisfactorily shewn in the progressive improvement of health, and the uninterrupted healing action of the ulcer.

Strumous Ulcers commencing in Ecthyma.

Susan Burford, æt. 18, admitted under Mr. Key, October 25th, affected with strumous cachectic ulcers on both of the thighs and legs, of three months standing. The patient is of an unhealthy exsanguineous appearance, subject to hysteria, and has had her catamenia absent four months. On her admission, the surfaces of the sores were covered by a thick brown incrustation, which being removed, exposed unhealthy indolent ulcers. The first remedies employed were a poultice, to remove the incrustations, and, internally, infus. cascarillæ, with carbonate of soda, bis die, and hydr. c. cretâ gr. ij. omni nocte, in starch. These remedies were continued till the 29th, when the sores became uncovered, and the following lotions prescribed.

Acid. Mur. gtt. xij.; Acid. Nitric. gtt. xij.; Ext. Opii, ℈j.; Aq. Puræ, ℥vj. ft. lotio.

This was applied to the right leg, on which were seated the deepest ulcers.

To the other leg the iodine lotion, consisting of

Iod. gr. ij.; Potass Hydriod. ℈j.; Aq. Puræ, ℥vj. ft. lotio.

At the end of a week the gums became affected by the hydr. c. cretâ, which gradually increased till November 12th, when it was thought expedient to administer the mercurial every other night only, being sufficient to keep the constitution under its influence. The lotions have been persisted in up to the present period, with the greatest benefit, all the ulcers having nearly healed.

In this case the action of the acid lotion was more beneficial than the iodine, the deeper ulcers cicatrizing as soon as the more superficial ones. It is also found, from extensive trials, that the two acids conjointly act with much more efficacy than the nitric singly.

These ulcers, at her admission into the hospital, bore the character of rupia, and the scabs had both the form and the dirty brown tint characteristic of syphilitic action; but on closely questioning her, there was no reason for believing that she had had any symptoms to warrant this suspicion. They were, therefore, considered and treated as strumous ulcers, and the mildest form of mercurial alterative, with alkali, and the cascarilla, were administered, according to the plan which Mr. Key usually finds most successful in treating this kind of sore. W. J. E.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 11, 1832.

Abscess	8	Hooping-Cough	62
Age and Debility	162	Inflammation	148
Apoplexy	38	Bowels & Stomach	6
Asthma	47	Brain	7
Cancer	12	Lungs and Pleura	5
Childbirth	26	Insanity	15
Cholera	54	Jaundice	4
Consumption	269	Liver, Diseases of the	11
Constiption of Bowels	2	Locked Jaw	1
Convulsions	146	Measles	47
Croup	7	Mortification	17
Dentition or Teething	41	Paralysis	16
Diarrhœa	7	Rheumatism	6
Dropsy	65	Scrofula	1
Dropsy on the Brain	56	Small-Pox	63
Dropsy on the Chest	5	Sore Throat and Quinsey	4
Dysentery	1	Spasms	3
Epilepsy	5	Stone and Gravel	2
Erysipelas	8	Thrush	11
Fever	65	Tumor	1
Fever, Scarlet	44	Venereal	1
Fever, Typhus	6	Worms	2
Gout	5	Unknown Causes	30
Hæmorrhage	1		
Heart, Diseases of	9		
Hernia	3	Still-born	63

Increase of Burials, as compared with the preceding week * . . . . } 10·0

* This account is greatly increased in consequence of the clerks of the parishes of St. George Queen-Square, West Hackney, and St. Ann Westminster, having neglected to make their reports weekly, in due order, and having comprised in this week's report the whole number of burials which have taken place in those parishes during the past year: to the same cause may be ascribed the apparent increase of deaths by Cholera.

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

December 1832.	THERMOMETER.		BAROMETER.	
Thursday . 6	from 34	to 47	29·98	to 30·06
Friday . . 7	33	43	30·14	30·24
Saturday . 8	32	44	30·24	30·29
Sunday . . 9	35	47	30·30	Stat.
Monday . . 10	34	49	30·29	30·24
Tuesday . 11	30	48	30·27	30·35
Wednesday 12	35	47	30·35	30·29

Prevailing wind, S.W.

Except the 11th, cloudy; misling rain at times on the 6th and 8th.

Rain fallen, ·2 of an inch.

CHARLES HENRY ADAMS.

NOTICE.

Mr. Spence's paper next week.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 22, 1832.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

PHRENITIS.

Having concluded my observations, gentlemen, on diseases of the surface, I now proceed to consider those affections which are situated in the interior of the head. The first disease of which I will speak, according to the order I have hitherto pursued, is inflammation within the head, and which is called *phrenitis*, from φρην, the mind.

Symptoms.—In the first place you have the symptoms common to inflammation in every part, only that in this case they are situated within the head. There is a sense of constriction of the forehead, which answers to the sense of tension in other situations. You perhaps also have violent throbbing and pain in the head; throbbing in the carotid arteries, and vertigo; throbbing of the temples; throbbing within the head; throbbing at the back of the neck; and you have also an acute stabbing pain in the head, or a dull heavy pain. Although you cannot examine the part itself which is inflamed, you have morbid heat, and that heat extends to the external part which is not inflamed, so that you have another mark of inflammation—increased heat. Although you cannot see the part which is inflamed, and therefore cannot discern the redness, yet this frequently extends to the eyes, so that they are exceedingly suffused, and thus you have a third mark of inflammation. Three, then, of the marks of inflammation are to be observed, though not actually at the part itself. Swelling, of course, is out of the question. Besides the pain, there is what we usually notice in inflammation—morbid sensibility, extreme excitability of the mind, and intolerance of light and noise.

Another set of symptoms arises from a disturbance of the function of the part, so that there is general delirium, and it is not of a mild or slight character, but it is violent—*delirium ferox*. In the greater number of cases there is also constant watchfulness; the patient cannot sleep at all.

Then, as to the secondary symptoms which arise from sympathy, you have pyrexia—perhaps violent; you have a pulse accelerated, generally full, and perhaps also hard; at any rate, in the greater number of cases it is accelerated, and it is generally full and firm, if not absolutely hard. If it should so happen, that instead of violent delirium there is more or less stupor, then, possibly, you have a slow pulse, but in general you have violent delirium, and a full pulse. The tongue is of course altered in appearance—it is white. White is the usual colour of the tongue in active inflammation, and the tongue in this disease is generally white, but as the powers sink it becomes brown. Not unfrequently the stomach is affected, so that there is vomiting in the greater number of cases; and as the bowels become exceedingly torpid, there is likewise costiveness. The urine, of course, is generally high coloured. As the disease continues, it is by no means unusual to notice convulsions, and at last, perhaps, paralysis.

Now these symptoms may arise from inflammation of the brain itself, or of the membranes; and either of these affections is called "phrenitis." There are no distinctive symptoms in these cases. You will read in books that the pain is more acute,

and the pulse harder when the membranes are inflamed, as in the case of *arachnitis*; but that when the substance of the brain is inflamed, the pain is more of a dull character, and the pulse is not so hard. But although now and then you may make a very good guess, as to how it may turn out after death, yet I believe in the greater number of cases you will be wrong. In the majority of instances both parts are inflamed—the substance of the brain and the membranes; and frequently, when the membranes only are inflamed, there is not an acute, but a dull pain, and not a hardness of the pulse, but merely rapidity. Besides, too, the distinction is of no importance. The membranes are more frequently inflamed than the substance of the brain itself; and when the substance is inflamed, it is very rare indeed for the membranes not to be inflamed likewise.

It is said that when the superficial part of the arachnoid has been inflamed, there is usually delirium; but when the basilary part is affected, there is rather stupor and convulsions—at any rate, spasmodic movements. So that you see some would have a diagnosis between inflammation of the brain itself, and inflammation of its various membranes; and others go still further; and when the membranes are inflamed—at least the arachnoid, they would have us to infer that it is the superior part, if there be delirium, but that it is the basilary, if there be stupor and convulsions. This is the statement of some French writers.

Morbid Appearances.—After death you will find in regard to the membranes either a distinct red net-work, or an uniform redness, of greater or less extent. The minor degree, as I stated when speaking of inflammation in general, is where you can discover each vessel distinctly; and the higher degree is where there is uniform redness in any portion, because the uniformity of the appearance arises from the excessive number of vessels which contain red blood. These patches vary exceedingly in extent and frequency. It is probable, that of the three membranes of the brain, the arachnoid is the most frequently inflamed; and you may have the inflammation, not merely in the enveloping portion, but likewise in that which lines the ventricles. You know, of course, that the arachnoid membrane dips into the ventricles, and lines them; and either one portion or the other, or both, may be inflamed. When this membrane becomes inflamed, it is opaque, (that is a common effect of inflammation) and it also becomes thickened, which I likewise mentioned formerly to be a common effect of inflammation. There is generally a certain quantity of serum, either upon, or in the brain; and in the greater number of cases, as I mentioned when speaking of serous membranes in general, the serum is turbid. Not only, however, is the serum turbid, but often larger or smaller portions of fibrin are seen in it. Now and then the inflammation is so intense that layers of lymph are found either upon the brain externally—that is to say, upon the arachnoid, or in the brain—that is to say, in the ventricles. Sometimes the fibrin is not in the form of layers, but has a jelly-like appearance, and you will find this much the most frequent at the base of the brain. Now and then you will find absolute adhesions. In general death takes place when there is such violent inflammation too soon for the layers of fibrin to become adherent; but death may not take place so rapidly, the process may be slow, the inflammation may not be so acute, and then adhesions may be formed.

If the disease be rather chronic, this fibrin may become very thick and organized, and you may have it to a very great extent. I was shewn by a friend of mine a portion of fibrin which covered nearly the whole of the brain; and I should think that nearer a third than a fourth of it was an inch in thickness;—it was perfectly organized, forming an envelope to the brain. Pus is sometimes produced, and Dr. Baillie says that he once saw pus all over the surface of the brain, secreted, I presume, by the arachnoid. If it be the pia mater which is inflamed, this of course becomes red; there is more or less of fluid under it; and the fluid, from being confined under the membrane, like the vitreous humour in the cells of its capsule, gives exactly the appearance of jelly. The jelly-like appearance of the fibrin secreted by the arachnoid, of course lies upon the arachnoid; but the jelly-like appearance which arises merely from fluid collected in the pia mater lies under the arachnoid, the pia mater being within. When the pia mater is inflamed, you have, of course, redness of it; and now and then it has been said to suppurate, and even to have fallen into a state of gangrene. Frequently a very large quantity of blood is observed after this inflammation, between it and the cranium. The great turgescence is not confined to the vessels of the pia mater. Indeed, in inflammation of the head, the blood is not confined to the interior, but very frequently it extends to the scalp, so that you will find all the vessels of the scalp exceedingly full, and you will find an increased secretion in the scalp itself of serous fluid. When the inflammation of the dura mater is local, the effect of an injury arising either from a diseased bone, or external violence, you know that the superjacent scalp—the scalp immediately over the part, becomes so affected that it is quite œdema-

tous, and this is a point attended to by surgeons as indicating after an accident great affection at a particular spot within. In general, if the dura mater be inflamed throughout, there is a great turgescence of the vessels of the scalp, and a serous effusion into it; but if the inflammation be local, then you may have exactly over the spot an absolute œdema of the scalp.

When the substance of the brain itself is inflamed, you may have a very large number of red dots within, besides those which are always seen, and the latter may be double their usual size. You frequently, too, see a number of minute vessels—the vessels of the part, which ought not to contain blood, do contain it; and you see them in thousands, like so many fine red hairs in the substance of the brain.

Now and then the inflammation, when situated within the brain, runs on to abscess. This is most usually the case when the inflammation is not general, but local. Dr. Baillie says that he once saw the brain in a state of gangrene. I myself have seen the dura mater in that state, but I never saw the brain so; at least, if we are to judge of its existence from its being very lacerable and exceedingly offensive. From inflammation the brain will become exceedingly soft, so as to be a mere pap, something like very thick arrow-root and water. There are various degrees, of course, but still the brain is softened. Now and then you will see softened brain and pus together: the brain generally looks of a dead white colour, and of course the pus has more or less of a yellow tinge, but frequently they are seen together. It is very rare for the brain to become ulcerated on the surface, but now and then such a condition has been seen.

Now all these effects that I have mentioned are frequently observed after chronic inflammation of the brain as well as after an acute attack; and after chronic inflammation there is another effect very frequently seen, namely, induration in that part which has been inflamed. Acute inflammation generally causes, besides the redness, a great turgescence of the vessels, large and numerous red dots, distinct red vessels, a great fulness of the larger ones, perhaps more or less effusion, and perhaps abscess. But besides all this, in chronic inflammation the brain may become hard. Now and then acute inflammation may produce hardening, but I believe more frequently it is the effect of chronic inflammation.

When the substance of the brain has so been inflamed, and pus has been produced, it is sometimes not collected in a large quantity, forming an abscess, but it has been seen infiltrated throughout the brain, so that it has been found in the substance of the organ in innumerable points. Where this is the case, the substance of the brain is generally softened; because, in the first place, there must be a great degree of inflammation to produce pus; and when the pus is infiltrated so extensively, of course there cannot be induration. There is a great variety in the degree of this; so that you may have mere drops of pus in the midst of softened portions, and then still larger drops, till you come to such large ones that they are, in fact, abscesses. When the pus is collected in the form of an abscess, there is a capsule produced of various degrees of perfection, so that sometimes it has been known to have distinct coats. The contents of such abscesses will sometimes be exceedingly offensive; although, of course, no air could have had access to them. The parts surrounding an abscess in the brain may be in all states;—it may be perfectly healthy around the abscess, or it may be diseased and softened; it may be altered in colour, and so on. The matter of the abscess may, of course, remain there, and be found shut up all around; or it may work its way and burst into the ventricle, or it may burst into the nose, or into the ear. Abscesses more frequently occur in the hemispheres than in any other part.

Having made these minute observations respecting suppuration, I must make some equally minute respecting other changes. With regard to consistency, it is to be remembered that the firmness of the brain varies at different parts naturally; so that what would be morbid at one part would be only natural in another. It varies, likewise, according to the time at which we examine a body; a fresh brain being firmer than one some days old, and as soon as it is exposed to the air it becomes very soft. With respect to different parts, I need not say that the tubercula quadrigemina are exceedingly firm. The consistency, too, varies according to age: the brain of old people is firmer than that of young persons. There is a greater variety in the degree of change of consistency after inflammation, than in any other disease.

When the brain is softened, the part may retain its natural colour; or it may be yellow, it may be of a rosy hue, it may be grey, or it may be whiter than usual. If the change be not the result of inflammation, the part is generally exceedingly white; but the parts around, which are not yet softened, you will find rosy. But when the brain is softened, to say nothing of inflammation, the colour may be of all the varieties which I have just stated. It may be rosy from inflammation, or it may be perfectly white: the

redness being only in the surrounding parts. When the brain is inflamed, the softened parts may be mixed with pus, or they may be mixed with blood. If there be a vessel of any size very near, the blood is poured forth into the softened part. It is the grey part, some think, which is the most frequently softened; but, however this may be, every part of the brain is liable to it. When the membranes have been inflamed, it is the cortical part which is most frequently softened: from being in a bad neighbourhood, the brain under the inflammation suffers, and becomes softened. The softening may occur in one or more spots, and, like the existence of pus, it may be exceedingly partial, or it may be very general.

The spinal marrow, I may mention here, is liable to this softening just like the brain; and this softening occurs whether there is inflammation or not, and it is seen at all ages, but more particularly in old men. Generally around the softened part there is congestion and inflammation; very often you see inflammation, but frequently you do not: the part is frequently softened when no inflammation can be discovered. I recollect distinctly opening the brain of a young man whose brain was softened in a great many parts. He was not a patient of mine, but a medical man invited me to see him. He had had paralysis, and the brain was softened; but the part was so white that you could not conceive that there had been the least inflammation. I opened another individual shortly afterwards, where there were the most intense marks of inflammation—the brain was absolutely red around the softened part. This is a proof that, though these appearances are often connected with inflammation, yet they are sometimes wholly independent of it.

Then as to another change, the reverse of this—induration of the brain, it may, like softening, be very local or only rather local, or it may be general; and of course it varies very much in degree. Sometimes it amounts to no more than it would do if it had been hardened by acid; or it may amount to the consistency of wax; and now and then the hardness is still greater—it is of a fibro-cartilaginous character. When the brain is pretty generally indurated, it is said to be the effect of an acute inflammation; but, as I before observed, acute inflammation more frequently produces softening than hardening: however, in this case, hardening is more frequently thought to be the result of acute than chronic inflammation; but it is only the first degree of hardness—viz. that which is equal to the consistency induced by acids, which occurs from this process. When the hardening is general, you would not suppose that such extreme induration as to be called fibro-cartilaginous could exist universally throughout the brain; and such, indeed, is not the case. The second degree of hardness—waxy hardness—is usually local; and the same is the case with the fibro-cartilaginous hardness. This is exactly what we should *à priori* suppose. These two extreme hardnesses are almost always—perhaps always, but I cannot positively say so—the effect of chronic inflammation. It is said, that after fever and great debility—after a dissolution of the fluids and solids—but at any rate after great debility—the brain is frequently found in an indurated state; but I do not know this from my own experience.

Then, as to the red dots, they ought to be very numerous and very large—one, or indeed both, for us to say that there is morbid redness. You will find people differ every day about the inflammatory appearances of the substance of the brain; some contending that there are not more red dots than there should be, and others that there are. We therefore, I think, ought not to be satisfied unless there be a very considerable number, or they are of very considerable size. They are more usually found in the medullary than the cortical portion of the brain.

We must carefully remember, in examining the brain itself and its membranes, with the view of ascertaining the existence of inflammation, that position has a very great effect; that if the head lie in the usual recumbent posture, and the body is not opened till several days have elapsed after death, extreme congestion may take place at the posterior lobes of the brain; such as might lead us to suppose that there had been a vast accumulation of blood during life. If the body have become putrid, this congestion may amount to effusion; at least the slightest touch will cause blood to be poured forth. We should carefully note whether position has been capable of causing that accumulation of blood which we observe on opening the head. We must remember, too, that we ought to look at the brain the moment we cut it, because, after it has been cut and exposed to the air, it becomes rather redder than before. Our judgment should be formed, therefore, immediately on slicing the organ. It is likewise to be borne in mind, that both the brain and the spinal marrow, without any accumulation at either part, have a redder appearance when death has taken place rapidly, than when it has occurred slowly—that in sudden dissolution the brain and the spinal marrow are redder than in a chronic decay of the body. It is said,

too, that they are redder in persons who have been asphyxiated—who have been suffocated, or died from the want of air—than in other persons. We must also remember that the redness constantly varies in different parts—that there is more redness in the corpora striata than in many other parts. At the base of the thalami nervorum opticorum, there are naturally a number of red vessels, the appearance of which we must not mistake for turgescence. We must remember, too, with respect to colour, that the white part of the brain contains more vessels in early life than in old age, when it assumes a yellow hue, and has by no means the same number of vessels. We must remember, too, that the grey portion of the brain is much *more vascular*, as it is termed, than the white portion. When a part is redder than usual, there are not more vessels than natural—they merely contain more blood than they ought to do; and therefore the expression "more vascular" is, strictly speaking, incorrect; but we merely mean by that phrase that vessels contain red blood which ought not to do so, and that those which should, have an increased quantity in them. The grey part is generally more vascular than the medullary portion. All these things are necessary to be remembered, if you wish to form a nice judgment of the morbid appearances in the head.

In many states of the body the very reverse of all these appearances takes place. In some diseases the brain will become bloodless. In cases of starvation, it is said, that the brain will become colourless: this you may suppose. When persons die through the want of some natural stimulus to which they have become accustomed, there is also this extreme whiteness of the brain. I have seen this condition quite independent of a general cause, quite independent of the loss of blood, or the want of food, or the want of stimuli, but from local disease of the cerebral arteries. I have seen them diseased, so that they would not admit of a proper quantity of blood circulating through them, and the brain has consequently been rendered far whiter than it naturally is. However, this whiteness is said sometimes to occur after there have been signs of irritation of the brain, but I should think that it more frequently arises from the want of blood throughout the body, or causes preventing the brain from receiving its proper quantity of blood. So much, therefore, for the morbid appearances.

One of the most splendid books on the morbid appearances of the brain, is Dr. Hooper's: some of the plates are rather too shewy, but still they exhibit extremely well the appearances of inflammation. Representations of this affection are also given in Dr. Baillie's work on Morbid Anatomy, but the plates not being coloured, they do not shew it very clearly.

Causes.—Inflammation of the brain is less frequently an idiopathic than a symptomatic affection. It is more frequently seen as an accompaniment of fever than any other disease. It will arise, like any other inflammation, from cold applied to the body, especially when it is over-heated. It will occur also from simple heat; for if a person in a hot climate be exposed to the direct rays of the sun, without any covering on his head, especially if he be lying down, inflammation of the brain may be the consequence. This is called *insolation*. Sometimes instead of inflammation, apoplexy is induced, but this more frequently occurs if the patient make a violent exertion at the same time. Intoxication will produce inflammation of the brain. Spirituous or vinous liquors irritate the brain, or they would not intoxicate, and the irritation may amount to such a degree, that inflammation may occur. The same circumstance arises from mental irritation. Mental irritation, whether it arises from rage or anxiety, causes a great excitement of the brain. Want of sleep, or long-continued watchfulness, will have the same effect. Long continued excitement of a less degree may amount to the same thing as violent excitement for a short time. Excessive use of the brain cannot take place without the want of sleep and anxiety; no person studies without being anxious to learn what he studies, and his love of study induces him to sacrifice sleep.

Narcotics which stimulate the brain may also induce this condition of that organ. It is very common after large doses of opium, hyoscyamus, and stramonium, to find a throbbing in the vessels of the head. After a person has taken prussic acid, he may experience throbbing in the head, or throbbing of the throat, and more or less delirium. Wounds of all descriptions are common causes of inflammation within the head. Contusions, concussions, penetrating wounds, and mechanical injury of the head, may act in two ways, as exciting and as predisposing causes. You may have inflammation directly induced by them, or such morbid irritability excited, that any common cause afterwards applied, may easily produce inflammation; so that when a person has had injury inflicted on the head, whether it be fracture or any thing else, it is sometimes very dangerous for him to drink wine or beer, or spirituous liquors, for a very great length of time, or perhaps even to eat meat; for the least thing under these circumstances may cause

inflammation. This disposition will occasionally last for years. I recollect seeing a person, who, twenty years before, had suffered fracture of the skull, and on taking a glass of spirits, he immediately became almost delirious. I mentioned, when speaking of inflammation in general, that I had seen delirium induced from rheumatism of the scalp after an injury to the head.

Phrenitis has sometimes arisen from the cessation of an eruption. It is said that the cessation of itch has been followed by inflammation within the head; and sometimes it has arisen from the removal of a tumor. The tumor has taken off a great deal of excitement, it has required a considerable quantity of blood to nourish it, and the tumor being removed, there has been so much more energy throughout the system, and the brain has consequently suffered. This has more frequently occurred when the tumor has been situated on the head itself. This is exactly what we should suppose. Analagous to the cessation of an eruption is amenorrhœa, or costiveness. Women every day, from the cessation of the menses, when they ought to menstruate, become the subjects of violent headache, giddiness, and symptoms of that description. Now and then actual inflammation of the brain will take place. Costiveness every day induces headache; if a person pass his usual time for having a motion, headache takes place, and it is said that inflammation of the brain has sometimes been the consequence of mere costiveness. Inflammation of the eye, or the ear, or the nose, or the sinuses, will sometimes spread to the brain. Phrenitis has frequently carried off patients who have had nothing more at first than inflammation of the parts I have just enumerated. Of course, inflammation will spread in the head just as in other parts of the body. When the nose and the sinuses have been inflamed, in a great number of cases the bones have been found carious. I myself have several times seen phrenitis arise from disease of the ear. When a person has what is called *otorrhœa*, or *otalgia*—in common language, discharge from the ear, or earache—you ought to be on your guard to notice the first symptoms that he may mention of pain in the head, or the first anxious look that is displayed. The very slightest symptoms of cerebral affection, when there is a cessation of discharge from the ear, ought to put you on your guard. I have seen several cases of this description where persons have had phrenitis after pain of the ear, or discharge from that organ; some have had deafness, some have had pain formerly, and then only discharge. From having read on the subject before I witnessed these cases, I was on my guard. In the first case that I saw, there was a wildness in the person's look, and a quick pulse, and I expressed to the friends my belief that the person would never go out of the hospital again alive. You will find this circumstance mentioned by several authors, and several instances are quoted by Cheyne, in his work on Hydrocephalus. In these cases the bone is generally more or less carious. That portion of the dura mater spreading upon the petrous portion of the temporal bone, is found inflamed, perhaps softened, and perhaps there is pus there. I mentioned that I had once seen the dura mater gangrenous, and that was in a case of this description: the portion of the brain lying on the ear was likewise altered in colour—even underneath there was a very considerable change. In a short time the patient became violently delirious; no bleeding, no mercury could stop it; and for this simple reason, there was local disease keeping up the inflammation. There was diseased bone, and old ulceration within the ear; and you might as well have thought of curing inflammation while a portion of depressed bone rested on the head, or curing an ulcer where there was a piece of carious bone to come away, as curing this disease. It is not uncommon in venereal nodes, when the skull has become affected, for the dura mater to become inflamed, and the patient to die with all the symptoms of phrenitis.

When the external parts of the head are inflamed, as the scalp, or the face, it is very common for phrenitis to occur. When erysipelas of the face and head proves fatal, I believe in the greater number of instances it does so by inducing inflammation of the brain itself, or of its membranes; at least in every case of erysipelas of the head which I have opened, I have found very considerable effusion, either upon, or within the brain, or both. This is not an instance of metastasis, or the occurrence of inflammation in one part from its cessation in another, but it really appears to be an instance of the spreading of inflammation; for the inflammation of the face, and of the rest of the head, goes on just as vigorously in the greater number of cases when phrenitis has taken place as it did before it commenced.

Inflammation of the brain, however, certainly does occur sometimes in the way of metastasis. When rheumatism ceases in the joints, or gout ceases in some situations, phrenitis occasionally occurs; and it sometimes takes place after the cessation of inflammation in the salivary glands; in the case of mumps, or as it is sometimes called, *cynanche parotidea*. Phrenitis sometimes occurs immediately on

the cessation of this species of inflammation, but sometimes it occurs on the cessation of inflammation of the testicle, which itself occurs in the first instance after the cessation of inflammation in the salivary glands. Sometimes the testes are inflamed intermediately: it is very common after inflammation of the salivary glands for the testes to become inflamed; and when that inflammation ceases, phrenitis sometimes occurs; but sometimes inflammation of the brain occurs immediately on the cessation of the mumps themselves.

Phrenitis, however, as I before stated, is by far the most frequently seen as an occurrence in fever; and some may choose in this case to consider it idiopathic, excited by the contagion of typhus fever, or malaria, or remittent fever, or by excess, or vicissitudes of temperature. Some contend that fever itself, in many instances, consists of inflammation of the brain; and if they be correct, such phrenitis must be considered idiopathic. If, however, fever be a general affection of the system, then the phrenitis would be considered by those who hold that opinion as symptomatic. But these are mere differences of words.

Predisposing Causes.—Inflammation of the brain is predisposed to by native congenital irritability of that organ. Some persons have extreme irritability of the brain. If such individuals be thrown into apassion, or be suddenly and violently excited, they are very liable to phrenitis. Habits of intoxication, injuries of the head, all organic diseases of the head, and especially tumors in or upon the brain, necessarily have the same effect. All these things give a tendency to inflammation of the brain, so that an exciting cause easily becomes efficient.

OBSERVATIONS ON DYSTOCEA

FROM FAULTY POSITION OF THE CHILD.

Taken from Lectures delivered at St. Thomas's Hospital,

By Edward Rigby, M.D.

A FŒTUS which has been carried the full time of pregnancy can always be born as long as it presents with its long axis corresponding to the axis of the superior aperture of the pelvis. Oblique and transverse positions were first noticed by Van Deventer, a Dutch physician, at the beginning of the last century, and were said to be a chief cause of faulty position of the child.

The immense number of presentations which Baudelocque has described is the great fault of his work: a stuffed puppet was stuck into the pelvis in every manner that could be devised, and this was described as a peculiar presentation, and rules given accordingly how to proceed with the delivery, although many of these presentations never occurred in nature. Thus he enumerated actually seventy-four different species of presentation. How opposite is this to the plain practical observations of Dr. Denman! The presentation of children at the time of birth (says Dr. D.) may be three kinds, viz. with the head, the breech, or inferior extremities, the shoulder or superior extremities; the back, belly, or sides, properly speaking, *never* constitute the presenting part. Burton says, that next to the head presenting, the arm is more liable to offer itself than any other part. This is not exactly correct; but I deny that full grown living fœtuses ever present with the back, breast, abdomen, &c.; and I wish it to be understood that when I speak of a faulty position of the child, I mean where it presents with the arm or shoulder. Professor Nægelé, of Heidelberg, who, from being at the head of the midwifery department, is necessarily made acquainted with the result of every labour which is at all unusual through a very extensive district, assured me that of some thousand turnings which have occurred in the neighbourhood during the last twenty years on account of faulty presentation of the child, there have been perhaps one or two where the arm or shoulder has not presented: other presentations have, it is true, occurred, but only where the child was premature, or had been born dead. A child which has not been carried the full time, or has been dead for some days, comes *any how*: in the first case, it is too small to follow any peculiar course; it presents no resistance whatever; and therefore the form of the passages can have no effect in directing its progress: in the second case, a dead child, after a short time, becomes so soft and flaccid, from the loss of its vital elasticity, that it can be moulded by the uterus into any form whatever. If we read La Motte, Amaud, and others, we do not find a word of any other species of faulty presentation besides that of an arm or shoulder, except where the child was born prematurely, or where turning had been previously attempted by some awkward hand without success.

Baudeloque has considered obliquity of the uterus as one of the most common causes of faulty presentation of the child; but this opinion, once so prevalent, has been long since proved to be incorrect: the uterus towards the end of pregnancy is seldom perfectly straight, being almost always more or less inclined to one side of the abdomen, or is to a certain degree pendulous. The subject of obliquity of the

uterus belongs more properly to another species of dystocea; nor was Baudeloque right when he said that a faulty *inclination* of the pelvis as a cause of malposition of the child, for I know of a case where the pelvic axis was actually perpendicular, and yet the woman was mother of six children, each of which had presented with the head. He also considers a deformed state of the pelvis is a cause of mal-position of the child. When an author like Baudeloque asserts this, one would scarcely believe that in almost every case of the Cæsarean operation the child has been found with the head downwards, resting against the superior aperture of the pelvis, which was too contracted to allow it to pass. If deformity of the pelvis were a cause of malposition of the child, what difficulties would it not add to those cases where it is necessary to perform the perforation! and yet accoucheurs of the greatest experience will assert that they seldom or never met with a case where malformation of the pelvis compelled them to perforate, that the head did not present. Where Baudeloque enumerates an unusually large quantity of liquor amnii as a cause of faulty position of the child, I fully agree with him; for the uterus being so greatly distended, is not able to give that direction to the child's body which it does when there is merely the usual quantity. It seems more than probable that the first perceivable pains, or dolores presagientes, have a considerable share in determining the position of the child, for by the slight pressure which they exert, the long axis of the child is kept parallel with that of the uterus: as long as this is the case, the child presents either with the head or inferior extremities; but when the uterus is so distended, these forerunners of labour can have no effect upon the child's position.

Much dancing and jumping, and other species of violent exercise, have been assigned as causes of mal-position of the child; but I doubt much if this will have such an effect upon the manner in which the child presents. I know of a case where the woman was a rope-dancer, and exhibited at the various country fairs. She was brought to bed in the eighth month of her pregnancy, during which time she had been accustomed to stand almost as much upon her head as her heels, and to use the most violent exertions and contortions of her body, and yet the child presented with the head perfectly naturally.

The umbilical cord being twisted round the child's neck, or being unusually short, has also been assigned as a cause of faulty position of the child, but I know of no case to prove this: in fact, the cord is so often twisted round the child's neck, that I might almost say one half of the children are born with it in this condition. Cases, I own, do occur where it may be twisted so tightly round the child's neck as to cause its death, or where from this circumstance, or its being unusually short, the labour has been rendered tedious, (these will be considered in the third species of dystocea) but I know of no case where mal-position of the child has been produced by it. I am convinced that the position of the child depends very much upon the *form* of the uterus; and in this respect I am supported by Saxorph, Wigand, Boer, and Nægelé, four of the first continental *practical* authorities in midwifery. Thus Wigand, in a valuable work published after his death, says "that the original cause of faulty presentation of the child lies in the deviation of the uterus from its regular elliptical or pyriform shape." The first contractions, or dolores presagientes, are those which regulate the shape of it. Thus in a uterus for the first time pregnant, they generally act equally on all sides. Hence it is why in primiparæ the uterus is so exactly oval, and why we so rarely see faulty presentations.

"The first labour pains," says Fielding Ould, "which are very short, continue their repetition for two or three hours, or perhaps for more, before there is the least effect produced upon the os tincæ, *which time must certainly be employed in turning the head towards the orifice,* which being completed, the waters begin to gather." It is curious that this remark, made just ninety years ago, should not have attracted more notice; and Ould has the more merit, since until he published in 1742, scarcely any attention had been paid to the mechanism and other phenomena of labour. If the dolores presagientes act irregularly, or the uterus has a disposition to spasmodic affections of its muscular fibres, one side of it may be firmly contracted, while the other is quite loose: hence it will be drawn down unequally, and form a large pouch on one side. The result of this faulty configuration is that the position of the child becomes changed, so that its long axis does not correspond to the axis of the pelvis. On questioning women who have had difficult labours, on account of arm or shoulder presentations, they will almost uniformly tell you that during the latter part of their pregnancies they have suffered considerably from cramps and spasms at night time, and frequently describe the abdomen as being drawn into lumps. It is Professor Nægelé to whom I am indebted for the knowledge of this interesting fact; and I have had several opportunities since of proving the correctness of it. The following account, which he gave me, serves to illustrate this point very remarkably: it was the case of a woman who had

borne five times, and each time the child had presented with an arm or shoulder. Turning was of course necessary in every labour, and only two were born alive, and these unfortunately were afterwards carried off by the small-pox. Being pregnant for the sixth time, she was exceedingly anxious that if possible the life of this child should be preserved, and he was requested to attend her. He found her perfectly well made, but on inquiring into the history of her previous labours, he found that she had suffered extremely from cramps and spasms during the last months of pregnancy. Having tried opium by itself, or combined with ipecacuanha or valerian, without effect, he ordered her a starch injection, with twelve drops of tinct. opii every night as long as she continued to suffer from these attacks. The spasms soon ceased, nor did they appear during the remainder of her pregnancy, and my friend had the satisfaction of delivering her at the proper time of a living child, which presented in the natural manner.

Dead children, as I said before, are no rule for presentations, because they come any how. It is astonishing how quickly a child becomes soft after its death in utero. When it has been some little time in this condition, it becomes so closely packed into a round ball, by the general pressure which the uterus exerts on all sides of it, as to be truly surprising; so that, in trying to turn in such a case, it becomes very difficult to distinguish what we feel; for we find parts which in general are at some distance from each other, now in such close apposition as to completely mislead and puzzle us.

The signs of a faulty position of the child are various, and uncertain. Flatness of the abdomen has been considered to denote it; but this may alse shew the presence of twins, or of much liquor amnii. In thin subjects, where the head does not present, it may be felt sometimes externally through the abdominal parietes; but this is by no means uniform. In cases of eutocea where the head presents, it may be felt as early as the seventh month; hence in dystocea, from mal-position of the child, we shall not be able to feel it; but this is no proof of faulty position, for it may be a presentation of the nates: nevertheless, on examining per vaginam fourteen days before the woman expects to be confined, if we do not feel the head presenting, we should be prepared to suspect that all is not right. In a woman pregnant for the first time, it is a bad sign, for in these cases the head of the child lies remarkably deep in the pelvis during the last few weeks of pregnancy. Even under these circumstances our not being able to feel the head is no proof of mal-position, because it may be that the pelvis is narrow, and thus prevents the head from entering its cavity; or, as I have already observed, it may be a presentation of the nates, because the nates do not sink so deep into the pelvis as the head does. In women who have already had children, the head does not sink so low in the pelvis towards the end of pregnancy as in primiparæ. In cases where the woman has been pregnant so often as nine or ten times, the head is occasionally so high as scarcely to be reached by the finger, so that sometimes I have not been able to feel the head until the membranes had been ruptured, and then it seemed as if it were to come from a height. Nevertheless, it is a symptom which should put us upon our guard. "If on examination," says Dr. Merriman, "it should be ascertained that the os uteri is considerably dilated, and the child cannot be felt, this affords reason to suspect that the presentation is preternatural; should the liquor amnii be discharged, and the child be out of reach of the finger, the probability of a preternatural presentation is greater." Hence it requires us to be exceedingly cautious in forming our diagnosis; nor can we be quite certain until we are able to feel the arm or shoulder per vaginum. The power of distinguishing the various extremities and parts of a child can only be acquired by practice; it is impossible to describe these parts, for a description of their appearance gives no idea of their feel. Mad. La Chapelle has made a similar observation. A friend of mine, who is remarkable for the fineness and accuracy of his touch, was led to try the following expedient:—He tied the body of a still-born child in a large bag, and, cutting a small hole, introduced his finger to examine the presenting part; and he assured me that he had found great advantage from this method.

In a case of faulty presentation of a child, if nothing be done by the accoucheur, the arm or shoulder becomes gradually more and more wedged into the cavity of the pelvis. As long as the child is alive, the arm grows black, and swelled to such a degree that one would almost imagine it belonged to a child of five or six years old. If no assistance comes, the active pains gradually cease, and the uterus remains in a state of contraction amounting almost to a species of stricture; the whole abdomen becomes very tender, the pulse quick and hard, the skin dry and hot, the countenance flushed and anxious; the vagina will be found hot, extremely sensitive, and with no mucous secretion; in fact, all the symptoms of inflammation come on, which are quickly followed by

gangrene; or, during the height of a pain, the patient suddenly screams with intense agony: she complains of a sense of bursting or tearing within her; the pains cease instantly, followed by great prostration of strength; the pulse becomes small, and so rapid as not to be counted; the extremities cold; eyes glassy; the slightest pressure on the abdomen brings on acute pain, and death generally soon follows.

I need scarcely say that the symptoms which I have just enumerated are those of rupture of the uterus. When a rupture of the uterus, says Dr. Douglas, has really happened, it is generally marked by symptoms which are decisive; but from it being a case which occurs so rarely, they do not immediately create suspicions. When labour has continued violent a considerable time, if a pain expressive of peculiar agony be followed by a discharge of blood, and an immediate cessation of the throes, there is reason to apprehend this mischief. If nausea and languor succeed, with a feeble irregular pulse, cold sweat, retching, a difficulty of breathing, an inability to lie in the horizontal posture, fainting, or convulsions, there is still more reason to suspect the nature of the case. But if the presenting part of the child which was before plainly to be distinguished has receded, and is no longer to be felt, and its form and members can be distinctly traced through the parietes of the abdomen, there is evidence sufficient, I believe, to determine that the uterus is ruptured. The labour-pain, in consequence of which the rupture is supposed to have happened, is often described by the patient as being similar to cramp, and as if something was tearing or giving way within her. It has been said, likewise, to have produced a noise which could be heard by the people present. This brings me to consider what has been called the *spontaneous evolution of the fatus*, or that means which we occasionally observe nature adopts to expel a child which has presented with the arm or shoulder. This was first noticed by Dr. Denman, who was of opinion, that, in proportion as the head and upper extremities were gradually forced towards the fundus, by the continued action of the uterus, the nates had descended into the pelvis, and in this manner the child been born. Dr. Douglas, in a pamphlet which he published upon the subject in 1811, considered that Dr. Denman's view of the spontaneous evolution of the fœtus was incorrect, and that the arm and shoulder do not return into the uterus, but, with the side of the thorax, protrude through the os externum. Thus the side of the trunk comes to press upon the perineum; this makes room for the breech to descend from the brim of the pelvis into the hollow of the sacrum, and, by a few further efforts of the uterus, the rest of the body and lower extremities are expelled, leaving the head and one arm still to extricate. "If," says Dr. Douglas, "the arm of the fœtus should be almost entirely protruded, with the shoulder pressing on the perineum—if a considerable portion of its thorax be in the hollow of the sacrum, with the axilla low in the pelvis—if, with this disposition, the uterine efforts be still powerful, and if the thorax be forced sensibly lower during the presence of each successive pain—the evolution may with great confidence be expected."

The spontaneous evolution can only occur where the child is dead, and will seldom happen but where there has been delay in sending for proper assistance soon enough, or where the child has been dead some time. A case came to my knowledge of twins which had been united together by the breast, like the Siamese twins: they were carried the full time, and were by no means small children; for such a birth one would have supposed that not only the pelvis but the whole person of the mother must have been of larger dimensions than usual. I was never more surprised than when I saw the mother—a small, thin, delicate-looking woman. The children had been born dead, and this was the reason why so large a mass had been able to be expelled. I have no doubt but that the labour followed almost exactly the same course as the arm case which Dr. Gooch has recorded.

Dr. Douglas had several opportunities of observing the spontaneous evolution of the fœtus, and considered it so favourable, that he actually went so far as to think turning the child was unnecessary in these cases, for that it might be safely left to the powers of nature; but this cannot hold good in practice, for it is exposing the child to certain death, and the mother to the most imminent danger: there is no doubt that in cases of very difficult labour, the spontaneous evolution of the fœtus is a most fortunate occurrence for the mother, but *not* for the child.

But to return to the treatment of a case where the arm or shoulder presents. It has been supposed, that when the head is high above the pubes, we might guide it into the pelvis, or towards the fundus, by pressing upon it externally through the abdominal parietes. Wigand, of Hamburg, tried this practice, and Dr. W. Hunter used a similar plan when he tried to turn the fœtus with the nates into the pelvis. The most important complications of faulty position of the child are, with a contracted pelvis, or stricture of the uterus: by stricture of the uterus, I mean that vio-

lently contracted or almost tetanic condition of the uterus which not only renders the child immoveable, but makes it almost impossible to introduce the hand for the purpose of turning: this latter complication is by far the most dangerous. Where the liquor amnii has escaped some time, it increases the danger and difficulty immensely; the uterus contracts tightly upon the child, and inflammation, and rupture, &c. are apt to follow. Suppose, for instance, we are sent for suddenly to a case of this sort: on arriving at the patient's house, we find the liquor amnii has escaped some hours since; the arm in the vagina quite livid, and so swollen as to prevent our introducing the hand to search for the feet; the uterus is hard, contracted; and the least attempt to pass up the hand produces intolerable suffering, or perhaps even convulsions; moreover the accoucheur by whom we have been sent for, informs us that he has already tried to turn, but without success. What are we to do?

Bleeding is here a *mighty* antispasmodie, and is most strongly and imperatively indicated. I have known of several cases where it was impracticable even to introduce the finger between the child and passages, and yet after the relaxation, or even syncope, produced by a full bleeding, the hand has been introduced with comparative ease, and the turning completed. "Bloodletting," says Dr. Dewcess, "is the only remedy with which we are acquainted that has any decided control over the contracted uterus: it is one almost certain of rendering turning practicable under such circumstances, if carried to the extent it should be. A small bleeding in such cases is of no possible advantage, for unless the practitioner means to carry the bleeding to its proper limits, which is a disposition to, or the actual state of, syncope, he had better not employ it." Nature herself clearly points out the necessity of active and decided bloodletting, to relax the uterus and external parts. "The vagina," says Wigand, "is never so soft, so dilatable, and capable of admitting the hand, as during the presence of an active hæmorrhage; and this is equally the case in primapara as in those who have had several children;—and it is a mistaken kindness in the medical attendant who, in order to spare his patient's sufferings under these circumstances, delays to introduce his hand until the hæmorrhage has ceased. The moment this is the case, the vagina regains more vitality, sensibility, and power of contraction; the hand now experiences much more opposition, and excites far greater pain than during a state of syncope." My father, in his Essay on Uterine Hæmorrhage, makes a similar observation.

Besides bleeding, we should also try the warm-bath, and neglect no means by which we may calm the mind of our patient; for this is of great importance. To diminish the spasmodic action still further, an opiate injection will be advantageous. In the state of vehement contraction in which the uterus was before the bleeding, turning was not merely impossible, but *contra*-indicated; for attempting, under such circumstances, to turn, we should have run a considerable risk of rupturing the uterus.

When the arm presents, the accoucheur must not lose time in endeavouring to reduce it: he must slide his hand into the uterus by the side of the arm, and bring the feet into the passage; the arm, by that means, will go in again of itself. "An arm presenting," says Chapman, "and advanced as far as the arm-pit, is *not* to be returned; but the hand is to be introduced (which, as Deventer justly observes, is often found to penetrate with much more ease when the arm hangs down than when it is thrust back again) and the feet to be sought for; which, when found, the arm will prove no great hindrance in turning the child." It is in no case necessary, or in anywise serviceable, to separate the arm of the child previous to the introduction of the hand of the operator. "In some cases," says Dr. Denman, "to which I have been called, in which the arm had been separated at the shoulder, I have found it a great inconvenience; there being much difficulty in distinguishing between the lacerated skin of the child and the parts appertaining to the mother: the presenting arm is never an impediment of any consequence in the operation, and therefore need not be regarded, or on any account removed."

Although, after all our attempts, it be still impossible to introduce the hand to turn the child, the case nevertheless still demands that the woman be delivered. Nothing remains now but recourse to cutting instruments: we must perforate the chest with the Smellie perforator, and, having made a sufficient opening, must bring away the viscera. This will generally give us sufficient room to pass the hand; if not, we must try to bring away portions of it as well as we can. This is no case for the Cæsarian operation; the system is too much exhausted, and the parts too much inflamed, &c. to admit of it.

These extreme cases rarely happen in lying-in hospitals, or in large cities, but in the country, remote from assistance, and where an ignorant midwife has made the case much worse by pulling at the arm. Mad. la Chapelle's admirable observations

upon this subject deserve your attentive perusal. The *pravus fœtus situs*, the vicious, faulty, or mal position of the child, has not been sufficiently treated on by authors: it has never been made the subject of a distinct monograph, but has merely been cursorily discussed under the chapter of turning. Some authors have described a presentation of the head and arm *together:* thus La Motte, in his eighty-fourth observation, gives a case of this sort which terminated by the natural powers; and if I recollect rightly, Dr. Ramsbotham has recorded a similar case. I know of one case, but whether the midwife had been pulling at the arm or not, it is difficult to say: at least she denied it. It is extremely common to have a hand come down by the side of the cheek, nor does this produce the least hindrance to the passage of the head. In a practice of several years, one meets with complications and irregular cases which are sometimes not even described in books. Thus, for instance, Professor Naegelé told me of the following case: it was a case of first labour, and the head was passing over the perineum when he remarked a discharge of blood from the anus: he examined, and about three inches up the rectum he felt an elbow of the child protruding: it had somehow come down along with the head, had become entangled in the vagina, and forced its way through into the rectum. When the child was born, he examined the vagina, and found a laceration of the posterior wall, corresponding to where he had previously felt the elbow in the rectum. He was at first uneasy about the case, fearing that she would not be able to retain her fæces. He gave her a laxative, and kept her quiet. In two days after labour, he found the laceration, which at first seemed so extensive, surprisingly contracted, and on the 12th it was completely healed. This was evidently a complicated presentation of the head and arm, and belongs to those cases which are among anomalies of the rarest description: nevertheless, it is necessary.

As to the complications of the head with both arms, we have *no* example of it in the experience of our great practical authorities in midwifery, as Mauriceau, La Motte, Smellie, and La Chapelle: it only exists in the copper-plates of certain works on midwifery. Nor can the position of the child exist in nature where the feet and head are wedged together in the pelvis; but I will not deny that it can be *made* during an unsuccessful attempt to turn the child: in this case the feet may have been even pulled down into the os uteri, and yet the head has not quitted the pelvis. When called to a case of this sort, what are we to do? The accoucheur tells us he has made several attempts to turn, but could not succeed. The first thing to be done, as the system is more or less excited, is bleeding, followed by warm fomentations to the abdomen, and an opiate injection; then try to pass a noose round the feet, and when this is done, we may safely push up the head, and the feet will soon descend.

AN ESSAY ON FEVER.

By Thomas Spence,

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Fever is a state of vascular and nervous excitement of the system generally, with or without determination to particular organs, suspending certain secretory functions, whereby the quantity and quality of the blood is changed, and rendered both chemically and mechanically unfit for the purposes destined by nature.

On the authority of nosologists, there are many varieties of fever, and in books they are found to follow each other in the most systematic order, and the student naturally imagines from the precision with which they are distinguished on paper, that they are each separate diseases, arising from opposite causes, being marked by distinct characters, and differing in pathology. Nature however discloses that each may arise from any one cause, that in the same person all the different forms are assumed, and that the pathology is generally to be found in the same organs; thus, chameleon-like, a patient may be seen at different times by a number of practitioners, and each will denominate the disease differently. One day it shall be a continued, another a typhus, the third a yellow fever, and, lastly, it may assume either a remittent or intermittent character.

The causes of fever are various; many of them easily traced, being cognizable by our senses; others are with more difficulty understood, being only known by their effects: amongst the former may be enumerated, heat, cold, moisture, fatigue, mental or bodily excitement, pain or local irritation, indigestible matters taken into the stomach, and putri-

fying or vitiated animal matters introduced into the circulation: amongst the latter, are malaria, and marsh miasmata. It is difficult, perhaps impossible, to demonstrate rightly the *modus operandi* of these causes in developing fever; but if I am not mistaken, the first impression of the majority is received by the nervous, and acts through it, upon the vascular system. This action, according as the agent is depressing or exciting, operates either by diminishing or increasing the force of the circulation; that is to say, the nerves receiving the shock of a depressing agent—for instance, an accident—immediately suspend or interrupt the powers of the circulation, whereby the blood is retarded in its progress from the internal parts to the surface of the body, the consequence of which is, coldness of the extremities, vertigo, nausea, difficulty of breathing, feebleness of the pulse, and sometimes vomiting; this state passing off, either by the struggles of nature or assistance of art, a re-action takes place, which excites preternatural quickness of the heart's action, and propels the blood with increased celerity through the vessels, whereby a quantity of caloric is evolved, which causes an expansion of the particles, and probably some important chemical change in the component parts of the blood: this state of excitement may be produced directly in cases where the cause is an irritant, for instance pain. The alteration then in the quantity, quality, and quickness of the circulation of blood through the secreting organs, is incompatible with the due performance of their different functions, the suspension or unnatural operation of which must necessarily leave to circulate through the system many matters which are of a deleterious nature. A moment's reflection is sufficient to convince us of the injurious effects certain to follow suppression, even for a few hours, of the secretion from the kidneys and skin. It is clear that besides the saline and other elements entering into the composition of urine and perspiration, a very great addition of fluid must necessarily remain in the circulation. Then again, if the elements composing bile be not duly separated from the blood, a train of evils succeed, which affect the constitution most powerfully.

The brain being an organ through which an immense quantity of blood is constantly passing, becomes materially affected by the increased quantity of the circulating fluid, and the bones of the head not yielding in proportion to the augmentation of fluid to be contained in the cranium, compression to a certain extent takes place. The liver, stomach, and bowels, besides suffering from the preternatural quantity of blood thrown upon them, are also sympathetically affected through the brain. The intimate connexion between these organs is a fact so well established, that to allude to it is sufficient for my purpose.

Thus, then, we have set up in the system, either directly or indirectly, a state of fever in which the quality and quantity of the blood are changed, and its circulation quickened; in which the nervous system is disturbed at its very foundation, and the functions of various important organs suspended.

We find that these internal changes are accompanied by corresponding external symptoms, which are certain evidences of the pathology: they are, a dry heated skin, a flushed countenance, suffused eye, quick full pulse, headache, pain in the back, weariness of the limbs, foul tongue, sickness at stomach, disordered bowels, and scanty high-coloured secretion of urine. This I look upon to be the simplest form of fever, which, being once established in the system, will be mild or severe, short or protracted, according to the remedial means adopted, and to the state of the internal organs at the time of attack; for it is well known that the body will receive a shock with impunity at one time, under which at another it would suffer severely. The predisposition of the constitution to disease will be found to depend very much on the habits, age, and temperament, of the individual, and also upon the climate wherein he resides; in a cold climate the lungs, and in a warm one, the liver and bowels, are most predisposed. It rarely happens that febrile excitement is established for any length of time in any constitution, without one or other of the vital organs becoming implicated: as few, indeed, are the individuals who have not some latent weakness. The symptoms will vary in proportion to the degree of the local determination, and to the importance of the organ attacked.

The brain, either in its substance or membranes, is often the seat of inflammation in fever; the evidence of which is pain and heaviness of the head, the dull and glazed appearance of the eyes,

the contracted pupil, and intolerance of light and sound, the concentrated heat of the scalp, restlessness, deprivation of sleep, and delirium.

The substance of the lungs and pleura may be implicated in persons predisposed, of which the cough, pain in the chest, and hurried laborious respiration, are clear indications. When the mucous membrane of the bronchiæ becomes inflamed, a marked change takes place in the symptoms of the fever, and those appear which have been termed typhoid. The peculiar influence of this affection was long since demonstrated by that enlightened and ever-to-be-lamented pathologist, Dr. Armstrong, who, with Mr. C. Haden, Mr. Alcock, and some others, have the merit of having directed public attention to this important discovery. The indications of inflammation of the mucous membrane of the bronchial tubes, are a brown dry tongue, (which, even when most moist, is covered by a thick glutinous secretion), the complexion becomes of a livid or leaden hue, the lips, instead of being red, are almost black, and, with the teeth, are covered with sordes; there is a remarkable depression of the vital, and disturbance of the mental power. These symptoms are easily explained by a reference to physiology: the tenacious matter seen on the tongue likewise lines the air-passages, and prevents the atmospheric air coming duly in contact with the blood, and chemically purifying it. The stomach, liver, and bowels, are implicated directly or indirectly in every protracted case of fever, bearing however a more conspicuous part in some than in others, and will especially be observed where the fever shall have arisen from malaria. The evidence of these viscera being affected is often obscure, and can only be perceived by close observation; indeed it has too often been overlooked altogether, until the secret was exposed after death, by inspection. I fear also that there are many practitioners who, even in this last investigation, rarely think of looking for this morbid anatomy, and many are the examinations in which the ulcerated mucous membrane is never exposed. The mucous membrane of the stomach is particularly liable to inflammation in fevers occurring in a tropical climate, and forms a most distressing part of the complaint: its existence may be ascertained by the constant vomiting, pain in the epigastrium, and red tongue. The irritability of the bowels, pain on pressure, and heat of the abdomen, and the smooth, dry, red tongue, are symptoms of the inflammation of the mucous membrane of the small intestines. In some cases there is the additional testimony of copious discharges of blood by the rectum. The disorder of the liver in fever is generally functional, and may be ascertained by investigating the alvine and urinary evacuations: in some instances (particularly in warm climates), the conjunctiva is tinged, and the skin jaundiced, which in these climates has been considered sufficient to stamp the fever with a new name, and thus we have a yellow fever, but in truth, it is only an additional symptom, and yellow fever and bilious fever are one and the same.

The symptoms then of fever occurring in a healthy subject, where there is no pre-eminent local determination, are headache and giddiness, with languor and a sensation of chilliness over the whole body, nausea, loss of appetite, pain or aching of the back and limbs, urgent thirst, foul tongue, heated and dry skin, full and quick pulse, the sleep being disturbed by starting and frightful dreams, the urine scanty, high coloured, and scalding the urethra in its passage, with much disorder of the bowels.

If seen early, the treatment must be vigorous and prompt: it consists in a free abstraction of blood, which must be taken, for the purpose of diminishing the vascular distention, and therefore it is desirable to obtain a certain quantity, if possible. In inflammatory affections this operation is performed under different circumstances, and it is then of importance to produce syncope; but this effect in fever ought rather to be avoided, and therefore when its approach is indicated by the pulse, the patient had better be placed in the recumbent posture, and the flow of blood stopped for a few minutes: by these precautions there will be little difficulty in obtaining a sufficient quantity, and from 16 to 30 ounces may in the majority of cases be taken with advantage: to this rule, however, there are some exceptions, and it sometimes happens that persons of apparently robust constitutions are, in an attack of fever, incapable of sustaining even the most trifling loss of blood; but to these peculiarities I shall hereafter more particularly allude. Having, then, by bleeding, removed the pain, weight,

and giddiness from the head, and diminished the force and frequency of the pulse, an emetic of ipecacuanha and tartrate of antimony should be administered: this is generally a most powerful and efficient agent, in the treatment of fevers; it produces considerable relaxation of the whole system, diminishing the force and quickness of the heart's action, and often exciting copious perspiration, always a desirable object, and further it occasions an abundant secretion of bile. The effect of the emetic having subsided, no time should be lost in the administration of eight or ten grains of calomel, followed by salts and senna, which, besides restoring the secretions, and thereby purifying the blood, removes irritating matters from the alimentary canal, and by its purgative influence depletes the system. Thus, then, in the space of a few hours the disease is attacked by a formidable force, to which it generally yields; occasionally, however, it happens that the means adopted are less successful; and at the expiration of a short time the patient may again labour under headache, the skin be dry and hot, and the pulse have become again full, hard, and quick; under which circumstances, particularly if the bowels have been freely acted upon, I seldom hesitate to bleed again to the same extent, and repeat the purge. If after this the headache, or pain in any organ, should remain, a dozen or two of leeches applied to the temples, or part affected, will be found very serviceable, followed by a blister, and a continuation of the purgatives. In conjunction with these agents, the strictest antiphlogistic regimen, and the recumbent posture, must be maintained; tea, or toast-water, is all it is necessary to give. The apartment should be kept cool, clean, and well ventilated. This treatment, as I have said, will for the most part check the progress of fever, and in a few days the patient will be fit for duty; but in some instances it assumes what is properly called the continued fever: continued, indeed, it is, and will be, in spite of medicine or medical means. From much observation I can confidently assert, that this protracted form of fever depends entirely upon inflammation and ulceration of the mucous membrane of the small intestines, particularly the ileum. My attention was first directed to this circumstance at the London Fever Institution, where I had an opportunity of attending throughout the course of my professional education, and saw no case in which, both before and after death, it was not a most prominent feature; since then it has been my lot to witness fever both abroad and at home, and I never examined a case of continued fever in which there was not inflammation of the small intestines, and rarely without ulceration. The signs of this condition are a harsh dry skin, small, soft, quick pulse, a parched tongue, of a bright colour, and smooth glazed appearance; frequent purging of slimy or watery evacuations; in some instances irritability of stomach, great emaciation, and an anxious expression of countenance. The patient rarely complains of pain, except on pressure over the abdomen, the integuments of which are hotter than the rest of the body, and retracted. In this condition it is not strength but stratagem which must effect the cure. The prognosis should always be guarded; for although many patients recover, even after ulceration has taken place, it is only by the utmost care. It is a grand principle here not to interfere too much with the operations of nature. Bleeding from the arm is certainly not advisable; nor, indeed, have I ever found it equal to leeches in reducing inflammation of the mucous membranes: a dozen or more leeches may be applied to the abdomen, and the bleeding encouraged by fomentations, until the pain be relieved, or the patient become faint. One, two, or three grains of calomel, may be given every or every other night, and two or three drachms of castor oil the following morning. These are almost the only medicines necessary: they act gently on the liver, and remove vitiated secretions from the alimentary canal. As to sudorifics in fever I have little to say, as I never saw any of much service except the warm bath. This tranquillizes the patient, and often produces sleep; and by bringing a flow of blood to the surface, relieves the intestines. Ablutions, with tepid vinegar and water, or the dilute nitro-muriatic acid, are particularly refreshing. The drink may be effervescing draughts, soda water, tea, or barley water, &c. &c. When the disease has been long protracted, and the patient very much reduced, it is advisable to administer mild unirritating

nutriment; broth, beef-tea, jellies, or the yolk of a lightly boiled egg, answer extremely well.

The danger of a patient labouring under continued fever is very much augmented by the peritoneal coat of the intestines becoming the seat of inflammation: it is frequently the cause of a fatal termination, and is a most difficult circumstance to treat: it is indicated by extreme tenderness of the abdomen, with distention of the integuments, irritability of the stomach, and anxiety in the expression of countenance: the bowels, which previously were probably relaxed, become obstinately constipated. Leeches, mercury, and blisters, are the means best calculated to give relief: the application must be prompt and decisive, as but little time can elapse before the patient is beyond the power of human skill.

[To be continued.]

TREATMENT OF PROLAPSUS ANI.

To the Editor of the Medical Gazette.

Sir,

Perhaps on an early occasion you will be good enough to insert in your journal the following communication: it contains the details of a mode of treatment of prolapsus ani, which, as far as I know, has not hitherto been employed by any one but myself.

There are three species of prolapsus occurring at the anus: the first may be produced by the invagination of the colon, of the cæcum, or of the small intestine; the second by the invagination of the rectum; and the third by the relaxation and projection of the mucous membrane of the rectum.

The first very rarely occurs, and against this art has not provided a remedy. Nature sometimes effects the separation *en masse* of the invaginated portion of the intestine, without producing any manifest injury to the patient.

The second species is very unfrequent in its occurrence, and the mode of treatment which has been adopted for its cure has been very generally unsuccessful; palliation alone being accomplished.

The third kind is a very frequent, and often a very distressing disorder; occurring principally in children and in old people. Many methods have been proposed and adopted for the cure of this disease. The great diversity which exists in the mode of treatment, even at the present moment, is, I think, the best possible evidence of the uncertain efficacy of each mode of treatment.

I trust that the employment of the remedy I am about to recommend will be found to prevent the recurrence of the two latter species of this disease; at least in the great majority of cases.

With regard to the mode of production of the first of these diseases, the information we possess is not sufficiently conclusive to warrant us in hazarding an opinion. The second of these diseases can scarcely occur unless there be relaxation of the levator and sphincter muscles of the anus.

In the third, it is only necessary that there should be relaxation of the mucous membrane of the rectum and of the sphincter of the anus.

Relaxation of the mucous membrane of the rectum is so frequent, the cellular tissue connecting it to the muscular coat is usually so lax, and often so infiltrated with serum, that we might, *à priori*, naturally anticipate a frequent occurrence of this disease.

To distinguish invagination of the colon or other intestine from that of the rectum, the process is usually simple; we merely take a common plaster urethral bougie; we pass it between the tumor and the anus: if it be arrested immediately (that is to say, within the distance of an inch or two from the orifice), we may fairly conclude that the disease is in the rectum; if it pass to the extent of some inches (by which I mean from five to six), we may as fairly conclude that the invagination implicates the colon or other intestine.

Yet this mode of investigation is subject to one fallacy; for a portion of the colon may pull down with it a part of the rectum, and in that case the bougie may be immediately arrested by a cul de sac: but here the quantity of intestine which has protruded cannot fail to set us right, if we should be in error. In well-marked cases we may sometimes determine at first sight whether the disease be an invagination of the colon or rectum; for if it be an affection of the former, instead of an irregular roundish tumor, making an inconsiderable projection, we find a cylindrical

flabby tumor, frequently many inches in length: but we must not always expect to see this wide distinction.

The second species is distinguished from the third by the bulk and resistant character of the tumor.

Having acquired this information, the next thing we have to attend to is the reduction of the tumor: how this may be best effected, has been so often and so fully described, that I shall not enlarge this paper by detailing the various means to which resort may be had.

When the reduction has been accomplished, the disposition by which the disease has been occasioned generally remains; so that this means of relief (which should never be considered more than palliative, and in some cases, it is true, as a preservative against fatal accidents) must never, under any circumstances, be regarded as a curative means.

I now come to the description of the means by which I always effect a radical cure of this disease. The reduction having been accomplished, the patient is placed upon a bed; the pelvis is then raised by pillows, so as to make the buttocks the most elevated portion of the trunk; the thighs and the folds of the nates are then so far removed from each other as to enable us with facility to make any application in the vicinity of the anus. A cautery, heated to whiteness, is now placed in the hands of the operator; who makes, according to the gravity of the case, one, two, three, or four applications of the cautery to the margin of the anus.

The exact point to which the application should be made is dependent upon the gravity of the disease: if it be not of long standing nor obstinate, the application should be made to the margin of the anus, but without implicating the mucous membrane; and the length of the eschar should be about half an inch: this should be the uniform length of the eschar.

If the case be an aggravated one, the application must be made, not only upon the epidermis, but also upon the mucous membrane.

It must be borne in mind that the object of the operation is to produce such an eschar as will be followed by suppuration; for in the process of cicatrization which follows suppuration, a fibrous tissue is generated, by which the anus will be so effectually contracted as to prevent the possibility of a recurrence of the disease; and it is upon the accomplishment of this effect that the cure almost entirely depends.

I have found in every case that the stimulus produced by the application of the cautery has occasioned the development in the submucous cellular tissue of an irritation capable of producing a firm and permanent adhesion of the mucous membrane.

In this operation, if the iron be properly heated, the pain is inconsiderable. And here it must be recollected that the application upon the living body of an iron heated to whiteness, occasions much less pain than the application of one merely heated to redness, and that the latter occasions much less pain than a grey heat.

No other dressing than a piece of dry lint is required, and this is retained between the folds of the nates, and removed only when the patient goes to stool: before it is replaced, the anus should be washed with warm water, by which any irritating matter will be removed. After the performance of the operation, the contractions of the sphincter, which have been excited by the application of the cautery, continue sometimes for three or four days.

If any pain be felt for a short time after the application of the cautery, fomentations of warm water will generally remove it.

I shall conclude this communication by detailing the particulars of two cases of this disease which occurred some months since: one in a spare man of sixty-two, the other in a child of three years. In the elder patient, in whom there was no hæmorrhoidal disease, the mucous membrane projected whenever he went to stool, and had done so during very many years. Occasionally difficulty was experienced in reducing it; and in consequence of this, on some occasions, it had remained unreduced for many days.

When I saw him, the prolapsus had existed for nearly four days; there was exhaled from it a fœtid sanious discharge, and it was considerably tumefied. The pain which the patient experienced was very severe whenever the tumor came in contact with his linen, or with any other body. Before I could succeed in reducing it, thirty-six leeches were applied, and a constant fomentation with warm water had been employ-

ed for some time. After its reduction, the patient was placed in the position I have already described, and the cautery was applied to the anterior and lateral parts of the anus, including about two lines of the mucous membrane. Some pain was experienced for three or four hours; it was relieved by constant fomentation with warm water. The patient did not go to stool for three days after the operation, and when he did, the membrane no longer protruded, neither has it done so to this day. The younger patient had suffered from prolapsus during five months; it occurred every time he went to stool. In this case only one cauterization was made, and that at the distance of a line and a half from the mucous membrane.

The following day, when the child went to stool, no prolapsus occurred, neither has it since. The cicatrization was completed on the twentieth day.

From the experience I have now had of this mode of treatment, I feel a perfect conviction that it will be found a valuable addition to our means of curing disease.—I am, sir,

Very faithfully,
BENJAMIN PHILLIPS.

17, Wimpole Street,
Dec. 14, 1832.

MEDICAL GAZETTE.

Saturday, December 22, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

CLINICAL INSTRUCTION.

WHEN treating a short time since of the subject of the London schools, especially with reference to their capability of supplying a complete medical education, we touched but lightly on the department of clinical instruction—not because we had not much that was important to say about it, but because we did not deem it requisite at the time, while pointing out circumstances which appeared susceptible of improvement, to dwell upon this to the prejudice of other subjects which seemed to demand a more immediate degree of attention. In consequence, however, of some flippant and possibly mischievous remarks which have been made in another quarter, it may be as well to devote a short space to setting the matter in a correct point of view.

It will no doubt by many be thought superfluous to state that no city in Europe possesses a greater number of charitable endowments than London does, in the shape of institutions calculated for affording the amplest relief to the necessitous, and the most extensive opportunities of medical instruction:—that those opportunities are either neglected or lost, is the unfounded assertion which calls for our statement of the facts. There are seven large hospitals in the metropolis, attended by men of the first eminence in the profession, who are followed by hundreds of pupils: there is not one of these institutions in which clinical instruction is not given, and given in a manner which may challenge competition with any thing of the sort to be met with in the continental schools. The school of Paris (this we notice particularly, as it is held up to us by those whose convenience it is so to do, as perfection itself) has but three, or perhaps four hospitals, in which its professors teach; so that in comparing with the resources of our own institutions the extent and variety of practice which such establishments should afford, we have no reason to hide our diminished heads. In what, then, are we deficient? If it be said that the alleged superiority of Paris consists in the methods of teaching there adopted, we beg leave to ask what methods those may be that we have not got here? We say methods, for there is no invariable system of conveying clinical instruction in the French hospitals any more than in our own. Some of their teachers lecture at

the bed-side; some are more practical than didactic; some more didactic than practical; and some, in a studied manner, defer their remarks till they have their pupils collected in the theatre. There are varieties of the same description among ourselves. If M. Dupuytren teaches in one way, and M. Andral in another, so among us do Sir Charles Bell and Mr. Brodie prefer methods of clinique different from those of Dr. Latham or Dr. Bright. Various plans, in fact, are adopted in various schools: we have specimens of the foreign methods among us; and the French have the same; they are eclectics as well as we; there is no mode of clinical instruction peculiar to our Gallican neighbours. We have therefore still to seek in what the imagined superiority of the Parisian school consists? Possibly its advocates may tell us that in the school in question clinical instruction is imperative, while with us it is purely optional. This is a fact which we do not mean to deny; a provision, the propriety of which we do not mean to dispute; for if we did we should have to take into consideration the different systems, founded on different principles, pursued in each country. It is sufficiently known with respect to the medical establishments, as well as most of the other institutions of France, that they are all under the immediate management and jurisdiction of government; that every professor is an employé of the higher authorities; and that every pupil is recognized, and must be entered in the lists of the minister. What can be more directly contrasted with the free and unfettered mode of managing matters among us? There is no other country than this where so much is left to the discretion of the conductors of public instruction—where so much devolves on the uncontrolled agency and choice of those who are to be instructed—and where, we might add, there is so much so truly valuable effected by means that is perfectly free from compulsion. Here our schools are under no surveillance, except perhaps in so far as the new anatomy act has introduced that principle; nor are our teachers stipendiaries under the control of government officers. This is a distinguishing characteristic of our system, and one that has not been duly taken note of by the admirers of things foreign.

A journal, as notorious for its ignorance as for its total disregard of truth, would fain persuade its readers that pupils in Paris may attend medical lectures for nothing; that clinical instruction is given in the Parisian hospitals free of expense. It is most absurdly false. Clinical instruction, as well as every other branch of medical education, must be paid for in Paris as elsewhere. No student, unless he does it clandestinely, or by special favour, and without a chance of getting a certificate (for the professors are bound by an ordinance which renders this impossible), can attend clinical lectures at any of the recognized hospitals—the Hotel Dieu, La Charité, La Pitié, or the Hospice de la Faculté—without having paid his admission fees to the University—his *inscriptions*, as they are called; and when we come to calculate what these are, and compare them with other expenses of the French metropolis, so far from finding them *nothing*, we perceive that they are by no means so extremely moderate as some people might be induced to believe *.

Clinique, *chirurgicale*, and *medicale*, are, in fact, branches of the general course laid down for the French student: he has to pay for these as well as for all the other branches; and when he enters, having taken out his *inscrip-*

* The expense of these *inscriptions* exactly is,

For the first fifteen	- -	750 fr.
——the sixteenth	- -	35
		785 fr.

Or about 31*l* 8*s*. sterling.

tions, he may then choose whether he will hear Dupuytren and Chomel, at the Hôtel Dieu, or Roux and Bouillaud, at La Charité; and he receives his ticket of admission accordingly. Strangers, if they have not those tickets to produce, are liable to be excluded. Yet the triple bronzed journalist to whom we have alluded has the effrontery to say, that "the doors of the Hôtel Dieu are thrown open to strangers as well as to natives!" They are so, certainly, in one way; in the way which we have stated—*upon the payment of the necessary fees.*

So much, then, for the *gratuitous* system of lecturing in the French school. If a subterfuge be attempted, by asserting that the teacher receives nothing from the pupil in the Paris hospitals—or, to use the appropriate language of our contemporary, that he "disdains to extort money for delivering his discourses,"—we must only take leave to reply, that this is no more than what he ought to do: it would be "extortion," indeed, if he did, and would expose him to the loss of his appointment. The pupil must have already paid for those "discourses," or he has no right to hear them; and this being the case, it is mere humbug and vapouring to talk about "this generous, this noble treatment, of the *untaxed* inquirer" in the French hospitals. The truth is, that the French professors (though our silly neighbour seems to know nothing about it) are abundantly provided for: if they do not receive fees directly from their pupils, they do so from a fund which is altogether supported by those fees; they are, in fact, government officers, receive salaries as such, and have a direct interest in the number of students who perform their exercises in the French school for the attainment of their degrees.

One more piece of information for our veracious contemporary. He ventures to deny that clinical instruction is given in our hospitals: he knows he is telling a falsehood, for, with an amusing degree of absurdity, he has no sooner made such an assertion than he quarrels with our lecturers for the *quality* of the instructions which they give. With such an acute and impartial judge it would, as matter of course, be difficult to pass muster: just now, indeed, it would seem that nobody could do this except Dr. Elliotson or Baron Dupuytren. The surgeon of the Hôtel Dieu, for reasons not difficult to comprehend, is lauded as the *ne plus ultra* of lecturers; and at present the physician of St. Thomas's, alone of all his brethren in this country, enjoys the gracious patronage of the Editor of the Lancet. Now so far are we from wishing to decry either protegé of our contemporary, that we have already given the clinical lectures of his favourite physician, while we have no notion of discontinuing those of the surgeon: we only confine our selection to what we deem really good. *We* are not limited to the lectures of one teacher abroad and one at home: no ban of prohibition is placed upon *our* pages: we select from all, and are left free to commend what we approve, our worthy opponent being perforce obliged to commend the wares supplied by the very straightened sources which yet remain open to him. But we digress: our contemporary wishes it to be thought that clinical instruction is neglected in our hospitals: it is merely an interested and a foolish wish to mislead his readers. There is no hospital in London that receives pupils in which clinical instruction, and that of a superior description, is not given. Need we do more than refer to the clinical lectures of this journal?—to those of Latham, and Elliotson, and Thomson, and Watson, on medicine,—or to those of Bell and Brodie, and Key and Earle, on surgery. But why particularize, when no student can go to any hospital in London, (may we not

add, the provincial towns?) anxious to receive clinical instruction, without the means of obtaining it? And again, our consistent antagonist assumes either that there is, or that there is not, any such thing as clinical instruction, just as suits the argument of the moment. At present we are told, for reasons above hinted at, that there is only one clinical lecturer in London, and one in Paris; but very lately it was his cue to assert the direct contrary, and then we were told that clinical lectures were at last given because *he* had so ordered it. The attempt to cushion the fact of the system of *clinique* pursued in the establishments of the metropolis, is rather too gross: yet it is not a little amusing to think how it may go down with the readers of the periodical in question. With regard to the insinuation (rather loudly expressed), that we have nothing in this country to compare with Dupuytren—we conceive it to be altogether a matter of opinion; and one in which others, under favour be it spoken, are as competent to decide as our would-be Aristarchus.

ANOMALOUS INQUEST BEFORE A CORONER.

Some of the Evening Papers, this week, contained a very extraordinary report of an inquest (?), held by Mr. Stirling, the Coroner, to inquire into the nature of the death of young Grimaldi, the well-known clown. A jury was summoned—witnesses were examined at some length—and both coroner and jury expressed themselves satisfied; while all the time *the body was not seen*, having been interred a day or two before in the church-yard. Among the witnesses was a medical man, named Langley, who had attended the deceased; but he had not opened the body, nor could he give any consistent account of the violent symptoms with which his patient was carried off, although he ventured to assert that they were *not* owing to the severe bruises which had been inflicted on the body of the deceased. Both law and physic seem to have been sadly confounded in this business. An inquest is held without a view of the corpse; no verdict (of course) is returned; and further inquiry is deemed unnecessary, in consequence of Mr. Langley's evidence. We do not enter into the particulars, as they have already been given the public; but we confess we think the matter by no means satisfactorily settled. It is still a question whether Grimaldi died a natural death: and should further investigation be deemed requisite, we do not see how the medical witness can escape heavy censure, who, by omitting to perform the requisite autopsy, not only neglected the possible advancement of science, but materially contributed to defeat the ends of justice.

DEATH OF MR. JOBERNS.

Mr. Joberns, senior-surgeon of Middlesex Hospital, died a few days ago rather suddenly at Woodstock, where he had gone on a visit. Mr. Joberns was an intelligent and worthy man, and belonged to a race of surgeons who are rapidly passing away—the remnants of a by-gone generation. Mr. Arnott, the present assistant-surgeon, as a matter of course, will be his successor. Mr. Shaw, Mr. Tuson, and Mr. Phillips, are in the field as candidates for the expected vacancy in the assistant-surgeoncy.

DEATH OF RUDOLPHI.

M. Rudolphi, the celebrated Prussian physician, well known by his contributions to physiology and natural history, died at Berlin on the 29th ultimo, in the 63d year of his age.

MEDICO-CHIRURGICAL SOCIETY.

Tuesday, Nov. 27, 1832.

Mr. Lawrence in the Chair.

Mr. Lloyd on Fatty Evacuations from the Bowels.

A gentleman, aged 47, after eating heartily of cray-fish, was seized with violent pain in the epigastric region, but especially in the situation of the duodenum. This was succeeded by a sharp attack of urticaria, with hepatitis, and subsequently of jaundice. When the jaundice was fully established, the hepatitis subsided, and the patient regained a comparatively good state of health and spirits. Pressure on the situation of the duodenum, however, always gave pain. For many months the patient remained in this state, deeply jaundiced; the urine, saliva, tears, mucus of the nose, and serum of the blood,

were all loaded with bile, and yet not a particle passed through the duct into the intestine, the motions being as white as pipe-clay. All the time the appetite was good, no inconvenience was experienced from taking food, and the bowels acted freely and most regularly. At length a renewal of the hepatitis occurred, which was followed by a discharge of *fatty matter* from the bowels. It appeared like melted fat; and when cool, was about the consistence of butter. It swam in water, melted at a moderate heat, and was highly inflammable. Sometimes portions of it would be mixed with the fæces, but generally the two matters were distinct. Its colour was sometimes darker, sometimes lighter, but always yellow. Contemporary with the appearance of the fatty matter, the alvine evacuations became of a darker colour, but never assumed that of fæces, coloured with healthy bile. And it was, moreover, observed, that whenever the fatty matter ceased to pass, the motions grew pale, as at first; but they always resumed their darker colour as the fatty matter reappeared. In the last week of the patient's life, there was none of the fatty matter perceived; and during the whole of that time the motions put on their white pipe-clay colour.

There was another new symptom occurred at the time, or soon after, that the fatty matter made its appearance. Hitherto there had been a total freedom from sickness; now, on the contrary, scarcely a day elapsed without the contents of the stomach being thrown up: it occurred almost without effort, as in a case of simple stricture of the pylorus. There was no nausea, the appetite was good, and directly after vomiting there was the utmost eagerness to take food; and such may be said to have been the case till the day of the patient's death. The bowels acted regularly to the last. The patient's death occurred between ten and eleven months after the attack.

Sectio Cadaveris.—The whole of the external and internal parts of the body, as far as were examined, were of a deep yellow colour. The stomach was of immense size, extending across the abdomen from ilium to ilium, and its greater curvature almost reached the pelvis. In its cavity there were from three to four pints of dark fluid, smelling of wine, beer, &c.; its coats were thickened, and its inner membrane was more vascular than natural. Immediately beneath the pylorus a hard mass was discovered, which proved to be principally made up of a portion of the duodenum, the head of the pancreas, some absorbent glands, and condensed cellular substance. The duodenum, towards its middle, was so much contracted, that its cavity was in great measure obliterated; so much so, that the larger end of a common blow-pipe would hardly pass through it. In no other part of the alimentary canal was any disease discovered. The pancreas was healthy, but its duct was enlarged. The liver in its structure shewed no diseased change, except such as is seen in the simplest form of chronic inflammation. It appeared more bulky than common, as throughout its substance the pori biliarii were enormously distended, as were the hepatic and common ducts, and also the gall-bladder. The orifice of the common duct in the duodenum was completely closed. In no other part was any disease observed. There was not the slightest indication of malignant disease. The morbid parts were exhibited after the reading of the paper.

December 11, 1832.

MR. LAWRENCE IN THE CHAIR.

A PAPER by Mr. Cæsar Hawkins was read,

On Sloughing Abscess connected with the Liver; with Remarks on Encysted Tumors of that Organ.

The first case on which Mr. Hawkins's observations were founded, was that of a man, aged 31, a patient in St. George's: he had lived intemperately, had been in the East Indies, and suffered from liver complaint. He came into the hospital in consequence of a swelling in the right hypochondrium, for which he had been bled and salivated without effect. It was an oblong swelling, extending across the abdomen above the umbelicus. It appeared to be connected with the liver, and fluctuated obscurely; it was opened by Mr. H. Five or six ounces of thickish dark-green fluid were evacuated, which, upon the addition of nitric acid, seemed to indicate the presence of biliary matter. The patient was relieved by the discharge, which was kept up for some time: it at last, however, began to appear mixed with arterial blood, and the apertures began to slough. A large sloughing sore, four inches by two and a half, now nearly covered the place of the original tumor; it was attended with hæmorrhage, and a peculiarly offensive discharge wholly unmixed with pus. In spite of every remedy, local and constitutional, the man died five months after the abscess was first opened. On examination after death, it was found that, of the abdominal parietes, nothing remained but the peritoneum, which adhered to that of the liver. Strange to say, there appeared to be no marked disease of the liver; there were no remains of a cavity; nothing to indicate the existence of any local affection of the organ, except a very slight thickening of the peritoneum, with a whitish mark resembling a cicatrix.

A female, aged 22, died of a similar complaint in the same hospital, and the symptoms were as like as possible. She sunk under the sloughing process, which continued for about four months. The liver was remarkably healthy; but close to the peritoneal covering of its surface there was observable a yellowish-white mass, about the size of a small nut, with slight condensation of the liver around it to the extent of an inch.

Mr. Hawkins does not consider these to have been cases of abscess of the liver, for reasons which he stated at length. But his impression is, that the disease originated in one of those encysted tumors which not unfrequently form on the surface or at the margin of the liver, below the peritoneal coat, and may be termed aqueous encysted tumors. He treated fully concerning the nature of these structures, and their relation to hydatid cysts and other analogous formations. Mr. Brodie (he went on to relate) had a case like the preceding under his care some years ago, in St. George's Hospital. It was that of a boy of 12. Here, by the introduction of a trocar, a pint and a half of clear watery fluid was drawn off; pressure by bandaging was applied; the cyst was apparently obliterated; and the boy left the hospital cured. Mr. Brodie has given an account of another similar case in the Medical Gazette (vol. i. p. 334): it was the case of a young lady of 20. Three pints of fluid were drawn off, and the treatment generally was quite successful. Mr. Hawkins considers these as examples of the success which may be anticipated when the complaint is treated early: though even after inflammation has set in, and the nature of the contained fluid has been altered, the same result may be expected. In proof of this, he referred to a case treated by Dr. Thomson, and an account of which is in the Gazette, vol. i. p. 168. Urgent symptoms are frequently produced by the growth of these tumors, in consequence of their encroachment upon the thorax compressing the lungs, and those symptoms may be mistaken for hydrothorax or hepatization, or actual effusion into the pleura may ensue. He referred to a case in the Hist. de l'Acad. des Sciences (1732), for an example of this latter description. A soldier, after complaining for two years of very great dyspnœa, died; and there was found a cyst of the liver containing yellowish-green fluid. There were also cysts of the lungs. In another volume of the Acad. des Sciences, there is an account of a girl of 8, who had a tumor in the situation of the liver. Owing to a violent accident it disappeared; but inflammatory symptoms followed, and the child died. A rupture was found, to the extent of three or four inches, in the right lobe of the liver, in which was found a cavity lined by a cyst.

Other cases in point were adduced by Mr. Hawkins, from journals, foreign and domestic. With regard to the occurrence of hæmorrhage from the cavity of the cyst, and the fungous ulceration, observed in the two cases mentioned in the beginning of the paper, both have been noticed before, when similar tumors have formed in other parts of the body. A female patient of Mr. Brodie's had a tumor in the neck, apparently connected with the thyroid gland, which was punctured: a small quantity of fluid was discharged, but the cyst filled with blood, and, when re-opened, hæmorrhage took place. Mr. Brodie dissected out the cyst; but sloughing ensued, and the woman died. When the breast is affected in like manner, a similar result may happen. In one case of this sort the breast had to be removed, and the patient became quite well. Mr. Hawkins does not think, after all, that the fungous growth is of a malignant character; or that, as in fungus hæmatodes, from its occurrence in one part we should be led to apprehend its occurrence in another.

In conclusion, Mr. Hawkins promised to take an opportunity, in a second part of this paper, to point out briefly the circumstances which attend hydatids in the liver, and the discriminative characters of both them and the aqueous tumors of which he now treated.

CLINICAL LECTURE
ON
DISEASES OF THE URETHRA AND NECK OF THE BLADDER.

Delivered at Middlesex Hospital, Dec. 15, 1832,

By Sir Charles Bell.

Gentlemen,—To-day I shall beg your attention to the diseases of the urethra and the neck of the bladder, and particularly to the operations performed upon those parts. I am almost afraid to ask you if you have attended to the cases which I am about to enumerate. You will see that a commentary on the cases of these patients does, in fact, embrace the whole of this important branch of the art of surgery. The *first* case on the list is that of a distended bladder, with paralysis of the lower extremities, from injury of the spine. The *second* case is of distended bladder, with a false passage made by the catheter,

and a stricture. The *third* case is fistula in perineo, consequent upon the operation of piercing the stricture from within. The *fourth* case is stricture of the urethra, with prolapsus ani as a consequence: in this case, too, the operation of piercing the stricture had been performed. The *fifth* is a case of a very narrow stricture, causing retention of urine. The *sixth* is ulcerated urethra and fistula in perineo; not from stricture, but a direct consequence of gonorrhœa. The *seventh* is fistula in ano, attended with rupture, or rather ulceration of the urethra, in which flatus is occasionally discharged from the penis. The *eighth* is extravasation of urine from stricture of the urethra, combined with fistula in ano. In the *ninth*, the patient suffered injury of the perineum from the pummel of a saddle, which gave rise to a fistula in perineo: he is now an out-patient.

I am confident that you feel the whole subject to be before you, and you see at once the importance and the difficulty of it. There is not one of these patients who has not been in danger of his life—there is not one who has not still to suffer a great deal, either by the inevitable progress of the disease or by the operation necessary to his cure.

You have reason to be convinced that the opinion was a false one which supposed that these diseases of the urethra were almost peculiar to the rich. It arose from the diseases of the rich being at ended to, while those of the poor were neglected. When I first came to London, I had read all the books on stricture, and I had endeavoured to see the appearances in the dead body; but I found the knowledge of important facts confined to a very few, and the correct descriptions of the state of the parts only in Mr. Hunter's works. I set about investigation, and I collected, and dissected, and prepared 105 specimens of stricture in the urethra; not, of course, from the higher class of patients, but from men in hospitals and from poor-houses. You see, from the enumeration of the cases to-day, how the matter is—that the very lowest classes of society are as subject to this disease as the luxurious and rich. These local disease are not consequent (as once was the opinion) upon constitutional disease, as gout; but by far the greater number of them are to be referred to inflammations at an early period of life;—and the disease of the bladder is for the most part consequent on that of the urethra.

I will now call your attention to the first case.

1.—*Case of Distended Bladder, with Paralysis of the Lower Extremities.*

Wm. Arnol, æt. 21.—This man was brought some distance from the country, and admitted October 30th. He had partial paralysis of the lower extremities; his urine dribbled from him continually, and he was provided, by the surgeon who formerly attended him, with an urinal, which was fastened round his loins and received the water as it flowed. His fæces also passed involuntarily. He stated, that, a month before, he was employed in cutting wood; and whilst standing upon the branch of a tree, he slipped and fell to the ground, a height of twenty feet. He lighted upon his feet, and then fell flat upon his back. He was not stunned, but found, upon attempting to rise, that he had lost the power of his legs, and his skin was quite numb. He experienced no pain in his back; and when the surgeon examined the spine, under the impression that there was fracture, no marks of injury were apparent. After two days had passed, a catheter was attempted to be introduced to draw off the urine, which had not flowed since the accident; but the surgeon failed, and the water, from that time, has been allowed to dribble from him involuntarily, as it does at present. A fortnight after the accident, he began to feel pain in the region of the bladder, for which leeches were applied. At this time he was attacked with scarlet fever, and the skin is now desquamating. He also, about the same period, began to recover, in some degree, the command over his legs. He can draw them up in bed towards his abdomen, but they are still very weak; the skin, although not altogether deprived of sensation, possesses it only in an imperfect degree. He can sit up in bed, without experiencing any pain in his back. The spine has a lateral curvature in the lumbar region, the curve of which is only trifling: there is also a prominence of the vertebræ at the same part; but he complains of no pain, however roughly they are pressed or kneaded with the hand.

The first thing which was attended to upon his admission into the hospital, was the condition of his urinary bladder. Upon examining it, it was found to be enormously distended; the fundus being above the umbilicus, and requiring the fingers to be spread widely over it to embrace it fully. When the catheter was introduced, a large chamber-pot was nearly filled, to the patient's great amazement, who did not suffer pain from the distention, and did not conceive that his bladder held any urine.

Since his admission, up to the present date, the urine has been drawn off regularly twice a-day by the silver catheter. For a week past he has succeeded in making water once a day without the instrument. He has now the command over the action of his bowels. He has been able,

with the assistance of crutches, to walk from his bed to the fire-place, where he sits most of the day, and without experiencing pain in his back. He informs us for the first time, that, when he was ten years of age, one of the wheels of an unloaded cart passed over his loins, while he was lying upon his face in a hay-field; but he received no material injury, as he was able to get up immediately after the accident, and even to run to his home. This, he says, may perhaps account for the appearance which is observed in his back.

Gentlemen,—In reflecting on this case, the first consideration is, whether the man's condition be the effect of the accident or of disease?—for you ought to be aware that his condition is like a disease that presents itself to us very frequently. I have been six times in consultation, within a short period, on affections similar to this, with Dr. Maton, Mr. Brodie, Mr. Guthrie, Dr. Young, and other most intelligent practitioners. There is still a question whether the debility is caused by an affection of the spinal marrow or of the brain. These patients labour under the following symptoms: paralysis of the lower extremities, not complete, but with diminished sensibility, a certain unsteadiness in walking; and fullness and softness of the belly; a tightness across the stomach; a difficulty of making urine, amounting sometimes to total obstruction, and an inability to retain the fæces. Now these symptoms, which are frequently presented in practice, are so precisely those which you find in this patient, that I cannot altogether remove from my mind the idea that this may be one of those cases of paralysis of the lower part of the body. Is it a case of disturbance of the spinal marrow, arising purely from the accident, or is it a case of disease of the spinal marrow?

There is something in the case to which you must attach importance, and it is the circumstance that is last narrated. I allude to the curvature in the spine: for although it is stated that this is a *lateral* curvature, yet you must have seen that, when I asked the patient to sit up in bed, just about the part where the dorsal vertebræ join the upper lumbar vertebræ, there is a remarkable projection; and, on further examining the part, you find there is an unusual immobility of the spine there. You know very well that this is naturally the most pliable part of the spine; but in this man it is quite the reverse. Observing this, and inquiring into it, the patient recollects himself, and states that a waggon went over his back in childhood. When you consider how scrofulous action is apt to take possession of these bones, and how readily this diseased action is to be excited by any such injury as this at an early period of life, you will, I think, agree with me that there has been an injury to the spine, followed with a certain curvature and a union of the bones of the vertebræ, by exostosis of their bodies.

Now if that be the condition of the part, what is the natural reflection upon it? I can tell you what happens in similar instances—viz. that when a man, a little farther advanced in life, has had his spine thus consolidated, and has afterwards fallen, the fracture has taken place in that part of the spine which is strongest. At least you would be apt to say that the strongest part of the spine was that where the bodies of the vertebræ are joined by bone: but it is really not so; because nature has made the strength of the spine to consist in its elasticity, not in its inert resistance; so that when the rest of the spine is elastic, and a certain portion is united by bone, it is there that the force is concentrated, and the injury done. In this hospital we have found repeated instances of the spine fractured across at the ossified part; and I can the easier conceive that this man has suffered a higher degree of concussion in falling from the tree, and that the spinal marrow has suffered concussion where the spine itself is most firm.

Well, notwithstanding all this, the circumstance of the accident, the narrative of the symptoms, the man's appearance altogether, constitutes a case so distinct, that you are obliged to enter upon a certain line of practice, for the purpose of diminishing inflammatory action in the membranes of the spinal marrow.

I will not touch farther upon the subject than to beg your attention to the introduction of the catheter in this and similar cases. Let us suppose that the case is one of injury of the spinal marrow, and that paralysis is the consequence: how is it that there is distention of the bladder without obstruction? There is no stricture nor obstruction: why is it, then, that the bladder is distended? This is an important consideration: it is, indeed, a leading subject, on which depends the comprehension of the whole detail. Most of you, I have no doubt, have attended a little to midwifery; and I must recal to your notice, that when the child's head is detained in the pelvis, and the labour is protracted, it will often happen that on the day subsequent to the labour there is an immense tumor in the abdomen, and that tumor is the distended bladder. Why should a temporary obstruction of the functions of the bladder be attended with retention of the urine to that degree that the bladder has been known to ulcerate and burst? You must recollect that when the urinary blad-

der is distended beyond a certain degree, it becomes paralyzed, the *detursor urinæ* becomes incapable of acting, and the bladder is so distended at length that the pressure of the diaphragm, and of the abdominal muscles, come to be the only agents in expelling the urine. Whatever may be the cause of the distention, you see this effect, that the person cannot evacuate the urine; and this man comes up from the country, and into the hospital, conceiving, as the patient almost always does, that his bladder cannot retain so much as a cupful of urine; and, accordingly, the case narrates that he was astonished when, upon introducing the catheter, a chamber-pot full of water was drawn off. He could not conceive it possible, for he believed that the last drop of urine was discharged, because he had to strain with the muscles of volition to accomplish what he did.

Presuming that the accident is the sole cause, we reason thus. There has been a disturbance of the natural sympathy that exists betwixt the muscular coat of the bladder and the muscles at the neck of the bladder, and the consequence of that derangement has been a great distention of the bladder, and after that distention has taken place there has been an inability of the bladder to evacuate its contents. Well, then, it is necessary to pass the catheter; and all I have to say upon that head is, that you must be especially careful in passing the catheter in these cases—that you must pass it slowly, gently, with every possible attention and precaution, and avoid any thing like that dexterity which by French authors is called *tour de maitre*. It is especially necessary that you should be cautious in these cases, because there is no sensibility of the part. In passing a catheter in a man who has the natural sensibility of the part, he cries out, he shrinks from you, he will hardly permit you to do harm, or to turn the instrument in a different way from what is right. You are then, by the sensibility of the part, made aware when you are doing wrong; but when a man has an injury of the spine which obliges you to pass the catheter, you have no sensibility to assist in the direction of the instrument, and you may twist the instrument, and thereby make an abrasion of the membrane, or so injure the urethra as to lay the foundation for a false passage.

Now it will be found that when a false passage is made, or there has been a rupture of the urethra, (and the next case will prove it sufficiently) and the point of the catheter has gone out of the urethra, there is the greatest probability in introducing it again that you hit upon the false passage, the edge of the ruptured part being so apt to catch the point of the catheter, and direct it out of the urethra.

An opinion has arisen that the amoniacal condition of the urine in these cases proceeds from an imperfect nervous power influencing the kidney, and that when the spine is hurt, and there is consequently paralysis, that there is a changed condition in the secretion of urine, and hence the amoniacal urine. I have not made my mind up about it, but I certainly see this state of urine when there is no reason to conclude that the nerves of the kidney are injured; and I am inclined to believe, that what with the urine retained in the bladder, together with the necessity for frequently introducing the catheter, and the almost necessary consequence—inflammation of the bladder, the ammoniacal urine is produced; and here is an additional reason for your introducing the catheter with great care in these cases of paralysis; for if you make a hitch, and bring blood, and cause inflammation of the bladder, you find offensive and stimulating urine to follow, which increases the fever.

To bring us again to the practical point, that we may not wander into speculation, I will ask my young friend here to read the next case.

2.—Case of Distended Bladder, with Stricture and False Passage.

Henry Hautboy, æt. 22, a waiter in an hotel, was admitted on Tuesday evening, December 4th, suffering from retention of urine. It appears that this man has had a stricture of the urethra for several years; that he has been subject to occasional total obstruction; that on these attacks he has had recourse to a surgeon, who has relieved him by an instrument; that on this last occasion the operation failed, and nothing but blood came. He states that his urine always flowed in a small stream. Attempts have been made to introduce the catheter since he was admitted into the hospital, without success. The usual means of relieving the spasm of the neck of the bladder have been employed, but now the bladder has risen above the pubes, and he is in great suffering.

The surgeon of the week introduced a silver catheter, of a small size; and putting his finger in ano, said that he felt the instrument running close to the coats of the rectum in a false passage, and that it must have gone out of the urethra just under the arch of the pubes; then keeping the catheter in its place, he begged his colleagues to examine if it were not so. Upon this, the other surgeon, withdrawing the instrument altogether, again introduced it, and with ease and dexterity passed it into the bladder. The water being drawn off, the catheter was retained in the urethra, and fixed with the proper bandages. In the evening the instrument slipped out of the passage, upon which the house-surgeon introduced it again, and the water flowed,

although he was of opinion that he had not passed the catheter fully into the bladder. As it was found after this that the patient could evacuate his bladder without difficulty, no further attempts were made to introduce it. Since that time he has been free from suffering, and can retain his urine for the natural time.

Now, GENTLEMEN, I will bring your mind to reflect on this subject by stating to you that when a house-surgeon is about to be introduced here, he undergoes an examination on certain important practical points, and he is asked, what is to be done when a patient is brought into the hospital with retention of urine? He is then asked what he understands by the terms suppression and retention of urine? What is the condition of the patient when he has introduced an instrument into the bladder, and no urine flows? He is then asked, what is to be done when a patient cannot make urine, the bladder containing urine? It is not expected that he will say, "I would introduce a catheter," because there come men into this hospital in whom it would be most dangerous at once and inconsiderately to introduce a catheter. It is expected that he should distinguish the cases, consider attentively all the features of each individual case before he thinks of the catheter; and, of course, the same will be expected of you in practice. If a person come into the house, or you be called to a person with a narrow stricture, and with a distended bladder, and you at once have recourse to the catheter, and it may be, boldly attempt the introduction of it, you complicate the case exceedingly. What is to be done then? Why this: you are to make a careful inquiry into the condition of the patient. If he be an old person, you are to think of disease of the prostate, and your questions are to be made with a view to that. If he be a young man, you are to consider whether he may not have gonorrhœa; whether he may not have inflammation of the neck of the bladder; whether he may not from modesty have retained his urine too long; because if a young man have been a situation where he could not make water, and if in that state the urine has accumulated so as to distend the bladder greatly, then you return to the point which I have explained—the bladder has been over-distended; and when he was released from the restraint of company, and thought to pass his water, he could not make a drop.

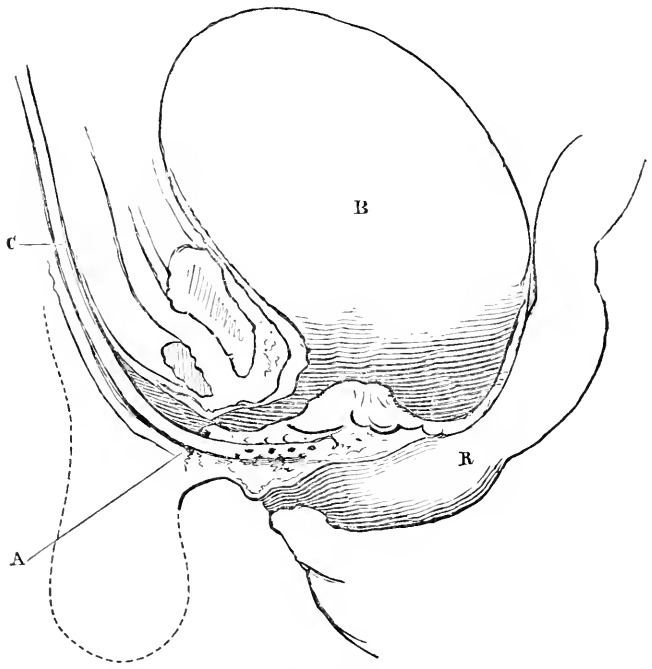
In such a case, where it is quite clear that there is no obstruction in the urethra, the temptation to use the catheter is very great, and thus at once to relieve him. But where the narrative leads you to suspect that the patient has a narrow stricture, and that it is a spasm consequent on the inflammation attending the stricture which has brought him into this condition, you must have him bled; and having been bled you must put him in a warm bath, and give him a large opiate, when you will have the pleasure of seeing the urine flow. By bleeding, by leeching, by fomentation, by the warm bath, by a large dose of opium or Dover's powders, you find that the sensibility of the inflamed part is diminished, that the spasm is removed, that the power of freely evacuating the bladder is restored, and you do infinitely more for the safety of that man than if you passed a catheter, and burst through the stricture.

But it appears that in the case before us the obstruction did not arise from a narrow stricture, and we are left a little in the dark even now as to the cause of the obstruction. We found that he was subject to this obstruction; we heard him state that he made a small stream of urine—this looks like a stricture; we found that he went to his surgeon, and had a small catheter introduced, to relieve him occasionally; and we found that on the last occasion the instrument was used, but without entering the bladder; and instead of urine, blood appeared. What does that imply? It implies that the urethra is torn; it implies that the catheter, instead of passing freely with a sweep into the bladder, has passed out at the lower part of the urethra, at the posterior part of what is called the sinus of the urethra, and which in this instance is directly anterior to the ligament which binds up the urethra to the pubes.

[The learned lecturer here handed round a sketch which he had made illustrative of the exact position at which the instrument had perforated the urethra, a copy of which will be found in the next page.]

Now when I came to pass the catheter, as has been stated, it passed to the place which was, as it were, made for it, where the urethra had been ruptured. There is a sensation produced, not easily conveyed in words, when the catheter passes out of the urethra. There is a sort of roughness, yet no obstruction, because the false passage is free, but a certain roughness which will lead the surgeon to say, this instrument cannot be in the smooth mucous surface of the urethra. When I found this, I looked to the direction of the instrument, and it did not appear to me exactly to correspond with the rapha, and therefore you saw me oil my finger, and introduce it into the rectum. On its introduction, I was convinced that my first idea was right, that the instrument was not in the canal, and that it passed close to the membrane of the rectum. I did not feel the usual thickness of substance between the finger and the catheter, and such as there would have been had the instrument been within the prostate,

or even within the membranous part of the urethra, and I therefore said to my colleagues, "I do not think it is in the urethra; I wish you would feel and ascertain



A—the point at which the catheter has passed through the membrane of the urethra.
B—the bladder. C—the catheter. R—the rectum.

this: *I think it has passed out just under the arch of the pubes.*" Instead of my colleague feeling this, he withdrew the catheter, and giving it another direction, he with great dexterity introduced it at once into the bladder, and very happily for the patient.

Here we have a subject on which I am very anxious that you should give me the most diligent attention. Suppose the bladder were distended, and were rising up to the umbilicus; (this man's bladder was as high; I could feel it bulging upon the rectum; and on striking the belly, there was an undulation against the finger) suppose such a case occurring, and that you did not succeed with the catheter, what is the next thing to be done? This brings us to the question of puncturing the bladder; and I am very desirous that on this question you give me your undivided attention, because I have found a letter from Sir Astley Cooper, and also from my friend Mr. Travers, touching this very subject. There are in the old practice of surgery three ways of puncturing the bladder—one above the pubes, another by the rectum, and a third by the perineum. Do not confound the old operation, which you find described in the Transactions of the Academy of Surgery of Paris, of thrusting a trocar by the perineum into the bladder with the operation which is performed by us here in London, and which consists in opening the urethra behind the stricture, and betwixt the stricture and the bladder, and not in thrusting the instrument into the bladder by the side of the prostate.

It appears in two different publications —of course without any connexion with me at all—that I have been the inventor of this operation; to which Sir Astley Cooper very naturally says, "no, I performed this long ago;" and he refers to our mutual friend Mr. Travers. I am happy in having both these gentlemen for my private friends; and in a professional view it becomes a duty to respect and to see justice done to him who has so long been the head of his profession. Mr. Travers writes that he has seen Sir Astley Cooper long since and often perform this operation of opening the urethra behind the stricture, to relieve the

distended bladder, instead of puncturing it. The important point for you to observe, independent altogether of the question who did this operation first, is that you have the highest authority in the profession for doing it. That is the single and important question for your consideration; and as to myself, I beg you will distinctly understand that I at once resign all pretensions to have been the first to perform this operation. Such a thought never entered into my head; and my friend Mr. Philips, the author of the book which has given rise to this correspondence, has probably misunderstood the question. I think it has arisen out of this circumstance, that younger men than me have assumed to themselves that they have been the first to operate in this manner; and he, perhaps, in vindication of his own teacher, has said, "no, Sir Charles Bell has advocated this practice long ago." I fancy it has occurred in this way.

Now mark me; here comes a most important question. I have performed, and I have recommended, the operation of cutting into the urethra behind the stricture, in another case altogether, not in the case of a distended bladder. The affection in which I conceive it most important to have recourse to this, is a totally different condition of the patient. I venture to say that for one man who dies with a distended bladder, a hundred die of the complaint to which I shall now allude.

The case is this:—A man has a very narrow stricture; the surgeon cannot pass an instrument through the strictnre; he has exhausted all his means of alleviating the spasm attendant upon the stricture; the patient is night and day distressed with ineffectual efforts to make water; he makes very little at a time, and even then there is severe straining; every twenty minutes he is up in bed, and on his knees, endeavouring to press out the last drops of water; the bladder is contracted, so that its cavity is not larger than that of a walnut-shell. It is not a case of distended bladder, for the moment the urine comes down through the ureter into the bladder, that instant there is micturition—a call to expel it. In this condition a man will pass one or two days; he will then be seized with fever—he will very often become delirious—he will even have all the characters of a maniacal person, or effusion will take place into the brain, and he will be in a comatose state, and so he will die; and when you examine by dissection, you will find the bladder contracted in the manner that the old pathologists (if pathologists they could be called) would designate by the term schirrosity of the bladder. It is thickened, it has a small cavity; the peritoneum over it is inflamed; the internal surface is gorged with blood, and black, and the ureters and pelvis of the kidney are distended and inflamed.

Here are the facts, and I conceive that it is of the very utmost consequence to determine what should be done. When you find a man thus straining and continually emptying a bladder that is not dilated, you cannot puncture it from above, it is so small; you cannot hit it through the rectum, it is so small; it has no cavity into which you can thrust an instrument But if you divide the urethra—and I advise you to do it just behind the stricture—the most extraordinary phenomena take place. You would naturally suppose, and you will be borne out in supposing, according to the principles of mechanism and hydrostatics, that in proportion to the obstruction in the urethra would be the action of the bladder: but it is quite the reverse. A narrow stricture is attended with a contracted bladder; and the oddest thing of all (and which is only to be explained by a reference to the vital principle of the part, and not to a mechanical principle) is this—that no sooner does the urethra become free, than the patient, after passing a very little urine, has a longer interval of ease, and, instead of rising twenty times in the night, he perhaps rises only six; the day comes, and he rises only every hour, and gradually the bladder, being no longer resisted, is observed to dilate more and more freely, until at length it allows the accumulation of the natural quantity of urine, and of course the water comes only at the natural period.

Now this is the consequence of dividing the stricture in the perinæum; and so far from having my vanity hurt, I should be delighted if Sir Astley Cooper would say that this is a case also in which he has divided the urethra, because, if he can say so, see what an important acquisition we have. Then your minds would be relieved at once; because, having his authority, I have no hesitation in saying that you have the highest authority in the profession for dividing the urethra in the perinæum, relieving the bladder, and restoring the patient from a state of extreme danger to life.

It was my intention to have had another case read, but the time has elapsed. This subject is an important matter of practice—important to you in after-life, and therefore I must beg of you to give me your attention on Saturday next, in order that we may go fully into it. You see how I am impressed with its importance; and I do assure you that it is in consequence of the frequent loss of life which I have seen, resulting more from wrong principles than awkwardness or want of dexterity on the part of the surgeon.

WESTMINSTER HOSPITAL.

Case of Pneumo-Thorax, in which Paracentesis was performed, with an Abstract of a Clinical Lecture,*

By G. Hamilton Roe, M.D.

Wm. Laird, æt. 25, by occupation a groom, was admitted into the hospital, August 27th, labouring under the following symptoms. Severe pain across the chest, with violent cough, and some expectoration; hoarseness, and night sweats. He stated, that, till July last, he had always enjoyed good health; that then, after exposure to cold, he was seized with pain in his chest, cough, and expectoration; which were relieved by two bleedings. A second exposure, shortly after convalescence, brought on his present symptoms.

Percussion elicited a rather duller sound than natural over the whole chest, particularly on the left side. Respiration pure, but feeble at both sides. No resonance of the voice.

Till the 15th of September he exhibited signs of amendment under treatment; on that day he was seized with a severe stitch under the left breast, much increased by inspiration; attended with hot skin and rapid pulse. Local bleeding relieved these pleuritic symptoms, but his cough, hoarseness, and *mucous* expectoration, continued.

On the 7th of October he was suddenly seized with dyspnœa, soreness of the chest, inability to lie on either side, increase of cough and expectoration (muco-purulent). Respiration laborious (number 38). He could not inspire fully. Voice almost none. Pulse 120; face flushed; skin very hot and dry; considerable night sweats.

On the 13th the left side of the thorax appeared more prominent than the right; the intercostal spaces were enlarged, and there appeared but little motion in it during inspiration. Percussion elicits a tympanitic sound all over this side, except in the axilla, where it is less clear. Respiration absent at this side, except immediately under the clavicle. When the patient sits up, the sound on percussion becomes dull, anteriorly and inferiorly, at the left side. *Tintement metallique* distinctly audible at the inferior angle of the scapula; *ægophony* distinctly audible at the same place.

At the right side the sound on percussion is rather dull; the respiration is puerile; there is considerable resonance of the voice under the clavicle. The heart pulsates at the right side. (Diagnosis: hydro-pneumothorax of the left side, with most probably a fistulous opening in the lung. Right lung healthy, except at its apex, where tubercles doubtless exist.)

* It should be stated that the lecture was given before the patient was operated on.

The patient's dyspnœa increased with great rapidity; his anxious and flushed face, and great degree of distress, rendered obvious the necessity of adopting some immediate measure of relief. The operation of paracentesis was proposed, and, in consultation with the surgeons of the hospital, it was deemed advisable. At this time, percussion and auscultation conveyed the same sounds as before, excepting that the space over which percussion elicited a dull sound at the left side, was increased, indicating an increase of fluid.

October 21st.—Mr. Guthrie performed the operation, by passing a small flat trocar between the eighth and ninth ribs. The withdrawal of the trocar was followed by a gush of air in large quantity; after which, forty-one ounces of clear whey-coloured serum were evacuated. Immediate relief succeeded the operation. The heart was nearly restored to its natural position; the tympanitic sound on percussion was still distinct; respiration had returned to the upper part of this lung, and *bourdonnement amphorique* now became audible about the middle of the anterior surface of the thorax.

On visiting the patient in the evening of this day, it was found that his fever had rather increased. Pulse 140; breathing short and hurried; respiration inaudible in the left lung. The opening in the chest was enlarged, to admit of the introduction of a gum elastic tube. A quantity of air escaped immediately through the tube, followed by the discharge of about seven ounces of turbid serum. This second evacuation of the chest was likewise succeeded by a degree of restoration of the heart to its original position, and bourdonnement was distinctly audible at the anterior part of the chest.

Habeat. Pil. Sapon. c. Opio, gr. v. h. s. Acid. Hydrocyanici, ℥i. om. secundâ horâ ex aquæ cyatho.

23d.—Fever diminished; slept well; the turbid serum continues to flow in considerable quantity.

The acid omitted. Haust. Opii c. Liq. Amm. Acet.

24th.—The discharge from the wound is copious; it is obviously purulent. His respiration is easy and skin cool; he complains of irritation from the presence of the catheter; it was accordingly withdrawn.

He was ordered a draught with Sulph. Quinæ, gr. ij. and Acid. Sulph. Dil. ℥v. to be taken three times a day; and directed a nutritious diet, with bottled porter.

From this time his strength gradually declined, the purulent discharge increased, and his cough became more troublesome.

His countenance assumed an expression indicative of much distress and anxiety. Respiration is totally inaudible at the left side. *Bourdonnement* distinct at the anterior surface of the left side. Puerile respiration at the right side; less strong at the apex of the lung, over which percussion gives rather a dull sound. The voice is excessively feeble.

On the 1st of November a small quantity of warm water was injected into the wound in the chest. It produced a considerable increase in the pain and dyspnœa. The discharge increased considerably; it became very fetid. He sunk with rapidity, and expired on the 6th of November, having survived the operation sixteen days.

The whole of the left pulmonary pleura was thickly coated with a deposit of lymph of a yellow colour. The costal and diaphragmatic portions of the pleura appeared injected with numerous red vessels; eight to ten ounces of a thick puriform fluid lay in the pleural cavity.

The lung was compressed against the spine; inflation did not expand it, the air passing out through two openings on the lung's surface; one of which was situated at its apex, the other about its middle. Two or three superficial ulcerations were observed on the lung; they did not communicate with the bronchiæ. The size of the openings through which the air escaped from the lung attracted notice; that on the middle of the lung's anterior surface was about the size of a half-crown, and had jagged edges; that at the apex was not so large, and had a smooth margin. The right lung was congested; at its upper part it was indurated, and contained a number of miliary tubercles; at its apex there was a small cavity about the size of a walnut.

The lecturer commenced by directing the attention of the students to the signs upon which he had founded his diagnosis of the case under consideration. The first sign was the remarkable clear sound yielded by the percussion of the left side. This tympanitic sound was obviously attributable to the presence of a large quantity of air within the thorax at that side. The air might be contained, 1st, in a lung affected to considerable extent with emphysema; 2dly, in a lung entirely, or in great part, excavated by a large cavity; 3dly, in the sac of the pleura. The almost total absence of respiratory murmur at once proved that the lung was not affected with emphysema. The absence of any extensive expectoration, the short duration of the disease, and the early progress of the case, were sufficient proofs that the lung was not excavated by a large cavity: it was therefore reasonably to be inferred that the air was contained in the sac of the pleura.

Auscultation detected œgophony and metallic tinkling; both indicative that a liquid effusion was likewise present with the air. This opinion was further confirmed by the fact that change of posture produced a change in the sound elicited by percussion; it being dull over the most dependent part of the chest. Thus, when he lay supine, the sound was tympanitic over the whole anterior part of the chest; when he sat upright, the sound was tympanitic above, dull below. On succussion, fluid was distinctly audible, as if shaken in a large glass jar. The obliteration of the intercostal spaces, and the decubitus on the left side, were additional proofs of the presence of air and liquid effusion: it is obvious that both exist in the same cavity.

The next inquiry is as to the source of the air. 1st, it may be the product of the decomposition of a puriform effusion in the chest, as stated by Laennec; 2dly, it may appear in such a way as to lead to the supposition of its being a secretion, as mentioned by Andral, in his Clinique Medicale; 3dly, it has been known to pass into the pleura through a slough in the œsophagus, engaging the right wall of the mediastinum, and permitting the entrance of air and the liquid food of the patient into the thoracic cavity; 4thly, it may come from the lung through an opening on its surface, which may result from a wound, the rupture of an air cell, the falling out of a gangrenous eschar, the bursting of a pulmonary abscess, or of a softened tubercle.

The presence of the sound called by Laennec *bourdonnement amphorique*, from its resemblance to that produced by blowing into a cask or jar, is the strongest evidence of the existence of an opening on the lung's surface, through which the air might pass into the sac of the pleura. In the case under consideration, this sound was absent before the operation; but the rapidity, and almost suddenness, with which the left side of the chest was distended with air, and the absence of symptoms denoting a previous liquid effusion into the chest, clearly shewed, that the air was not the product of secretion or decomposition; nor did it appear that the œsophagus had been the seat of an ulceration or sloughing process: it was therefore inferred, that the air passed through an opening on the lung's surface, which communicated on the one hand with the bronchiæ, on the other with the cavity of the pleura. That this opening was not the result of a wound was evident; nor was it produced by the rupture of a dilated air cells, as was apparent from the absence of the signs usually attendant on emphysema of the lung. Many symptoms exhibited by the patient since his entrance into hos-

pital left no room to doubt the existence of pulmonary tubercles. The softening, and subsequent rupture, of one of these tubercles deposited immediately subjacent to the pulmonary pleura, were therefore set down as the cause of the pulmonary fistula—an opinion founded as well on the above reasoning, as on the known fact, that such is the mode of formation of these pulmonary openings, which morbid anatomy proves to be the most common.

The lecturer then proceeded to shew that the liquid effusion resulted from pleuritic inflammation, most probably consequent on the admission of air into the cavity of the pleura: what the *precise* nature of the fluid was, our data did not enable us sufficiently to determine; but from the observation of similar cases, we might safely pronounce it to be a sero purulent fluid.

The prognosis in this case must obviously be very unfavourable. Even supposing the right lung to be healthy, his chance of recovery is very slight. The opening through which the air now passes must be closed by the adhesive process, to prevent its further accumulation. The most likely manner in which this would take place would be by an adhesion of the costal to the pulmonary pleura, over the opening, by which the cavity of that membrane would be obliterated in a degree proportioned to the extent of adhesion. The lung, condensed by the continued pressure of the fluid, is incapable of such distention as must bring it to meet the costal pleura; the ribs are, therefore, pressed in, and a contraction of that side of the chest takes place, a deformity which has been well delineated and described by Laennec. Such would be the process of cure. The contraction of the chest is not unfrequently observed in cases of simple empyema. In such cases as this, however, the continual ingress of air keeps the two portions of the pleura so apart from each other as to prevent the possibility of their adhesion. To get rid of the air now effused, and to prevent the entrance of more, is obviously the first indication of treatment. Yet such is the unhealthy nature of the pulmonary fistula that the stoppage of it by any natural process must be considered as utterly hopeless, so that the chest will be filled again almost as rapidly as it has been emptied. The operation, then, of *paracentesis* must therefore be resorted to in this case merely as a measure for temporary relief, and as calculated probably to prolong life for a few days. Its effects are immediate in affording relief to the distressed dyspnœa under which the patient suffers. This it does by removing the fluids which distend that side of the thorax, and displace the heart, affecting, doubtless, the right lung also, by pressure on the mediastinum. The trial of this operation in cases of this affection has hitherto been almost universally unsuccessful. In some it appears to have prolonged life, (in one case, especially, related to me by Dr. Davis, of the London Hospital, the patient lived from April to December) while in others it is not clear but it has hastened the fatal result. A case of perfect cure is related by Dr. Archer, having occurred so far back as the year 1798: that it was a case of pneumo-thorax was obvious from the fact that the Doctor *heard* fluctuation in the chest; but whether the air had passed through a fistulous opening in the lung, does not appear.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 18, 1832.

Abscess	1	Hydrophobia	1
Age and Debility	31	Inflammation	15
Apoplexy	3	Bowels & Stomach	3
Asthma	13	Brain	4
Consumption	50	Lungs and Pleura	4
Convulsions	21	Insanity	2
Croup	1	Jaundice	1
Dentition or Teething	2	Liver, Diseases of the	1
Dropsy	11	Measles	13
Dropsy on the Brain	11	Miscarriage	1
Dropsy on the Chest	1	Mortification	2
Fever	7	Paralysis	4
Fever, Scarlet	9	Scrofula	1
Fever, Typhus	1	Small-Pox	14
Hæmorrhage	1	Tumor	1
Heart, Diseases of	2		
Hernia	3	Stillborn	20
Hooping-Cough	7		

Decrease of Burials, as compared with the preceding week . . . } 1359

[For the cause of the increase the preceding week, see our last number.]

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

December 1832.	THERMOMETER.		BAROMETER.	
Thursday . 13	from 33	to 47	30·19	to 30·05
Friday. . . 14	31	47	29·87	29·81
Saturday . 15	30	44	29·56	29·69
Sunday . . 16	25	41	29·85	29·79
Monday. . 17	34	56	29·62	29·47
Tuesday . 18	37	45	29·39	29·54
Wednesday 19	27	39	29·57	29·64

Prevailing wind, S.W.

Except the 18th and 19th, generally cloudy; with frequent rain.

Rain fallen, ·7 of an inch; of which, ·5 fell on Saturday morning.

METEOR.—On Thursday, the 13th, about a minute before six in the evening, a remarkably brilliant meteor made its appearance in or near the zenith: it proceeded in a southerly direction. The sudden transition from comparative darkness to a light equalling that of mid-day, produced an extraordinary effect upon the minds of those who witnessed it.

A friend who happened to direct his eye towards the zenith before the meteor appeared, says, that from the larger ball of light, smaller ones were discharged in various directions, for a moment only previous to its moving.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

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OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 29, 1832

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

PHRENITIS.—HEAD-ACHES.

Variations in the Degree of Inflammation.—Inflammation of the brain itself and its membranes, like all other inflammations, may vary in degree from mere inflammatory headache up to the most violent delirium. There may be mere headache, characterized by a sense of tension, heat, and a degree of giddiness, or there may be simple giddiness without any pain, or watchfulness, or sleeplessness; and from these symptons you may have all the intermediate grades, up to the most intense inflammation and the most furious delirium.

Duration.—The same variations, of course, may occur also in regard to the duration of the affection. Sometimes this inflammatory affection of the head will destroy the patient in a few days, or even in a few hours, and sometimes these symptoms may last for years. Chronic inflammatory headache, which is neither more nor less in many cases than phrenitis, may last for many years. When the disease is of this chronic character, you may have merely some thickening of the membranes; but if lymph be effused, they are rendered still thicker. There may be continuous adhesions, and even the bones themselves, as well as the membranes, may become exceedingly dense and thick.

Mild Phrenitis.—To speak more particularly of the milder degrees of this affection: when it is in a very mild degree, a person complains more or less of headache, but that headache is attended by a throbbing sensation; there is a throbbing pain in the head, or a throbbing of the temples, or of some particular part, and the pain usually is the most intense in the forehead. In the greater number of cases, the patient puts his hand up to his forehead. It is rendered worse by heat—by the heat of the bed and by the heat of the fire. It is rendered worse too by stooping, and especially on rising again after stooping. This will cause a sensation of great weight, or even a cutting sensation, to be experienced within the head. It is generally worse in the morning, from the continued heat of the bed and the horizontal posture. There is likewise, in many cases, drowsiness; and yet the patient perhaps cannot sleep, on account of the intensity of the pain. There is a morbid heat of the head, and a morbid sensibility to light and sound: these produce, not an agony, but an uneasiness; the least noise frets a patient, and so does the light. The mind too, in these cases, is almost always irritable; patients are easily put out of humour, and they are impatient. You will find, in these cases, that the pain rarely extends below the zygoma. If it be an inflammatory affection within the head, of course it is within the cranium, and therefore the face does not suffer; nor does it extend, for the most part, down the back of the neck. The pain is usually not increased by touching the scalp. Now and then, however, you will have the external part affected, as well as the internal, and then there may be tenderness of the scalp, but for the most part there is not.

Diagnosis between Phrenitis and Rheumatism of the Scalp.—In rheumatism of the scalp, on the contrary, there is almost always extreme tenderness. You will find many cases where you will be exceedingly anxious to ascertain whether the pain complained

of is internal or external, and you will find, by attending to these marks, that you will be able to say it is internal; or, by their absence, to say that it is external. In rheumatism, there is not only for the most part tenderness of the scalp, but the pain generally extends beyond the cranium; it frequently runs down the face, it runs behind the ears, down the neck, and very frequently there is rheumatism in other parts. Sometimes there is great sweating, just as in common rheumatism.

Now and then, however, in rheumatism, the internal parts suffer, so that you have both external and internal inflammation; and, in these instances, the nature of the case is easily made out in general, by observing that, although the scalp is tender and the pain runs down the face and the back of the neck—although there is rheumatism in other parts and the pain is worse in the evening, yet there is likewise giddiness, drowsiness, and a throbbing of the inner part of the head. When you see two sets of symptoms like these, you may be sure that the two parts are affected, the external and the internal; and, in such a case, although you see the patient is labouring under rheumatism, yet you must not trust to such ordinary remedies as, for the most part, causes rheumatism to disappear sooner than it otherwise would; but you must treat the case as phrenitis. If you see signs of internal inflammation as well as rheumatism, then, of course, you must treat the disease so much the more actively. Very frequently this pain of the head, when it is rheumatic, is attended with a great sense of coldness; in these cases, too, the pain, for the most part, is worse in the afternoon or evening; but the latter is by far the most usual, and that without any cause which we can discover. The pain is not worse in the morning; the addition of even two or three flannel night-caps does not make it worse; but in inflammatory pain of the internal part of the head, these things could not be borne, and, as I have before said, the pain is almost always worse in the morning, which arises simply from the mechanical circumstance of the horizontal posture allowing the blood to go more easily to the head, and rendering its return more difficult, and from the bed increasing the heat of the body. But in rheumatism which is of a cold nature you will find this very pain to be almost always worse in the evening, and relieved by heat. These circumstances clearly point out the nature of the case.

Neuralgic Pain of the Head.—When pain of the head is of another description—neuralgic, you may frequently discover its nature by the absence of these internal symptoms, and by the pain running along particular nerves. Sometimes it runs in the course of the supra and infra orbital nerves; sometimes it is particularly seated in the branches of the fifth pair near the ears; and sometimes you may trace it along the mastoideus. At other times, however, it does not run along the course of particular nerves, but is situated in one spot, where there is a violent continual pain, and this is very common in hysteria. Sometimes the part itself is very tender, and sometimes not. When you see the absence of the usual symptoms of inflammation of the head, you may easily in general make out the true nature of the case. It very frequently attacks the brain on one side, not in the situation of the supra orbital nerve merely, but some other part of the brain, and the pain seems seated there. In this case it is not intermittent, does not run along the branches of nerves, but is situated in nerves terminating at one spot on the surface of the body.

A pain of this description is sometimes inflammatory, sometimes attended with these internal symptoms, and then you have to treat it accordingly. But frequently there is nothing but a fixed pain in one single spot, and it may last for a few days or for a long time, coming on at regular or irregular periods. Such a pain as this is frequently hereditary. I have known many members of the same family, children of the same family, especially after they have become adults, suffer the disease. It is a very hereditary sort of pain, a pain over the brow coming on once in three weeks, or once a month, or more or less frequently. It is sometimes produced immediately by mental agitation, by overloading the stomach, or putting improper articles into it; but, in spite of every thing, it will come on, without any apparent cause, in many persons every few weeks.

Local Pain of the Head.—But, in many other cases, you will have a local pain, a pain not intermittent, situated in different parts of the head, and very frequently it is hysterical; it occurs especially in hysterical patients.

Thus you have pain of the head of a decidedly inflammatory nature, attended with inflammation of the brain itself or its membranes. You may have pain of the head of a rheumatic nature, and the rheumatism may be active, attended with heat, or of a cold character, which I shall hereafter speak of, which is relieved by warmth, and is worse in the evening; or you may have another headache, which is neuralgic, and of that kind called *tic douloureux*, running along particular nerves, but sometimes diffused with morbid sensibility of a particular part, or of an intermittent character.

Sick Headache.—The last kind of headache which I mentioned, where it occurs parti-

cularly over the brow, has been called *sick headache*, because it is attended frequently with sickness. The stomach is deranged in the first instance, or it soon becomes deranged after the headache has begun; you find, more or less, headache connected with the affection of the stomach, so that it is called sick headache. I believe that most persons ascribe this to the stomach; but I am quite sure it is very unjust to lay it to the charge of the stomach in every case. The stomach has enough to do with diseases of its own without being accused of the diseases of other parts. I am quite sure of this, because I have experienced pain of this description two or three times from evident local causes in the head. From having a draught blow on my head when I have been overheated, I have had intense pain come on. I may mention that I rarely have any thing the matter with the stomach; but, after this pain has existed some time, I have had violent nausea, and then vomiting, the stomach being only affected sympathetically. I have observed too, in a great number of persons, that this headache has not been preceded by an affection of the stomach. People have declared that they digested well, that they had a good appetite, not only up to the time of the occurrence of the pain, but as long as the pain was moderate; but, when the pain arrived at a certain intensity, then the stomach fell into nausea and vomiting, and was disturbed as much as the head. There is no doubt that persons predisposed to these pains may bring them on by overloading the stomach, or taking improper articles of diet; but it is to be remembered that pain of the head will cause disturbance of the stomach, and therefore we have no reason to suppose that the stomach is in fault. I do not think that you ought to infer that the stomach originally is in fault, simply because it is disturbed as well as the head. In a great many cases, the stomach is not affected until the derangement of the head has arrived at a certain point; but the state of the stomach will bring it on, and so also will costiveness; but it is precisely the same with all other affections of the head and alimentary canal. If a person allow himself to become costive, he will he almost sure to have an inflammatory headache, and an inflammatory headache will induce costiveness. It is quite illogical to say that so many affections of the head arise from the stomach and intestines, and it is just as wrong to say that all affections of the alimentary canal depend on the head; yet there are parties who, if they do not say so in plain and distinct terms, they nevertheless approximate very closely towards it.

As I shall not have another opportunity of speaking of this sick headache, I had better say that it is a most intractable complaint. I have known many persons have it in whom all the remedies that were employed failed in accomplishing any material good. If the system be too plethoric, if you find the pulse full, if you find them eating and drinking too much, you may do good to a certain extent by lowering their diet and bleeding. Now and then the pain is so intense that a degree of phrenitis occurs, and you must then treat it as phrenitis; but where it only comes on from time to time, I do not think that you will easily remove it, though you may lessen it and prevent it from being as bad as it otherwise would. If the patient avoid every thing which is likely to do him harm, and pays proper attention to his bowels, this object may be affected. Now and then the stomach is very much out of order, and an emetic may mitigate urgent symptoms; but it will not produce material benefit. I have tried iron, sulphate of quinine, arsenic, and every medicine that suggested itself to my own mind, or has been recommended by others, but it has been in vain. After a number of years this description of headache will sometimes cease of its own accord.

General Treatment of Phrenitis.—As to the general treatment of phrenitis, that is perfectly easy. In the first place you should have recourse to copious blood-letting, and my own experience leads me to think that bleeding in the arm is just as good as bleeding in the neck. It is not advisable to bleed from the temporal artery, because you have to put a bandage on the head afterwards, which occasions more or less augmentation of the heat, and the bandage itself is often very troublesome. Then with regard to opening the jugular vein, that sometimes causes so much agitation of a patient that it is not a very easy matter to accomplish it; but there is no difficulty in detracting blood from the arm. But notwithstanding all this, I am not aware that there is any particular advantage in taking blood from the head; if you make a large orifice in the arm, make the patient stand upright, and produce a strong impression: that will generally answer every purpose. Cold should be applied to the head, but blisters are dangerous things. A bladder of ice laid upon the head, or a stream of cold water allowed to run upon it, are both very serviceable. In a case of violent phrenitis, evaporating lotions are hardly sufficient, and it is better to apply ice, or a stream of cold water. The posture of the patient should be carefully attended to. The head should be raised as much as possible, and silence and darkness are indispensible. I need not say that active purging is likewise required, and you may give antimony, colchicum, or mercury. I certainly

would not give digitalis in such a case, for it is a narcotic that frequently produces irritation of the brain when exhibited for other affections, and not only so, but it is much less to be depended upon in inflammatory cases than other medicines: it will, moreover, frequently produce delirium or headache. Antimony is a very good remedy if you give it so as to keep the patient in a state of constant nausea; colchicum, likewise, is excellent, on account of its depressing the whole system, producing nausea, and purging the patient violently. But altogether, as I said when speaking of the treatment of inflammation in general, I should place the greatest reliance on mercury, and get the mouth sore as quickly as possible. Sinapisms to the feet may likewise be exceedingly useful; and after free bleeding, a blister applied to the nape of the neck may be advisable; and after a time, if the inflammation be not very violent, a blister may be applied to the forehead; but it is not till towards the close of the disease that I would recommend any blisters to be applied to the crown of the head. I need not say that the patient ought to be starved, and that rest should be strictly enjoined. If the disease have arisen from the cessation of another disease, we ought, if possible, to re-excite it. If it have arisen from the cessation of gout or rheumatism, we ought to apply sinapisms to the extremities, to re-excite them.

In chronic inflammatory headache the same treatment is required, but carried on, of course, with less vigour. It is astonishing what perseverance in bleeding is sometimes required in order to effect a cure in these cases; you must bleed every week or ten days, either from the arm, or by cupping, or by leeches. The application of cold, of blisters to the nape of the neck, and to the forehead, and likewise setons in the neighbourhood of the neck, are all useful. You will find the disease continually give way to the exhibition of mercury as soon as the mouth is tender. I have seen this in dozens—I might almost say hundreds of instances—bleeding did good to a certain extent only, but as soon as the mouth became sore, away the pain went. Low diet, and attention to the state of the bowels, I need not insist upon.

I must, however, mention that in some cases which have proved rebellious to starvation, the application of cold, setons, frequent bleedings in various ways, and ptyalism, long continued, I have seen the disease yield rapidly on taking away blood from a more distant part. I have seen several cases in which, on applying cupping-glasses no longer to the nape of the neck, but to the hypochondrium, and some say to the verge of the anus, the disease has rapidly given way. I have myself been surprised on some occasions to see the disease decline immediately when cupping was instituted on the abdomen.

You will find the same perseverance in bleeding frequently necessary when the phrenitis or inflammatory state of the head is not characterized by pain, but simply by giddiness. I have seen some cases of intense vertigo in which there was sufficient strength of body to bleed freely, ultimately give way to that measure. In instances where I could not make out any sympathy with the stomach and intestines, but where it appeared to be an inflammatory state, the chief symptom of which was vertigo, or where that was almost the only symptom except throbbing of the head, on motion, or taking stimuli, I have seen continued depletion effect a cure. If patients feel themselves worse for stimuli, and you find the pulse sufficiently strong, I would certainly bleed. I recollect a case of severe vertigo in a young man attended by no other symptom whatever; and as he was young and strong, I bled him to between twenty and thirty ounces with no relief whatever, but with no aggravation of the symptoms, and I was obliged to have recourse to this extensive bleeding several times before he was cured. He had been ill from this giddiness for many months, and used to roll about the room with it, but he recovered simply by repeated bleedings to this extent. It is just the same sort of case as chronic inflammatory headache, only that these symptoms arise from the particular part of the head which the inflammation has attacked. I had a case only the year before last in which this vertigo was acute. A young woman was suddenly seized with intense giddiness, but without any pain. There were some very odd symptoms about her. Her eyes were pushed far more forward in the orbits than in health, and every event appeared old to her—so that there was an extraordinary affection of the brain. If she put down a tea-cup, she fancied that it was years ago, and she could not get over this feeling. These were her symptoms; and as she was plethoric, and her pulse justified bleeding, she was twice depleted very copiously, and by that simple means, together with purging, she got completely well. There was no pain whatever in this affection.

It is, however, to be remembered that all these affections, whether there be an inflammatory state of the head, or inflammatory headache, or simple vertigo, may depend upon an opposite state of the brain. I have seen several cases of chronic pain of the head which have resisted all anti-inflammatory treatment, but which gave way very speedily to the exhibition of iron,

quinine, or other tonics, and to full diet. You can only judge of these things by observing, not only how long the case has existed, but that the pulse is feeble, and that stimulating the patient does not make him worse. If this be the case you may safely resort to an opposite mode of treatment, and I believe iron is the best remedy you can employ. In other cases it is well to apply cold, in the form of a shower-bath, which is a powerful tonic. This state appears to be a morbid sensibility without any great accumulation of blood, and certainly without any violent action of the brain. With respect to vertigo, I recollect seeing a gentleman last year who had a constant sensation as if he were going to fall forwards—a sense of plunging as he sat in the chair; he had no pain at all, but he had heat, and the throbbing sensation in his forehead was terrific. He was upwards of 60 years of age, but he had a florid complexion, and was a strong old gentleman. It seemed to me that the case required antiphlogistic treatment, and I recommended that it should be put in practice, and that his diet should be low. I may mention that he was a very excitable person; that although he was so old, he said he had not lost any of his vigour; that since he was 25 he had not experienced the least change; that in hot weather he experienced the strongest excitement. In general people are not so sensitive at that age, but the slightest effects of various agents were distinctly perceptible to him; in fact, such as would not have affected other individuals. Seeing all this, and that there was such extraordinary excitement within the head, I concluded that though he had no pain, yet the case was certainly of an inflammatory nature. Antiphlogistic measures were put in practice, but I understood without the least benefit. He was afterwards allowed meat, wine, and stimulants of all kinds, and I was told that he got perfectly well. Here was an instance of vertigo of an opposite kind. It was difficult for me to form an opinion, though I had paid great attention to these diseases, and I formed a wrong judgment. I thought antiphlogistic treatment would be best, and it is possible that the other mode might not have succeeded if anti-inflammatory treatment had not been put in practice first.

You will have inflammatory pain of the head of a nature to be benefitted rather by stimulants and tonics than by depletory measures, and you may have these partial symptoms of affection of the head, such as vertigo, which must be treated in the same way.

Now it is to be remembered, that after the acute disease you may have a state in which nourishment, and even opium, are the chief remedies. At the close of phrenitis, especially if you have evacuated well, there sometimes will be a continuation of delirium; and if you evacuate still more, you will kill the patient; and sometimes this state will come on without any previous active inflammation. In such a case as this opium is the proper medicine, and for the most part the patient's diet must be good; but of this I will speak hereafter, when I come to consider the next class of diseases of an inflammatory nature which occur within the head. It has been called *delirium tremens*; and as it has received a particular name, I will speak of it separately; but it is a state which will occur without any great tremor at the close of common inflammation of the brain.

HYDROCEPHALUS ACUTUS.

There is another instance of inflammation of the brain, which, from its causing, for the most part, great effusion, and this effusion having formerly been noticed more than any thing else, the disease goes not, or has not gone, by the name of inflammation of the head, but has received the peculiar appellation of *Hydrocephalus acutus*. Some, who have been more precise in their language, have chosen to say *hydrencephalus*; and some have called it *phrenitic-hydrocephalus*.

This is a disease seen, in the greater number of instances, in children; in fact, it particularly occurs in the phrenitis of children, but the phrenitis of adults is sometimes attended by a very copious effusion. When a child has inflammation within the head, it usually goes by the name of "hydrocephalus acutus," but in its essential character it is very much the same as the common phrenitis of adults.

Premonitory Symptoms. — It frequently comes on in children after premonitory symptoms—after heaviness of the head, dullness of the mind, and a disturbance of sleep; and the child too, frequently has frightful dreams, wakes screaming, and is found to be restless both up and in bed—to be exceedingly peevish in temper, and there is a continual knitting of the brows. I may mention that the last is a common symptom in inflammatory states of the head. The child, too, frequently is observed to walk insecurely—to totter a little, as if it experienced a certain degree of vertigo. Some say they have observed children, under these circumstances, have a great trick of putting their hands behind their head, and pulling the back of their neck. There is occasionally darting pain in the head, and of course there is feverishness. The body is hot, and the pulse is quick and exceedingly various. You will observe, too, that from the feverish-

ness the child picks his nose and lips; the nose and lips are dry, and this gives rise to a degree of itching, so that the child is continually picking its nose and lips. Of course there is thirst and loss of appetite, and frequently there is a fœtid breath. The stomach and bowels are disturbed; the tongue is white, yellow, or brown; nausea is experienced, and also vomiting and costiveness—though occasionally there is purging and griping. The fæces are observed to be white, and to have a sour smell; but, on the other hand, they are sometimes dark and very fœtid. The abdomen is frequently full, especially at the epigastrium, and there is frequently tenderness on pressure; but this is particularly noticed at the epigastrium and the right hypochondrium.

Now these premonitory symptoms may go off spontaneously, and if the practitioner attend to them he may remove them so that nothing follows. Whenever we see such symptoms as these, we must recollect that they may be easily followed by hydrocephalus, and it is our duty to attempt to remove them, which we may generally accomplish; but if we fail, and hydrocephalus does come on, we have, at any rate, done our duty. It is true that hydrocephalus might not have supervened, but it was impossible for us to tell that, and it is our business to do what we can to prevent it. These symptoms may last only a day or two, and then come on with increased severity; or they may last many weeks; and the continuation of these symptoms has been detailed by Dr. Yates, who terms them the premonitory symptoms of this disease. In fact, he directed the attention of the public to these circumstances, under the idea that the disease might be prevented.

When the disease, however, is formed, it has two stages; and it may occur without any premonitory symptoms at all. Not only may they vary in duration—from a day to a few weeks—but they may last only for an hour or two; and, indeed, they may not exist at all: the child may be seized in a moment.

Symptoms in the First Stage.—When the disease occurs, there is severe pain in the head—shooting through it; so that the child lays its head in its mother's lap, and is continually crying, "Oh, my head!" It is awakened, too, from sleep by this violent shooting pain in the head; the head is found to be very hot, and there is an intolerance of sound and light, and, from the sensibility of the retina, the pupil is very much contracted. From the extreme irritation, I presume, of the nerves, there is strabismus; but some ascribe this to a paralysis of certain nerves, so that some muscles get the ascendency over others; however, you will see it before there are any signs of paralysis—you will see it during the mere excitement of inflammation. Besides the squinting, there are convulsive spasmodic motions of other muscles, and frequently there is general convulsions. Sometimes there is at last, but sooner in some cases than in others, delirium; and the delirium may not be constant: in the first instance, it is not constant. The child is observed to turn its head continually about on the pillow, never to be at ease, and there is a peculiar motion of its arms; so that it saws the air with its hands, and tosses them over its head. Whenever you observe these symptoms, you may be sure that the disease is formed.

There is now violent pyrexia; the pulse is rapid and full; and Golis, a physician at Vienna, who has the care of an establishment for infants there, says that the abdomen sinks, and becomes flatter, and that this is a pathognomonic sign of the disease, so that if this occur, you may be certain as to the nature of the disease; but whether he is correct I cannot tell. There is, in this stage, costiveness; and the stools are usually very fœtid and of a very dark colour, something like tar. About this time, the abdomen (especially the epigastrium, or the right hypochondrium) is exceedingly tender, and the vomiting which occurred as a premonitory symptom is now perhaps very frequent. These symptoms, like the premonitory, may exist for various periods; but, of course, they cannot exist so long as the premonitory symptoms may. They may last only a few hours, or they may last a day or two; or they may be extended to seven days, but I believe they very seldom go beyond that.

Symptoms in the Second Stage.—After this, the second stage comes on; which is that of exhaustion. There is more or less blindness now, and the child is unable to discern one object from another; and perhaps it cannot perceive the light, which is now borne very well. There are no longer twitches, and the pupils are no longer contracted, but dilated; sound no longer produces disturbance, but appears not to be heard. There is a general insensibility, and the child, from being delirious and irritable, is now drowsy; and the convulsions come on with more intensity, as likewise does the squinting. The pulse is no longer quick, but weak and slow; and, in fact, an apoplectic state occurs. There is sometimes hemiplegia, or local paralysis of the limbs; and there is likewise paralysis of the eyes. Sometimes you will see the two stages marked very distinctly, but they certainly run into each other: you see one running gradually into the other, so that both may exist together in a limit-

ed degree; and this may last for three weeks, but it rarely, I believe, extends much longer. The first stage does not subside entirely, but there is a great diminution of it; and the second stage comes on, but is not fully formed. The first stage without the second, rarely extends beyond seven days; but when the second stage begins before the first has come to a close, the two may continue together for two or three weeks. Now and then the pulse is quick throughout the disease; and when the apoplectic state comes on, the pulse is as rapid as before, or very rapid.

Symptoms in the Third Stage.—It has been observed, that before death, after the second stage has been fully formed, there are again symptoms of excitement; so that some writers have divided the disease into three stages: but this, I believe, does not occur very frequently. Now and then, however, there is excitement, and the pulse, after it has been slow, will become quick; there will appear to be some sensibility of the eyes and ears; even the muscular powers which have been implicated will be restored partially, and likewise the mind; so that not only the delirium but even the stupor will pass off, and the child again knows its friends and parents. Some of these symptoms will occur without the others. Occasionally the mind will be restored to a certain extent, and the senses restored, and yet the pulse will continue low. Now and then the pulse will be rapid, and no other change occur. But now and then this excitement will occur before death—this restoration of the powers of the mind and the powers of volition in the muscles, will take place where great effusion is found after death, and where there is every reason to believe that effusion existed at the time that this restoration occurred. The common people term this "a lightening before death;" and you will observe in many diseases an apparent amendment just before the fatal event. But when this last change does occur, the pulse, for the most part, becomes very rapid; and for the most part, whatever restoration there may be, there is more or less stupor observed, and perhaps still convulsive actions.

The disease occasionally occurs in a moment, and when that is the case, from the idea of water being so prevalent among medical men, it has been called, by Dr. Golis, *wasserschlag*, or water-stroke. But it is to be remembered, that you see children die from this disease without effusion taking place; and on that account, the name of *arachnitis* would, I think, be much better than hydrocephalus. I believe I mentioned, when speaking of inflammation, that sometimes, in a moment, a child will have a rush of blood to the head—that it will breathe hard, and die; and afterwards, a great collection of blood may be found in all the vessels of the head.

The disease sometimes, when it terminates, leaves more or less paralysis; sometimes it will leave hemiplegia; and some patients have recovered with the loss of one arm or one leg.

LECTURES

ON

DISEASES OF THE EYE,

Delivered at the Birmingham Eye Infirmary,

BY RICHARD MIDDLEMORE, ESQ.

PURULENT OPHTHALMIA IN THE ADULT.

PURULENT ophthalmia, or inflammation of the conjunctiva producing a discharge of purulent fluid, may be conveniently considered, as it takes place in the adult and in the infant. We shall first consider it as it occurs in the adult.

The symptoms which indicate the commencement of this disease are, a slight tingling and stiffness of the lids, and an itching or smarting sensation at the corners of the eye, which induces the patient to rub it. Persons in this state will tell you that the eye feels hot and dry, and that the movements of the lids upon its surface occasion some uneasiness. This sensation of uneasiness will very soon be superseded by severe burning pain, and they will complain as if sand or particles of dust were beneath them: at the same time there will be a slight increase of vascularity, and a profuse flow of scalding tears, with some intolerance of light; the eyelids will be swollen, and their margins will be red and irritable; the inner surface of the inferior palpebra will generally be found in a highly injected state. The preceding set of symptoms is quickly succeeded by the following:—The pain is now of a severe and throbbing character, and is not always limited to the eye, but sometimes extends to the head and face, producing, if one eye only be inflamed, intense hemicrania and facial neuralgia: there is a sense of tension of the globe; the conjunctiva presents an almost uniformly red surface, and is raised in various degrees in different instances around the cornea; the eyelids are tumid, and their edges, and still more their angles, are extremely red and irritable; the patient cannot bear the smallest quantity of light; there is an abundant secretion of purulent fluid, which requires to be

frequently removed, as, if allowed to remain, and the lids are closed, it collects beneath and painfully distends them. This fluid is at the commencement of the inflammation very thin, and of a pale yellow colour, which frequently becomes heightened, and its consistence increased, until it is a thick straw-coloured fluid, and finally this secretion becomes blended with serous, sanious, or sanguineous fluids. You will generally find the degree of inflammation indicated by the colour and density of the discharge: it will be pale and thin, if the inflammation be slight, and more consistent, and of a deep yellow colour, if it be severe. You would apprehend mischief, independently of an examination of the inflamed eye, as soon as the discharge became blended with the thin fluids just mentioned. If the inflammation be not now checked it will spread to more important textures, and be indicated by the symptoms peculiar to its extent and complication: the cornea also will participate in the mischief; its brilliancy will be destroyed, and it will assume a pale, dingy ash colour, and will eventually slough or burst, and permit the escape of the contents of the globe, when the pain and other severe symptoms will usually subside; or it may happen that the membrane of the aqueous humour may remain entire, projecting as a pellucid tumor through the corneal aperture, and preventing the transit of the humours; or the lens may be prevented from escaping by the small size of the opening in the cornea, and thus give rise to a deceptive expectation on the part of the patient as to the preservation of his sight; for, on the destruction and separation of a portion of the opaque cornea, the light will pass through the humours, whose transparency has not been materially injured, and for a short time vision may be distinct; but this state will be of very brief duration, for, sooner or later, the humours must be discharged, if the opening in the cornea be considerable; or, if not, the discharge of the aqueous humour and consequent prolapse of the iris, combined with the opaque and ulcerated state of the cornea round the opening, and very probably closure of the pupil, will altogether prevent, or materially interfere with, vision. Such a patient may indeed recover a certain degree of sight, but it will only be sufficient to interfere with the vision of the opposite organ: it were better that collapse of the eye-ball be permitted to occur, so that an artificial eye may be worn; the deformity will be then diminished, and the obscurity of vision occasioned by possessing two eyes of very different degrees of visual perception prevented. If, however, the ulcer of the cornea be small, or, if extensive, superficial, it may, in the one case, be filled up by lymphatic deposition, and, in the other, replaced by an adventitious structure, and, in both instances, there will exist an extensive opacity, which in many cases cannot be removed; the pupil may, however, be drawn by natural efforts quite away from the opaque part of the cornea; or, if not, there will probably be space enough for the formation of an artificial pupil.

It may happen that the palpebral portion of the conjunctiva may alone be affected at the commencement: you will be apprised of this by the great tumefaction of the lids, (which are, in many instances, so much thickened and swollen as to protrude externally, giving rise to the most painful form of ectropium) the extreme vascularity of their mucous surface, and the absence of much redness of the eye-ball and extreme intolerance of light.

It is not necessary for me to detain you long by stating the kind and degree of constitutional symptoms you would meet with in such cases; they would vary with the peculiarities of your patient, the stage of the disease, and the severity of the local symptoms. Of course you would not expect a patient to be suffering from those occurrences immediately preliminary to sloughing of the cornea and suppuration of the eye-ball, without also experiencing considerable constitutional disturbance; there would be in such a case irritative fever and general derangement of the health, and you would bear this in mind in determining your means of cure, not forgetting, however, their cause, regarding, as of secondary importance, the constitutional affection resulting from such cause to which I have just alluded.

Now there is a mild form of this disease sometimes very prevalent among children, producing no important symptoms and requiring no active treatment; it would appear to be readily disseminated by the contact of matter from the eye of one child to that of another, aided by disordered health, a damp state of atmosphere, and want of cleanliness and good nursing; for if you will direct their parents not to allow the linen or sponge with which the diseased eye is bathed to be used for any other purpose, and enjoin the strictest cleanliness, and attend to the state of the bowels, you will generally banish it: it does not usually attack those children who are well nursed and whose constitutions are vigorous and robust.

Effects of Purulent Ophthalmia in the Adult.

The effects produced by the purulent ophthalmia of adults will be decided by the severity of the inflammation, the time at which it first engages medical attention, the mode in which it is treated, and the

existence of constitutional peculiarities or idiosyncracies. If your treatment be judicious, and the disease have only just commenced, you would expect to remove it entirely, without leaving behind any functional or structural mischief; but if, on the contrary, you were not called to such a case until the disease had advanced to the production of ophthalmitis, attended by active inflammatory chemosis, you would not, in many instances, be able to prevent some of its worst consequences, namely, sloughing of the cornea and suppuration and collapse of the eye-ball; if, however, by the employment of active remedies, you were capable of subduing the severe symptoms, you would expect the occurrence of a certain degree of opacity of the cornea; that is, admitting your ability to prevent the ulceration of the cornea (of which, in many instances, the opacity is a consequence) from extending through the whole of its layers. Should this latter occurrence take place, there may be adhesion of the iris to the edge of the ulcer (synechia anterior); or the iris may be drawn together where formerly the pupil existed, forming closed pupil (atresia iridis completa). If the chemosis be severe and long-continued, you will probably have to encounter a chronic state of ophthalmia, and afterwards a granular condition of the conjunctiva. Sometimes the pressure of the tumid palpebral and sclerotic conjunctiva upon each other produces ulceration of the points of contact, ending in permanent adhesion of those surfaces, unless you are careful to prevent this effect by frequently separating the lids when such mischief seems likely to occur; and even then you will generally have a cutaneous state of the conjunctiva, with a slight degree of ectropium: the tumescence and thickening of the conjunctiva may remain and produce ectropium, requiring the treatment adapted to the cure of that disease; or, lastly, the conjunctiva may be studded with small tumors (fungous excrescences), which may require excision with the scalpel; indeed many writers appear to imagine that pterygium is sometimes produced by this disease; but I am not prepared to accede to the accuracy of this opinion.

Another very frequent effect of this disease upon the palpebral conjunctiva is a vascular, tumid, and unequal state of its surface. But I shall not enter upon a minute statement of the pathological conditions of the palpebral conjunctiva, as excited by this disease; they are many and various, and not unfrequently leave behind a state of ectropium, and induce opacity and vascularity of the cornea, and, if allowed to continue, very often lead to the irreparable destruction of vision. This state of things was particularly remarked in that form of ophthalmia which has been rather vaguely termed Egyptian.

These are nearly all the modes in which this disease terminates that I am acquainted with, and you will learn from their variety and importance the necessity of promptly subduing those acute symptoms, the continuance of which is liable to be followed by effects so injurious, and, in many instances, so destructive, to vision.

Diagnosis.—Purulent ophthalmia has a certain degree of resemblance to catarrhal and to gonorrhœal inflammation of the conjunctiva. I have already entered pretty fully upon the means of distinguishing the former from purulent ophthalmia. Gonorrhœal ophthalmia may be distinguished from purulent by the nature of its cause, the great degree of chemosis which attends it, and also by the extreme tumefaction of the eye-lids. It has been said that the colour of the discharge will materially assist your diagnosis, and you will not certainly remark that thin pale appearance of the secretion at the commencement of acute gonorrhœal which is observed at the onset of purulent ophthalmia; but then it must be remembered that there are certain varieties, or, if you prefer it, certain degrees of gonorrhœal ophthalmia, the mildest of which are scarcely to be distinguished, as respects this quality of the discharge from the conjunctiva, from that accompanying the acute purulent inflammation of that membrane. Gonorrhœal, in short, is distinguished from purulent ophthalmia by its origin from gonorrhœal contagion, its greater degree of chemosis and tumefaction of the lids, the consistence of the discharge at the commencement and close of the disease being nearly the same; the extreme degree of deep-seated pain of the eye-ball and head, and by the destructive tendency of the disease. Purulent ophthalmia, as compared with gonorrhœal, is attended with a less degree of chemosis and palpebral swelling; there is less discharge, and also less deep-seated pain of the eye-ball, and seldom any great degree of hemicrania. The colour and consistence of the puriform secretion is variable in the different stages of the disease; it is more generally manageable by treatment, and, when contrasted with the results of gonorrhœal ophthalmia, it is much less frequently fatal to vision.

Prognosis.—If you are called to a case in which the chemosis is not very great, nor the pain intense and deep-seated, nor the transparency of the cornea much impaired, you may expect to preserve the eye with merely a slight and perhaps only a temporary impediment to vision; but if the pain be considerable, the cornea cloudy, and the chemosis great, you may apprehend serious injury to vision;—and if the

chemosis nearly concealed the cornea, which, as far as could be judged, was of a dull ashy colour—and if the tension of the eye-ball, and the sense of pain and throbbing, were severe and deep-seated—you would relinquish every hope of saving any useful degree of sight, and be prepared to expect the occurrence of sloughing of the cornea or suppuration of the eye-ball. Such are the chief circumstances which would determine the character of your prognosis, although many other events would very properly modify your opinion respecting the result of any case of this nature—such, for instance, as the state of the individual's health prior to the attack, his constitutional peculiarities, and his capacity to bear the necessary treatment.

Causes.—In reading the accounts of the Egyptian ophthalmia*, you will remark the great severity of its symptoms and the very destructive extent to which it frequently proceeded; but there are no circumstances connected with its origin, its symptoms, its mode of termination, or the treatment required for its cure, which render it probable that it differed in any essential particular from the purulent ophthalmia which we are now considering, in its severest form. There are, indeed, many circumstances connected with the soil, the atmosphere, and the physical and moral condition of the sufferers, which favoured its extension and increased its severity; but the same things exercise an important influence over every other form of disease; and I apprehend we ought not to consider mere degree of disease to alter its nature. Surely iritis, or conjunctivitis, are not otherwise than the maladies their names import, because they may chance to be unusually severe.

If you refer to those authors who appear to have paid the greatest attention to the Egyptian ophthalmia, and who, owing to their residence among the affected troops, had ample opportunities of observation, you will find that they either directly or indirectly admit the agency of many circumstances in producing, aggravating, or rendering susceptible of the disease. They do not contend that the unaided operation of contagion, and it alone, gave rise to the ophthalmia during any period of its most fatal prevalence, but, on the contrary, admit the assistance that cause derived from other agencies, and also that, in many cases, it appeared to originate where the existence of contagion was extremely doubtful, and, in some instances, apparently impossible. You will find that the earliest symptoms of the disease (as described by those who had the management of the diseased troops in Egypt and in various parts of England) were a sensation of sand beneath the lids, and a well-marked vascularity of the mucous lining of the lower lid; and if you will carefully peruse the observations of the medical attendants of the troops abroad and at home, you will be satisfied that the identity of the disease with which both were affected is most satisfactorily proved*.

The Egyptians are in the habit of tying a bandage over their eyes at bed-time, during the prevalence of this ophthalmia, with a view of preventing the ill effects arising from a damp state of the atmosphere, and possibly also to screen them from the hazard of contagion, which, from the occasional very great prevalence of this disease, is very generally incurred at such seasons; and this precaution is strongly recommended by some gentlemen who have very well described the Egyptian ophthalmia and its mode of treatment.

In order to decide the fact of the contagious or non-contagious nature of purulent ophthalmia, a gentleman named Machesy, who had resided with the troops in Egypt during the prevalence of that severe disease, applied a piece of linen well soaked in the secretion from the eyes of three patients who were suffering from this affection, and afterwards walked out a mile or two, a sirocco wind blowing in every direction. He reapplied the soaked linen on his return, and wore it during the night, occasionally moistening its surface and pressing it to the eyes, to ensure its contact with their mucous surface; but no severe inflammation followed†. Nothing satisfactory, however, is proved by an experiment of this kind.

I have known nurses affected with purulent ophthalmia from syringing the eyes of adult patients suffering from purulent ophthalmia; a portion of discharge from the eye of the latter having come in contact with that of the nurse. A similar accident has occasionally happened to medical students, and this occurrence has been observed by Mr. Macgregor and many others; and I have also known the discharge applied to the eye of a healthy individual, who was engaged in the per-

* See the third, fourth, and seventh volumes of the "Edinburgh Medical and Surgical Journal."—"An Account of an Ophthalmia which appeared in the second regiment of the Argyllshire Fencibles in 1802; with some Observations on the Egyptian Ophthalmia." By A. Edmonston, M.D.—"Attempt to investigate the Cause of the Egyptian Ophthalmia; with Observations on its Modes of Cure." By George Power.—"An Account of the Ophthalmia which has appeared in England since the return of the British army from Egypt." By J. Vetch, M.D.

* See, in addition to the authors I have previously referred to, some Observations by Mr. Macgregor, in the third vol. of "Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge."

† Edin. Med. and Surg. Journal, Oct. 1816, vol. xii.

formance of the same duty (syringing the purulent eye of a patient), without being succeeded by any inflammation: he has complained of smarting at the moment of contact, but it has soon subsided, and has not been followed by any other unpleasant sensation.

On the whole, my inferences would be these:—First, contagion alone will not, except in very rare instances, produce this form of purulent inflammation of the eye, but requires to be aided in its operation by many other causes; of which we may enumerate, constitutional susceptibility or aptitude, want of cleanliness, disordered health, exposure to a brilliant sun, or to the damp night air, or to dust, or peculiar conditions of the atmosphere—the dense moist atmosphere being most prejudicial. All or any of these circumstances will generally ensure the operation of contagion. Secondly, purulent ophthalmia may arise without the aid of contagion—as occurs in many instances of relapse, and in some of those cases in which one eye becomes affected as soon as the other has nearly recovered; and, finally, the disease has occurred to a ship's crew during their voyage, whose eyes were not affected at the time they commenced their voyage, nor until some time afterwards, and who had no communication with the men of any other vessel until the completion, or nearly the completion, of their voyage. Let me not forget to mention that many persons apply for relief who are suffering from purulent ophthalmia in its most severe and unequivocal form, and who are quite unconscious of having, for a long time previous to the occurrence of the inflammation, seen or associated with any one affected with a similar disease.

If you will read the statement of Mr. Peach, in the fourth volume of the Edinburgh Medical and Surgical Journal, you will find that those men suffered most severely from purulent ophthalmia whose health had been disordered by irregularity and intemperance, and who had been long exposed to the influence of a brilliant sun and the injurious agency of keen winds.

A damp dense condition of the atmosphere will not only act as a cause, but will also materially favour the extension and aggravate the symptoms of purulent ophthalmia; even admitting that it is excited by some other agent. Many patients experience the influence of such changes in the state of the weather most severely; and we have frequently opportunities of witnessing an exacerbation of the disease, when it was nearly removed, from no other cause than the changed condition of the atmosphere. Dr. Vetch relates a very remarkable fact in illustration of this: he says, "the disease had been disseminated at the Riding-Street barracks by the 54th regiment of foot, but had not produced a single instance of its violent form until the 24th of September, when, after a very heavy fall of rain during the night, *to which the men affected with the ophthalmia were more particularly exposed*, by being at the time under canvass, the whole number of patients, to the amount of thirty-four, were found in the morning with their eyes completely closed by the swelling of the palpebræ, attended with the excruciating pain, the purulency, and other symptoms of the disease, in its most alarming and inveterate form."

Treatment.—You should be guided in your treatment by the symptoms of each particular case: nor should you let any rule which may be laid down by authors, however eminent, supersede the exercise of your own judgment.

If the symptoms be severe, and the patient tolerably strong, bleed until the pain is relieved, the chemosis diminished, and the sense of tension and throbbing removed; and afterwards apply a quantity of leeches close to the tarsal margin of the lower eyelid. You will thus relieve the state of congestion or local vascular fulness which is usually present, and at the same time, remove that state of the system which would be likely to maintain or reproduce it, and thus prevent the distention of the blood-vessels, which, if long continued, generally destroys or much weakens their tonicity, and thus lays the foundation of those chronic diseases with which, after acute inflammation long continued or inefficiently treated, the eye is so liable to be affected; and also disposes that delicate organ to frequent relapses of acute inflammation, from causes totally inadequate to produce them if the eye be in a healthy and unimpaired state at the time of their application. Whilst upon this subject, let me not forget to mention that scarifications have been much recommended, particularly at an early stage, as being an excellent mode of relieving the vascular plenitude of that part in which the disease is first evinced, and from which it frequently extends. Dr. Edmonston says, "I am firmly persuaded, that if there be any means of arresting the progress of inflammation in that violent and destructive variety of ophthalmia (the purulent), it is scarification of the vessels on the globe of the eye itself; and when performed early, and duly repeated, I have *never* known it fail of success." When you reflect that this mode of relieving the inflamed organ in one of the most acute diseases to which the human eye is subject, is recommended almost to the total exclusion of general bleeding, you will not fail to recognize the author's enthusiastic fondness for a fa-

vourite remedy. Let me advise you not to employ scarifications unless the chemosis be considerable, however great may be the vascularity of the conjunctiva; for such a mode of practice will not only betray a blind reliance on an unimportant means of cure, and thus tempt you to be less attentive to more valuable means of relief, but also inflict much pain, and excite great irritation on the scarified surface. If, however, the chemosis be considerable, you would of course freely scarify the chemotic surface, not with the view of superseding general depletion by lessening vascular fulness, as stated by Dr. Edmonston, but with the intention of preventing sloughing of the cornea, suppuration of the eye-ball, and the many evil consequences upon the conjunctiva which have been previously mentioned.

You must keep the bowels well relaxed, suiting your medicine for this purpose to the general habit and other circumstances of your patient: pills composed of the blue pill and the compound extract of colocynth, with sometimes a small quantity of tartarized antimony, have proved very useful in my own practice.

With regard to local applications: generally speaking, the common alum wash, or goulard water made twice its usual strength, will answer the purpose; but it may be necessary to use remedies possessing more soothing qualities. There are surgeons who prefer the use of strong local stimuli at the commencement of the disease: a strong solution of the nitrate of silver, the tinctura opii, and the undiluted liquor plumbi acetatis, have had their respective advocates; and I have previously informed you, that Mr. Guthrie is in the habit of using a strong ointment, composed of the nitrate of silver mixed with lard, or the unguentum cetacei, in nearly every form of inflammation of the conjunctiva, attended with increased discharge from its surface, at the commencement and at almost every future stage of the disease; but I cannot speak favourably of any of these applications as early remedies, although they are undoubtedly extremely useful as soon as the acute symptoms are subdued, when the vessels of the eye remain enlarged, and the conjunctiva has a loose relaxed appearance. The early stimulant plan is certainly, to say the least, equivocal practice, and is also very painful and uncertain in its operation, and will occasionally disagree so much, that, by the time you have discovered its injurious tendency, it will be too late to prevent the mischief such a mode of practice has occasioned: you cannot, as Mr. Ware advised, discontinue the use of stimulating applications, and after having bled, purged, and lowered your patient, resume them again; the mistake will be fatal to your patient's vision, for the only opportunity of diminishing the extreme extent of inflammatory action by proper and efficient means, has passed away in the employment of irritating and injurious remedies: as, therefore, you cannot tell beforehand with certainty in which cases these harsh applications will be suitable, and those in which they will disagree, it would be improper to use them at hazard, while you possess, in antiphlogistic means, remedies whose powers have been ascertained, and may be always safely employed and trusted.

When the disease, having been acute, shall have been rendered much milder by the aid of antiphlogistic treatment, or shall have degenerated into a chronic state, or exist only in a very slight degree, it will be necessary to use local astringent and stimulant remedies; such as the zinc wash, or a solution of the nitrate of silver; and it will be adviseable to employ, at this season, some form of counter-irritation, such, for instance, as a blister at the nape of the neck, or behind each of the ears, recommending at the same time an avoidance of all means calculated to aggravate the malady, and particularly any undue exposure of the eyes to the influence of a cold moist atmosphere.

But if suppuration of the eye-ball and sloughing of the cornea have commenced, you must cease your antiphlogistic remedies. The powers of the system will now be fully required, and it will be your duty to support them. The management of suppuration of the eye-ball, and the treatment of sloughing of the cornea, have been so fully discussed in a former lecture, and will constitute such necessary objects of investigation at a future part of the course, that I shall not detain you, on the present occasion, by detailing the various curative means to which you should have recourse.

As to the dietetic part of the treatment there is little to be said: the state of the symptoms and the stage of the disease, conjoined with the patient's mode of living and his habit of body, will be the chief circumstances influencing your judgment as to the extent to which you may deem it prudent to reduce the quantity and lower the quality of his aliment, and also the time at which it may be necessary to increase and improve it. The acute stage will require the lowest scale of diet, somewhat more judiciously selected than ordinary; and the state of suppuration of the globe, and sloughing of the cornea, will frequently demand, always indeed where the vital powers are much depressed, the use of a nutritious and stimulating diet.

In conclusion, I would remind you that, in far the greater number of cases which you will be called upon to treat, the symptoms are so

little severe, that slight attention to the habits and diet of the patient, the administration of a few doses of purging medicine, the use of an astringent lotion, and the application of the ung. plumbi to the tarsal margins in an evening, will comprehend every measure which may be required for their cure.

AN ESSAY ON FEVER.

By Thomas Spence,

Assistant-Surgeon, 52d Regiment.

[Continued from page 384.]

Fevers are occasionally observed to gain insidiously a powerful hold upon the constitution, and are often scarcely suspected before considerable mischief is done: they are much more dangerous than when the symptoms are openly developed. The patient usually, for some time before, feels languid and indisposed, the temper is irritable, and appetite indifferent; the bowels generally relaxed; the tongue foul in the centre, and red at the tip and edges. In this state, very slight causes are sufficient to remove the mask, and fever is excited. Several cases of this description are fresh in my memory; one, however, will be sufficient for the purpose of illustration. A delicate lad was admitted into the hospital for gonorrhœa. He did not at the time make any complaint of general indisposition. A small dose of copaibæ was prescribed, which purged him very violently, and the following morning I was struck with an alarming appearance of listlessness and stupor. He confessed himself to be labouring under pain in the abdomen, which ultimately I found he had been in a less degree long affected with. The pulse was small, quick, and soft; the skin harsh and dry, and the tongue very red. Judging, from these circumstances, that inflammation of the mucous membrane of the small intestines was the pathological cause of the fever, leeches, with the warm-bath and calomel, were employed; but the disease became established of the continued type, the pulse being generally about 120, small and soft; the skin much heated and dry; the tongue red, shining, and parched, with extreme emaciation and debility; the cerebral functions unimpaired. Small doses of calomel and antimony were administered, but could not be persevered with, in consequence of swelling of the tonsils and sore throat. Thus the medical means were reduced to a little castor oil each morning, with strict attention to the general management. The fever, however, continued without the slightest intermission till the twenty-fourth day, when the tongue became moist, the pulse less quick, and he seemed much better; which improvement continued to the 28th, when, on visiting him early in the morning, I perceived great anxiety of countenance, the pulse quick, and the debility much increased. This, at the time, was inexplicable, but, in an hour afterwards, he passed an evacuation consisting entirely of coagulated blood, which was repeated several times in the course of the day, until he lost upwards of three pounds of blood, and was reduced to the lowest extreme of existence. Under this emergency, large doses of opium, with anodyne suppositories, were administered; whereby the involuntary evacuations were checked and sleep induced, from which he always awakened refreshed and disposed to take nourishment. From this period he gradually improved, the recovery only being retarded by collections of matter in various parts of the body. In reviewing this case, we cannot help remarking the extent to which remedial agents were limited: general bleeding was contra-indicated by the constitution of the man, the inflamed state of the alimentary canal precluded the use of emetics, and mercury was necessarily withdrawn in consequence of the swelling of the tonsils and fauces. There was really nothing to be done but to manage the patient generally during the continuation of the fever, to watch for and support him under the operation of the crisis, and then gradually to conduct him through convalescence.

As inflammation of the bowels is seen to render a common fever continued, so inflammation of the mucous membrane of the bronchial tubes renders a continued fever typhus. When it takes place, which it may do, either at the commencement or during the progress of fever, the tongue becomes brown, furred, and dry; the teeth and lips are covered with sordes; the countenance of a livid or sallow colour; the eye glazed, and without expression; the functions of the brain disturbed, the delirium consisting of a low muttering

of incoherent sentences; the vital powers become sunk; the patient lies constantly on his back; the pulse is small, soft, and quick, being seldom less than 120; the skin harsh and dry, and the urine scanty and high coloured; the fæces generally dark. These symptoms being continued some days, are succeeded by a train of circumstances the existence of which renders the prognosis almost hopeless: they are, relaxation of the sphincters, subsultus tendinum, picking of the bed-clothes, and the mucous rattle. This combination of evil symptoms has generally passed under the name of putrid, typhus, low, or jail-fever. They are supposed to invest the disease with extraordinary powers, and render the person labouring under them capable of contaminating others. In this particular, as well as most others, it would be well if medical men would confine themselves to facts which, to speak legally, they know of their own knowledge; then, indeed, we might hope to be rid of the odious establishment yeleped Quarantine; then would a serious interruption to our trade be removed, and a considerable expense to the public saved; but what is of more consequence still, we should no longer hear of the mother deserting her sucking child, nor of the infected being turned into a pig-stye, or allowed to die by the road-side. This is no over-drawn picture of the evils resulting from a belief in the doctrine of contagion; instances too many have occurred in this country (Ireland) within these few months. Adhering to the principle of speaking only from personal observation, I can most confidently state that I have never seen fever propagate itself by contagion. I can conceive that if an individual be confined to bed in a close room, where there is no ventilation, without strict cleanliness, let him be labouring under whatever disease he may, such a state of malaria will be produced that his symptoms will assume this particular character, and any person who may be long exposed thereto shall in like manner be infected. This would never be the case, I am convinced, where cleanliness and ventilation were maintained; neither have persons on being moved from the infection been found to propagate the distemper, so far as I have observed.

The treatment of this stage of fever is very simple, and being conducted upon principles having reference both to physiology and pathology, will be successful in a large majority of cases. As this most commonly supervenes upon the type which has been previously described, it will here only be necessary to allude to the specific condition under consideration: in addition to other local derangement we have a mechanical obstruction to the action of the atmospheric air upon the blood in the lungs, and consequently a quantity of carbon is retained in the circulation. The measures are evident, and the most important is to encourage or promote expectoration, whereby the glutinous secretion forming the impediment is removed. For this purpose a combination of ipecacuanha and squills, in doses of two or three grains each, may be administered every three or four hours. If the patient cough pretty strongly, it may be considered a very favourable symptom, as it assists powerfully in relieving the air-passages. A blister to the throat or nape of the neck is generally of service. A free circulation of pure air cannot be too strongly insisted upon, the surface of the body at the same time being preserved from cold. Small doses of calomel and castor oil should be given occasionally, for the purpose of gently acting upon the primæ viæ. A warm bath has often a very beneficial influence; it tranquillizes and produces sleep. Should the exhaustion be too great for this measure, the body should be sponged frequently in the day with tepid water and vinegar. The head should invariably be shaved, and kept cool by cloths dipped in an evaporating fluid: the thirst may be allayed by acidulated drinks, or by saline effervescing draughts. Stimuli I look upon as worse than useless: they always fail to give strength, and increase the inflammatory action: to a mild unirritating diet, however, there is no objection, and good jelly or broth may be given with advantage. It is in this stage of fever that an intelligent and careful nurse is invaluable, as the patient requires incessant watching and the most delicate care. Bleeding from the arm I have generally avoided after these symptoms have manifested themselves, but frequently with benefit have applied leeches to the head or seat of pain.

The typhoid form of fever has, within my observation, very frequently become remittent; when the tongue, instead of being constantly dry and

brown, is, at certain periods, perfectly moist; the skin covered by profuse perspiration, the delirium ceases, and the patient is apyrectic. This remission, however, is of short duration, for soon the fiend resumes his power; again the mouth is parched, the skin dry and hot, and the delirium returns. To explain the cause of this change, is, I confess, far beyond my capacity; but, to illustrate the position, I will relate a case which occurred to me a little time ago. A soldier, who had been indisposed for some time, was admitted into the hospital with continued fever, in which very considerable inflammation of the mucous membrane of the small intestines was manifest. He was treated generally according to the principles here described, but the progress of the disease was uninterrupted, and the bronchial affection having set in, typhoid symptoms became established, until the night of the seventh day, when, visiting him about twelve o'clock, I found him in a complete state of collapse, no pulse at the wrist, the extremities cold, and he had passed a copious evacuation involuntarily. By the immediate administration of stimuli, with the application of heated bottles to the extremities, he rallied a little; the pulse returned in the right arm, and he became tolerably sensible. I then gave him five grains of the sulphate of quinine and eight of the carbonate of ammonia, which produced considerable reaction, attended with a state of tranquillity and succeeded by profuse perspiration. This encouraged me to repeat the medicine, and during the day he seemed much better, but had an exacerbation of fever from seven o'clock till ten, which was followed again by perspirations; the stools were still passed involuntarily, and the exhaustion was very considerable; the tongue, except during the remissions (which occurred regularly twice a day), was black and dry. At last, the voice having become weak and almost inarticulate, the eyes glazed, and the delirium constant, on the eleventh day, exhausted, he expired. The examination of the body exhibited appearances corroborative of what I have before asserted; the mucous coat of the ileum being highly injected with several ulcerations, and the inner surface of the trachea and bronchæ changed from a white to nearly a black colour.

[To be continued.]

SELF-SUPPORTING DISPENSARIES.

To the Editor of the Medical Gazette.

Southam, Warwickshire, Nov, 18, 1832.

SIR,

WHOEVER may have been the author of the leading article in the Medical Gazette for September 22. on self-supporting, charitable, and parochial dispensaries, deserves my acknowledgements, and I beg to make them to him through you.

I must confess I have long thought the medical press tardy in their notice of my plan, as well as of the principles I have so long advocated; and which, at no inconsiderable sacrifice of time and money, I have endeavoured to bring into practice.

I have lately been requested by some of the governors of two County Hospitals to aid them in a code of laws which should combine the self-supporting dispensary with the present hospital system.

The inclosed letter has been the result: the matters to which it relates so nearly concern the honour and interests of the medical profession, that I thought it proper to submit it to them for examination, before I finally conclude on sending it to the Council, for whom it is ultimately intended: perhaps your pages are well calculated for such a purpose.

I expect that a desirable medical reform will soon follow from the general adoption of my plan. Hospitals will cease to be so exclusively the road to profitable and monopolizing practice as they have hitherto been. The junior members of the profession will procure much practical knowledge, and some profitable reward, when they first begin the world, and not have to purchase a parish practice, or canvass for permission to work hard at an honorary dispensary for nothing, as they have hitherto done.

Farming the sick poor of parishes will be discontinued; the aggregate of parish payments, and the subscription from the free members' fund, will afford a higher rate of payment than can ever be obtained from the same sources, by jobbing with overseers for parishes, or writing bills for day labourers, however familiarly and ingeniously the "craft

may be followed," and protected by the "custom of the trade."

There are many other advantages likely to attend the more general and complete application of the system—both to the science, and payment of time and knowledge in the profession. The retail druggist may complain, but the physicians, surgeons, and apothecaries, will be rewarded better by the higher classes of society when they have changed the present false and unskilful position in which they now stand to the lower classes.

Nearly thirty years ago, Mr. Editor, there was a discussion in the Gentleman's Magazine on the best mode of forming a circulating country library. It appeared every town wanted a library, but few knew how to set about forming one. Rules were soon supplied, and the rising generation appear intuitively to have caught a knowledge of the advantages and disadvantages of each particular plan, for the best are not without some inconveniences. Now cannot something be done in the same good humoured way with regard to the constitution of dispensaries? I think so, and shall be truly happy if I have been in any way a useful pioneer in amending so important a part of the machinery of common life.

I have the honour to remain, sir,
Your humble servant,
H. L. Smith.

On the Constitution of Infirmaries.

My Lords and Gentlemen,—I have for many years paid considerable attention to the formation of infirmaries, as well as to the history and causes of poverty amongst the labouring classes, as they have for upwards of twenty years unfolded themselves in this neighbourhood, particularly in connexion with that subject which to a surgeon may be considered a natural, fair, and appropriate field of inquiry, viz. their provision for sickness, and the ultimate effect which our public charities, and parochial arrangements, produce on their feelings and conduct. On hearing, therefore, that you are about to revise the laws and regulations of the ——— Infirmary, I am induced, with the greatest respect, to submit to your consideration the following not unseasonable observations.

The cause of suffering humanity amongst the poor in every shape is one of great interest and importance to those whose wealth, rank, and influence enable them to exercise a portion of the *governing power*. It is the admitted duty of all, who have leisure for thought and deliberation, to exercise these faculties as talents for the benefit of others who have not time to think and contrive for themselves.

In the establishment of clothing societies, the allotment of garden ground to cottagers, and the admirable application of life annuity calculations to clubs, the resident gentry of this country have in many places within the last few years manifested a sincere and commendable desire to improve their condition, and, consequently, to elevate the character of the working people in their respective parishes, to redeem them from extreme wretchedness, and from practical slavery, by enabling them to work more for themselves, and less by the round.

Still much remains to be done, in mere justice, as a return for the enjoyments we derive from their labour, and very much, indeed, before the divine principles of christianity can be said to be duly acted upon even in Great Britain.

The supply of food and raiment, fuel, and lodging, which the cottage-garden system, in conjunction with clothing societies, shoe, and coal clubs afford—though of the first necessity, is not all that is comprehended in the command for providing "for our own household," a command which, to neglect, is said on the highest authority, to evince conduct worse than that of the infidel. Nursing, and protection from a ruinous expense in sickness, and an income for maintenance—both then, and in old age, are necessary for those who look forward to partake of the common lot; and it would buoy up to generosity a manly spirit in health, and allay the feverish anxiety of sickness, were a better system introduced for attending the working people generally at such distressing times, *at their own homes;* their hearts are then opened, and social unions, on the principles of life-annuities, would become more popular: they would be trained for them, and would understand how a small monthly contribution could secure an income for declining years. How hard it is that industrious honest men in

their old age should be driven out to work in the cold and wet, because four or five comparatively rich persons in a parish cannot be found to take the management of such institutions. No man who insures his life, or his house from fire, can be ignorant of the power of many to do that for one which he cannot do for himself.

Such societies, such systems, are necessary before the working classes can find the way which tends to a state of independence; a safe, progressive, rational, and I hope some time national mode, of emancipating themselves from the feudal spirit of our parish law.

They are now constrained, however large their gardens, decent their clothing, and deeply stamped with English liberty their hearts may be, to form an alliance, and to renew, on every trivial case of sickness in their families, their connexion with the overseer, through the parish doctor; and *if it is really desirable* to recover them from their mean state of dependence, and wean them from their accustomed patrimony—parish pay and the workhouse—privileges which, in their simplicity, they mistake for blessings; if we are to do by them in this particular as we would be done by, and as we do by our own children, we should not stop when we had taught them to read and write, but endeavour to make them provident and reflecting beings. The means that invite attention to these matters deserve consideration, for it becomes education for the people in its best practical sense.

Institutions, then, must be generally established that shall address themselves to all the feelings and affections of their nature—institutions that shall more immediately tend to advance their interests, supply their wants, and insure them more kind attention than paupers can receive from their parish—than a slave can expect from a rack-renter, who, instead of purchasing him as an African for 60 or 80*l.* would give as much to be rid of him.

Large bodies are at all times moved with difficulty from their first position; and it is only when important changes in the laws of public charities are contemplated, that the governors, and other influential persons, can entertain principles which, however sound, moral, and religious, may require an admission of past error, and involve new combinations — principles which shew that charity is something more than almsgiving, or ticket-begging, and that as evidenced in many of its present most popular forms, it does more harm than good; and yet these admissions must be made, and our present mode of assisting the poor changed for their own sakes, or the charitable will give until they have nothing left to give, and all will become confounded by the progress of the monster, pauperism, (with its attendant evils —improvidence and profligacy) which we invite, foster, and feed, instead of strangling in his birth.

It will presently appear, that, by means of a differently constituted provincial hospital, acting in union with a comprehensive dispensary system, which shall effectively and affectionately embrace the working population of districts of parishes, that principle of combination peculiar to our nature as social beings, now too frequently an abused power, will be directed to its proper objects throughout the whole country, and union will cease to be applied to those purposes which may prove injurious, as combinations against masters have hitherto been, without being of real use to the parties combining.

Hundreds of thousands of intelligent labourers and mechanics have, for many years, been made the tools of crafty and designing publicans and agitators; who will be dislocated from their position, profits, and honours, when the social principles of Christianity are thoroughly acted upon in the country, and when all that is noble, generous, and good, will be concentrated in a system of social harmony, to promote the interests of the industrious many who would fain enlist themselves under other rulers than those who assume to govern, but, in truth, tyrannize over them.

How many young persons are daily sent into the world, trained by our infant national or dissenting schools, with excellent natural dispositions—industrious, humble, kind, virtuous — the bright promise of England's future strength—who, through the combined influence of contact with a debased and profligate neighbourhood, and the want of notice and encouragement from their superiors, in some thoughtless moment of youthful folly lose their character before they can rightly estimate its value, and confined, by its loss and the poor-laws, to one parish, have sunk

down in the end to be the burden and nuisance of society.

Hospitals and dispensaries may be made to draw a line of separation between the comparatively provident and improvident; and whilst they provide better attendance for the most abandoned, they may extend their healing influence to the cottage as easily as to the ward of the hospital, and permanently unite the physical strength with the moral worth of each neighbourhood. To carry these views into practice, it appears to me that the in-patient department of your and every other infirmary and hospital, should for the future be separated from the out-patient department; and the latter divided and extended throughout the country, or only bounded in its operations by invading the province of another hospital and its tributary dispensaries.

The patients to the hospital should be more frequently sent by the dispensary surgeons; by which means, an hospital will secure such occult, difficult, and protracted cases, as well as those requiring surgical operations, that are now to be found neglected in every part of the kingdom. It is notorious that many hospitals are half filled with patients sent by parish officers, or well-meaning governors; which patients are not proper objects of admission—or not so much so as others who are excluded: invariable discrimination in the recommendation of patients cannot be expected by gentlemen out of the profession.

There should be a separation in the wards of the hospital: the class of free subscribers to the dispensary (even in the hospital) should be separated from the parish paupers. The colouring of the walls of the ward would form nearly all the positive distinction in the treatment of the patients.

Every market-town and village in the county, having two or three medical men, and a district of country containing eight or ten thousand inhabitants (the more the better), and four or five persons to constitute a local or branch committee, in connexion with the hospital committee, should forthwith establish a self-supporting charitable and parochial dispensary.

The funds for its support are derived from the very small weekly contributions of industrious labourers—from charitable subscriptions, and parish payments in proportion to their population, being the sums they now pay to medical men for "farming their poor;" which jobbing it would for the future do away with.

For the details of such institutions, and the good they have done, however imperfectly they have been permitted to be established, I must respectfully refer to the Reports from Coventry, Birmingham, Derby, Burton, Wellesborne, &c.

Every ten thousand inhabitants would be able to maintain a self-supporting charitable and parochial dispensary; and each of the provincial and county hospitals in the kingdom would have tributary to them from thirty to fifty dispensaries. If each of these dispensaries subscribed for four or six in-patients per annum, there would be a compensation made for the source of income they now derive from parish subscriptions, and which, in some cases, would be discontinued.

The secretary's accounts for every self-supporting charitable and parochial dispensary ought to be settled monthly, or at least quarterly. The medical reports, containing the population of the district embraced by the dispensary—the number of free, charitable, and parochial members respectively applying for relief—the diseases of each class—the age, sex, &c.—with a meteorological journal, should be presented monthly to the hospital, and transmitted, when embodied, to the Secretary of State's office, to a Central Board of Health, or to a council appointed by the Colleges of Physicians and Surgeons in London. These aggregate reports would, in a short time, become valuable materials for statistical tables and information: the actuaries at public offices require such data.

There are many other suggestions and arrangements that would follow from bringing something like a system or method into practice throughout the country, where, from the want of it, the experience and practical knowledge of ages is continually superseded by some ingenious theory or another. An epitome of the history of medical science, from the time it deserved that name to the present time, will be found in the history of cholera since its introduction into this country; from the certain specific remedy, the oleum cajeputi, of which we now hear nothing,

to the single drop of spirits of camphor, transfusion, or gallons of cold water, of which we hear so much.

Regularly digested statistical reports would become general. They can only be given by an institution such as I recommend. A certain proportion of the whole population, sick or well, would be always before the medical officers—perhaps one-half, including the free members and paupers. The public require this information; the government would be enabled to exercise with more discretion their paternal duties in cases of extraordinary fluctuations as to food, work, or the public health. The profession would be more recognized and more trusted to by the governing powers; representation in the legislature would probably follow; and a long life of useful public service would not be (as it has hitherto been) neglected, unknown, or dishonoured, in the medical profession more than any other.

* * * * * *

I have the honour to remain,
My Lords and Gentlemen,
Your obedient humble servant,
H. L. Smith.

PHLEGMASIA DOLENS.

To the Editor of the Medical Gazette.

Sir,

Should you consider the accompanying case of phlegmasia dolens, successfully treated by mercury, of any importance, I will thank you to give it a place in your useful journal.

The researches of Drs. Davis and Lee, and MM. Bouillaud and Velpeau, have shewn that phlebitis, if not the cause, is often the associate of phlegmasia dolens.

The now well-known effects of mercury, in arresting and controlling the morbid action of the capillary vessels, led me to believe that the judicious employment of that medicine might possibly prove as strikingly remedial in phlebitis as in other inflammatory affections. I therefore determined to embrace the earliest opportunity of putting this opinion to the test of experience. The following case is the result of the first trial of the remedy; and, as far as an isolated example can support any particular mode of treatment, it appears likely to become eminently beneficial. Though the case here narrated was certainly a severe specimen of the disease, it was cured in a third of the usual time; and as no other means, either general or local, were had recourse to, there can be no error in ascribing the benefit obtained to the mercurial action.—I remain, sir,

Your obedient servant,
Thos. Slater,
F.L.S. M.R.C.S. &c.

Poole, Dec. 14, 1832.

Mrs. Maybee, a pale delicate woman, 22 years of age, was delivered, on Thursday, the 18th of April, of twins, being her first confinement. Two days after her labour, she complained of pain at the back and upper part of the left hip, and also in the groin, with tenderness of those parts. On the 21st, great pain was experienced in the calf of the leg. The pain now (May 4th) extends to the ankle, with generally increased sensibility on pressure of the whole limb, and tenderness in a marked degree in the groin and in the course of the femoral vessels; that part of the thigh below the point at which the vessels perforate the tendon of the triceps is less tender; in the ham the soreness is very considerable. The inguinal glands do not appear to be enlarged. The entire extremity is of the usual characteristic whiteness, hotter than natural, and œdematous, especially about the foot; there is also great muscular debility. The pain has been so violent that the patient has had but little sleep for many nights previous to the last, when, by the use of an opiate, some rest was procured. Pulse 120; tongue moderately clean. The lochial discharge is less than usual. The milk is secreted sparingly. The bowels being constipated, some castor-oil was directed, and afterwards five grains of the blue pill, with a quarter of a grain of opium, were ordered to be taken every four hours.

May 8th.—The swelling, both of the thigh and ham, is considerably diminished, but below the knee it remains much the same. The tenderness is not so great, and the limb is moved with less suffering. Gums slightly sore.

Continue the pills.

10th.—Since the last report the disease has attacked the other leg, but in a mild form. The swelling in the left

leg does not now extend above the knee, and there is but little tenderness in the course of the femoral vessels. The mouth remains sore.

15th.—The right leg and thigh have been a good deal swollen, but the pain and tenderness much less than were experienced at any time in the left. The patient can move freely in bed, and without much uneasiness.

18th.—The complaint in the limb last attacked is rapidly giving way; there is now but little swelling above the knee, or soreness in the course of the vessels. There has been no enlargement of the lymphatic glands on either side. The patient complains of her mouth, which has been kept tender by the continued use of the pills.

22d.—No vestige of the disease remains in the left lower extremity (the one first attacked); the right is slightly swollen about the foot and ankle, but quite free from pain. The patient is stronger and feels better than could have been expected after so severe a disease.

ANALYSES & NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Dr. Hope's Morbid Anatomy. Part I. *Diseases of the Respiratory Apparatus.* 1833.

It is a great mistake—as it appears to us—to assert, as many constantly do, that morbid anatomy does not meet with its due share of attention in this country. Not a year passes in which some contributions to this branch of knowledge are not presented to the public; and the splendid works of Hooper and Bright, and Sir A. Cooper, which have issued from the press at no distant period, are not less honourable to science than creditable to the arts. Morbid anatomy, indeed, is regarded in the present day as of paramount importance, and our apprehension with regard to the rising generation of practitioners is, lest they be led to attach too much, rather than too little weight to it; lest, in dwelling upon its excellence, they limit their view to its contemplation, forgetting that though extremely useful to recognize in the living, and describe, paint, and preserve from the dead, the various organic changes to which the body is subject, it is yet more satisfactory to the patient, and creditable to the practitioner, to know how to relieve suffering, arrest decay, and prevent those changes from occurring which, when present, the morbid anatomist is much more frequently able to indicate than to cure. The more intimately acquainted any one is with morbid anatomy, *cæteris paribus*, the more likely is he to direct his practice to a rational end; but the condition (namely, that he be in other things alike) is to be kept in remembrance; and if he has devoted his mind with too engrossing a study to the investigation of changes of structure, then the probability is, that though in organic diseases he may be more skilful in diagnosis, and though the indications which he attempts to fulfil may in such cases be more in conformity with the actual condition of his patient, yet in affording relief in the majority of complaints, will he be far behind him who is merely an attentive and judicious observer of symptoms, and of the effects of remedies. Those acquainted with the profession in London could have had no difficulty ten years ago in fixing upon two great rivals; one of whom founded his reputation on the basis of anatomy, in which, more especially as connected with disease, he took the lead over all his contemporaries: his skill in detecting disease was not less remarkable than the felicitous manner in which he conveyed to the mind of the patient or his friends a satisfactory idea upon the subject, and a conviction that they were in the hands of one who thoroughly understood their complaint. The other trusted less to pathological minutiæ, and more to the skill which results from a constant observance of the connexion between symptoms and remedies, studying the body and the mind of his patient, as influenced in their functions by disease, and as controlled by external agents; and thus acquiring a knowledge, less curious, it may be, as to the morbid changes which disease produces, but far more extensive as to the power and adaptation of remedies; commanding the confidence of his patients on a principle which comes home to all—the art of affording them relief. We do not mean to say that the former was deficient in his power of fulfilling indications, nor that the latter is defective in

a knowledge of morbid anatomy, but we have chosen the parallel as illustrating two distinct modes of contemplating disease, as adopted by eminent men of our own times, each conspicuously successful in his professional career.

From this digression we turn to Dr. Hope's *brochure*, and we apply our remarks in this way: as a knowledge of morbid anatomy is necessary to the accomplished practitioner, and as the time heretofore unavoidably spent in its acquisition is apt to interfere too much with other departments of even greater importance, so every work which tends to lessen the time and labour of the study must be useful, and more useful the easier it is of access. The great objection to most of such undertakings is, that they are either too expensive to be within general reach, or so badly executed as to be dear at any price. The plates before us certainly do not at all equal some of the former class which we could name, neither do they come in any degree within the description of the latter. They correspond in size to the "Cyclopædia of Practical Medicine," to which the work would seem to be intended as a kind of companion, and a very useful companion it is likely to prove. The delineations are accompanied by letter-press, containing succinct descriptions of the morbid appearances represented, and having references to the work of Andral. In expressing our opinion thus favourably to the undertaking, we must take leave to point out what we think imperfections in the plates, and which might easily be remedied in those which are to come. In the first place the colouring is too high; and although this objection will be lessened by the fading which will no doubt occur, still it is not the less conspicuous at present. There is a brightness about them with which the eye is not familiar even in recent parts, and which it therefore feels to be exaggerated. Again, we think too many figures are introduced in each plate: this dazzles and distracts, gives them a patchy appearance, and takes rather from the effect; and, not to multiply our criticisms, we disapprove very much of cutting portions of diseased organs into squares, and other regular shapes; it gives them too much the appearance of specimens of minerals—of variegated marbles, for example. Had the work been completed, we should have expressed ourselves less strongly on these little imperfections, because it would then have been too late to expect the improvement of any defect; and we should have dwelt more upon what really deserves praise, viz. the clearness of the delineations, the great care evidently taken to make them accurate, the perspicuity of the descriptions, and the moderation of the price, all of which are good, and we trust need not the spur of criticism to cause their being continued; but they will appear to still more advantage with the few amendments we have ventured to suggest.

MEDICAL GAZETTE.

Saturday, December 29, 1832.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

A CONFIDENTIAL COMMUNICATION.

"Shall we *now* learn who is in reality the mean fabricator of the MOCK LANCET,—the lying and infamous emanation of the BATS? Yes, we shall discover and trace the base reptile through all his secret, subterranean, winding recesses. Ay! we repeat; the creature shall be dragged forth and crushed, for our heel is already on the serpent's head."—*Lancet, Dec.* 22, 1832.

THERE cannot be a greater compliment to any anonymous writer than the manifestation of an intense curiosity to know who he is: we therefore feel greatly flattered by the extreme anxiety displayed by our much-respected contemporary, in an article from which the above is a short quotation, to discover the author of our original prospectus, as well as of several other papers which have appeared in this journal. That he should not yet have forgotten the sketch of his moral qualifications which appeared above five years ago, is a pretty satisfactory proof of the fidelity of the likeness, and of the power to aim his thrusts at the most vulnerable parts, possessed by the "mean, cowardly, dark, malignant, secret, literary assassin," (as our facetious friend entitles him,) by whom they were inflicted. Our worthy

fellow-labourer in the paths of science adopts the old expedient of naming one suspected person, in hopes, we presume, that he will either plead guilty or not guilty to the moral murder of the innocent and interesting victim; but as the gentleman alluded to seems disposed now, as we believe on former occasions, to be contumacious, and as we, on the contrary, are the best-natured and most communicative persons in the world, and as, besides, these holiday times are ill suited for regular business, we have a great mind to set graver matters aside, for the pleasure of telling our contemporary — confidentially, of course —*who* really does write our leading articles; who it is that has the audacity to bandy words with the Lancet's spoilt child and his immaculate patron. Now if he will but promise his constituents—we beg his pardon—his readers, to make no dishonest use of our confidence, we may hereafter be induced to speak more plainly; but till we have a "pledge," (which of course he is ready to tender) we must confine ourselves to a few brief sentences—true, indeed, but dark and mysterious—lest those with whom we are not on the same friendly terms should also penetrate our mystery. Be it known, then, that the effusions which have so nearly driven our contemporary into phrenzy, were written—by no one: no man—"nor woman neither" — can claim them as their own; and although we doubt whether, as above surmised, any of them belong to the "serpent" tribe, yet it is pretty clear that the "creatures" can sting. The expressions—all but maniacal expressions—of hatred, such as are used towards his supposed tormentors, are never wrung from any, but by suffering which amounts to torture: they come from the heart—the very heart, and are involuntary tributes to our power: they are the agonies of a demented outcast, levelled with the dust by the mere force of opinion, and so sensitive and sore at every point of his *morale*, that we can at at any time set him all on fire, and fret him into madness by a word. We will further declare, for his gratification, that on no two occasions, when he has been goaded to more than usual ferocity, has the blow come from the same hand: some are living, and some are dead—some we do know, and some we never did know—to whom the merit is due of having aimed the shafts which have sunk so deep, and which have rankled so long. In a word—to put our amiable antagonist out of suspense, and make a full and free confession—our leading articles, whether touching himself or the several protegés whom he names, were all written by US.—— There, now, most potent conjuror, whose music is to charm us from our hiding place, canst thou read us our riddle? Of course thou canst; for as Hamlet says, "'tis as easy as lying."

As to the learned Professor of Medicine in the University of London — alas! that he should have compelled us to associate him with such a companion—has he no friend candid enough to open his eyes, and to tell him what his professional brethren really think—and, in his absence at least, freely say—on the subject of his discussion with this journal? Does he imagine that sending communications aimed at us every week to the Lancet, will be received as a proof of the indifference which he affects? He entered upon a discussion regarding medical education, and abandoned it when he found himself worsted: he attacked all the schools in England indiscriminately, endeavouring to bolster up his own at their expense;—we defended them, and routed their assailant at every point. Does he conceive that the public can be induced to forget this, because he now chooses to start a fresh subject? We have no desire to triumph over his discomfiture, nor should we taunt him by keeping the subject

alive, if he had himself the common discretion to let it rest. But so long as he endeavours to throw dust in the eyes of the profession, by interminable letters in the Lancet, as to the degree and manner in which his colleagues expressed their dissent from his doctrines—as if that had been the subject of the discussion—so long shall we repeat that this attempt is a mere *diversion*, to cover his retreat;—yet even on this ground, if he can wring from his colleagues any expression of approbation, however cold, regarding those points of his original lecture or subsequent conduct which we have censured, we faithfully promise to transfer it from the pages of his journal into our own. *Till then we have done with him and his letters.*

CONVERSAZIONE MEETINGS AT THE LONDON UNIVERSITY.

Dr. Macleod has forwarded to us the following letter from the Dean of the Medical Faculty in the London University, with a request that we should publish it, and adding, "that it was but the week before last that the Professors did him the honour to send him a card of invitation for the present season." Of course we can have no hesitation in complying with his desire, although we think he has taken very unnecessary trouble in writing to the Dean of the Faculty at all, and although it be against a general rule of ours to insert letters contradicting the falsehoods of the Lancet: in fact, we never could afford space to do so.

Dr. Thomson's Letter.

3, Hinde-Street, 26th Dec. 1832.

Sir,

In reply to your note requesting to be informed whether your name be erased from the list of visitors to the evening conversazioni in the University, I have to inform you, that on examining the list, I find no such erasure: your name remains in the list in the place it has occupied for the two last sessions, and to my knowledge no such erasure has ever been contemplated.

I have the honour to remain,
Your obedient humble servant,
Anthony Todd Thomson.

To Dr. Macleod.

THE LATE MR. HENTHORN.

(From a Correspondent.)

We have received intelligence of the death of the oldest, and one of the most respectable of the members of the surgical profession in Ireland—James Henthorn, Esq. It occurred at his residence in Stephen's Green, Dublin, on the 18th instant, occasioned by a fall in attempting to go up stairs without assistance.

In point of age (we understand he was about 90), Mr. H. might have been styled the father of his profession; but he merited the appellation in a more honourable sense. He was the originator of that institution which has raised the profession in Ireland to its present highly respectable position: to him, in conjunction with the elder Mr. Dease, and the present able director-general of military hospitals in Ireland, are to be attributed the foundation and erection of the Royal College of Surgeons in that country. But Mr. Henthorn's labours, connected with this establishment, did not cease with its foundation: on him devolved the arduous and responsible task of watching over, and directing the progress of its superstructure, and the value of his services as secretary (we should add that they were wholly gratuitous) was duly appreciated by the members of the college, who, in testimony of their respect and approbation, voted him a piece of plate on two different occasions.

Mr. Henthorn was the main instrument of appropriating the resources of one of the most extensive institutions in the empire to the purposes of medical education. The House of Industry of Dublin contains within its walls a population of nearly 2000 souls of all ages, exhibiting every grade and variety of chronic disease, both mental and bodily. To his exertions, when a governor of that establishment, the medical profession is indebted for the erection of the extensive medical, surgical, and fever hospitals, now connected with it, where so many of the present and rising generation of medical men have received their first rudiments, and which have contributed a large proportion of those valuable pathological and surgical observations

with which the Dublin periodicals have from time to time supplied us. Mr. H. was for a long period surgeon to the Police establishment and to the Lock Hospital of Dublin, in the latter of which he was distinguished for his judgment and discrimination in the treatment of syphilitic complaints. The recent revolution in this branch of practice had been to a considerable extent anticipated by him—a fact which should have received an early publicity, had his instructions been acknowledged in certain quarters with becoming candour*.

To a manly and graceful deportment, were united in Mr. Henthorn the more enviable qualities of a mind well furnished from the varied stores of literature: his mild and agreeable manners, and rich fund of conversation and anecdote, rendered him a delightful companion, and being peculiarly exempted from those foibles which are conspicuous in most old persons, his society was pleasing till almost his latest hour. A gratifying tribute was long since paid to the kindly feelings of his heart in the subjoined lines:—

> His human kindness equal succour lends
> To those whom heaven abandons and befriends†.

BOTANICAL PRIZES, APOTHECARIES' HALL.

(From a Correspondent.)

The gold and silver medals annually offered by the Society of Apothecaries to all students (not being apprenticed to members of the Society) were on Tuesday, the 4th instant, awarded to Mr. T. H. Cooper, of the London University, and Mr. P. K. Weston, of King's College.

As these prizes are given, not merely for comparative, but for absolute merit and positive proficiency, (last year only one medal was decreed, the other being withheld) it is highly creditable to these young men, and gratifying to their friends, to have such evidence of the right employment of their time, and to be thus honourably distinguished as the two best botanists that the metropolitan scho ls this year afford.

Long before the examination took place, we heard that Messrs. Cooper and Weston were the favourite candidates; and from the former gentleman being a student of several years standing, and the latter of one year only, it was generally expected that the prizes would be awarded as they have been. We therefore think it unwise, and we are sure it must be contrary to his wishes, that the success of the gold medallist should be mentioned, by his would-be friends, as a triumph over his fellow candidate, to whom the silver medal was decreed. At any time we should have thought such reports ungenerous; under present circumstances we think the exultation foolish; for although the success of the senior student is highly honourable, it can scarcely be regarded as a triumph over a competitor so much his junior; and our veracious contemporary, when affirming that this was "the first examination at which the King's College students have attempted to contest the gold medal with those of the London University," would have done well to have recollected that the College was only opened in October 1831, so that it was the very first opportunity of competition which has occurred.

* For an abstract of Mr. Henthorn's practice in these affections, see the Dublin Hospital Reports. Vol. II. pp. 188-9.

† The Metropolis, a poem, Dublin, 1805.

CLINICAL LECTURE ON DISEASES OF THE URETHRA AND NECK OF THE BLADDER,

Delivered at Middlesex Hospital, Dec. 22, 1832,

By Sir Charles Bell.

Gentlemen,—Former habits continue to influence me; and if I have promised a lecture, and am not able to deliver it, I feel as if some important duty were neglected; indeed I have always found that what was promised to the students was exacted to the letter. You know that I have been absent from the wards in consequence of being a little unwell; happily, I can get the business there carefully done for me, but I cannot as yet have my duty performed here; I have therefore made a little exertion to be with you.

I stated, at the last lecture, that there were nine cases of diseases of the urethra and neck of the bladder to which I was desirous to direct your attention. We were about to have read to us the third case, and, in order to bring us to due reflection on the subject, I will request that it be now done.

Case III.—*Stricture of the Urethra, with Fistula in Perineo, following the Operation of piercing the Stricture.*

Patrick Shannon was admitted September 11th, having fistula in perineo, with difficulty of passing his urine. His whole appearance indicates long continued suffering, and he gives the following history

of his complaint. As far back as 22 years ago he was seized with retention of urine, for which an instrument had to be introduced. Three years after this, he underwent a course of treatment by the bougie for a very narrow stricture, and was cured. He remained free from any complaint till three years ago, when he was again attacked with a difficulty of voiding his urine. This progressively got worse. He was obliged to leave his situation as groom in a family, and he applied for relief at a neighbouring dispensary. At this time, he states that he could scarcely pass a drop of water. Upon his being admitted into the dispensary, the surgeon introduced an instrument into the urethra, which had an apparatus within it for cutting through the stricture, and, to use the patient's expression, upon "shooting this," the instrument was admitted into the bladder, and the urine drawn off. A bougie was subsequently introduced regularly into the urethra, and he felt completely relieved, passing his water with perfect freedom. Three weeks from the time of the operation, he observed a small swelling commencing in the perineum, at the place where the stricture had been situated. This gave him great pain, and, in process of time, it burst. He soon found that the urine, when discharging it, came partly by this abscess and partly by the natural passage. From this time various other abscesses formed in the perineum, from all of which the urine dribbled.

Upon examining the urethra, he is found to have a stricture situated near the bulb, through which it is impossible to pass the smallest sized bougie or catheter. The perineum is knotted, irregular, and undermined with fistulous openings, fungous growths, and sinuses; these extend even as far back as to the tuberosity of the ischium. At various periods since his admission into the hospital attempts have been made to introduce an instrument into the stricture, with the view of dilating it; but these have proved unsuccessful, and they have been followed by severe attacks of shivering and fever, which made it necessary to desist from them. At present he makes his water with considerable freedom, and it comes partly from the natural passage and partly from the numerous sinuses in the perineum. He is awakened at night every two hours, owing to the urgency of the desire to make his water.

The most remarkable circumstance in this case, Gentlemen, is the cutting of the stricture by an instrument introduced into the urethra; an operation which is very naturally suggested. It has been thought of by many, and, in criticising it, I in fact bring my later experience against myself, because I attempted it in early practice. I had a flat female catheter made, with a small semilunar slit in the point of it, through which I introduced a lancet adapted to the slit. I forced this catheter against the stricture, and then, by introducing the lancet, cut the stricture.

I had reasons for laying aside the operation; and they are exactly those which I shall cite in criticism of the present case. The principal danger, then, is that of extravasation of urine. It is very difficult indeed to strike the stricture exactly, so as to cut it and cut nothing else. No doubt it would be a happy circumstance if you did just strike the callous stricture, and not touch the membrane; but see how difficult it is to introduce the point of a bougie into a narrow stricture. When you reflect on this, you will perceive that it must indeed be a very nice thing to hit the stricture with a cutting point. Now, if you do not enter the stricture exactly, you open a passage into the spongy body of the urethra, or into the cellular membrane, and let the urine into these textures. Remember that extravasation of urine, although you might say that it is a natural fluid, is so far from being harmless, that it deadens the cellular membrane, causes sloughing, and, at all events, inflammation and suppuration. The first danger, then, is that of extravasation of urine; the second is that which you have seen to happen in the case just read, the formation of abscess. The dripping of the urine into the abscess follows, and ultimately fistula in perineo. The third misfortune to be apprehended is that of making a false passage; for, when you have cut the stricture, it is exceedingly difficult indeed to ascertain whether you are passing your catheter through the stricture which you have partially divided, or whether you are passing it in the manner I described in the last lecture, between the bladder and the rectum.

Now, these are three reasons against the operation. I would further say that it is an easy thing to state what is the rule of the profession generally, but a very difficult thing to say what a very careful, very dexterous, very ingenious, and very safe man, may think himself at liberty to do. I am, however, quite certain of this; that if the leading men in the profession were to say to you and to the practising surgeons in town and country, cut the stricture from within whenever you have a difficulty, incalculable mischief would ensue: how far an individual may raise himself above authority, it is not for me to say; but I am sure, as a general rule of the profession, there cannot be one more pregnant with danger than this of perforating the stricture with a sharp instrument.

CASE IV.—*Stricture of the Urethra with Prolapsus Ani, in which the Stricture had been divided from within.*

For several weeks a patient, J. Hinkley, lay in the bed opposite to Shannon, having suffered the same operation of piercing the stricture of the urethra. He stated, that he had been subject to stricture for four years. Two years ago he applied at the same dispensary in which Shannon had been admitted, and an instrument, which cut the urethra from the inside, was employed to divide the stricture. Two months after this operation, his difficulty of making water was as great as before. Since that time he has applied to various surgeons for relief, and has had a succession of bougies of different sizes passed before his admission in this hospital. At present he is suffering from a large prolapsus of the rectum, for which an operation has been performed. He makes water in a very fine stream, and, while straining to pass it, he has excruciating pain from the descent of the gut.

The first observation that is suggested by the reading of this case, short as it is, is one which I shall make in passing, for I must recur to it. It is very natural to suppose, that when you have obtained a full stream of urine, by whatever means, the patient is cured. No; he is very far from being cured. This is the peculiarity of stricture, that you must pass your instrument again and again, at regular intervals, preserving the passage open until all disposition to contraction has ceased. Whether you operate with a bougie—whether you force the stricture with a catheter, or apply caustic, or in whatever manner you destroy a stricture, so as to make the canal wide and the stream free, you have not cured your patient: neglect him from that time, and in two months he will come back to you with the same degree of stricture as before.

This is a circumstance which has deceived many: they have said, this stricture is a muscular and spasmodic contraction; we have the proof of it in the *disposition* to its return. But you must study this question properly, and first ask yourselves, what is the *disposition?* The error arises from using a word without attaching to it the proper meaning. The fact is, that the disposition to the return of the disease is the same with that which produced it, and that was inflammation; and until you find on passing your bougie that your patient does not suffer, and that the tenderness has subsided, the inflammation is not gone, or, as some authors would express it, the disposition remains, and the disease will certainly return.

There are other circumstances in this case which demand attention—the *prolapsus ani.* What is that? and how is it produced? Prolapsus ani results from the relaxation of the sphincter, and the irritation and the action of the gut within. It proceeds, then, from the disordered action of these two, or rather, I may say, these three muscles—the levator, the sphincter, and the muscular coat of the intestines. Nature intends, that whenever a portion of the gut is in action, the portion below should be relaxed. Whenever, therefore, there is irritation in the rectum, you find that there is action in the rectum, and relaxation in the anus, and the relaxation remains as long as the irritation within continues. Thus the inside of the gut comes to be turned out, and finally pushed more and more down until there is prolapsus. Now what produces it in this case? That is the point we must attend to. It is the frequent call to make water, attended with straining—the strain that accompanies stricture produces piles, or a descent of the anus, and it is very necessary that you should recollect this, because when the straining consequent upon stricture produces disease of the anus, or say disorder, not to give it a more formidable name, this increases the severity of the original symptoms. As a stricture in the urethra sometimes produces piles, so do piles and prolapsus produce pains, which to the patient's sensation are in the bladder and penis. You know very well that an operation on the anus for tying or cutting an hæmorrhoidal tumor, by disturbing the action of the muscles at the neck of the bladder, causes a necessity for the introduction of the catheter. That circumstance marks the established relation between the muscular apparatus of the anus and the muscular apparatus at the neck of the bladder. Observe, again, that irritation at the lower part of the colon, still more in the rectum itself, will produce continual *nisus* to pass urine, and the patient will complain of pain in the urethra, and be alarmed with the idea of having a stone in the bladder; while all that you have to do is, to soothe the irritated condition of the mucous membrane of the canal, and to prevent the lodgment of scybelæ. Mark, then, I beg of you, the sympathy betwixt the rectum and the bladder; the frequent call to make urine, caused by irritation in the anus; and not only the frequent desire to pass water, but pain in the bladder and in the penis; all those symptoms that give rise to the notion that there is a stone in the bladder. I have repeatedly found this fancy taking possession of the minds of medical persons. They have come to me, stating that they had all the symptoms of stone; that they had no rest from the frequency with which they made

water; that they had pain at the end of the penis; and they were afraid that I must pass a sound, and ascertain the condition of the bladder; instead of which, I have directed them to pay attention to the rectum, to use the tepid clyster, and gently to promote the action of the great intestines, and by so doing they have removed the irritation.

[The fifth case, that of B. Rowbottom, who now attends as an out patient, was next read. It was short, and stated that fistula in perineo had formed, not in consequence of stricture in the urethra, but of gonorrhœa, a fact which the lecturer said was very essential to a right understanding of this class of diseases.]

Gonorrhœa, young men think a mighty simple matter, yet it is the source of all the mischiefs of which we are now speaking. When gonorrhœa takes place in a young man of feeble and scrofulous constitution, there is another and a worse effect than either swelled testicle or even stricture, to be apprehended. Sometimes, I say, in a debilitated and strumous constitution, direct ulceration takes place without stricture, which ulceration makes a passage for the urine. In such a case you will find that you can pass the catheter freely into the bladder; that there is no stricture, but yet there is a great hole in the side of the penis, either behind or anterior to the scrotum. This is one of the most teasing cases that a surgeon has to deal with.

There is another effect of gonorrhœa which also should be borne in mind. This kind of inflammation, like any other accidental inflammation, is nothing in a good constitution, but I am speaking more particularly of patients who have a bad constitution. The inflammation from gonorrhœa will sometimes creep backwards, by what John Hunter called *continuous sympathy*: it will cease, perhaps, to have the specific character of gonorrhœal inflammation, but it will creep back to the neck of the bladder, and will there cause inflammation: inflammation in the prostate, abscess within the prostate, and abscess around the neck of the bladder, the consequence of which is, that the urine gets into these abscesses, and keeps up a continual discharge, keeps up also a continual irritation, so that the patient has rest neither night nor day, and, in fact, is teazed to death. What with the fever, the restlessness and disturbed nights, together with the copious discharge, it produces hectic, and destroys him. Now this is not generally understood, nor thought of by young men.

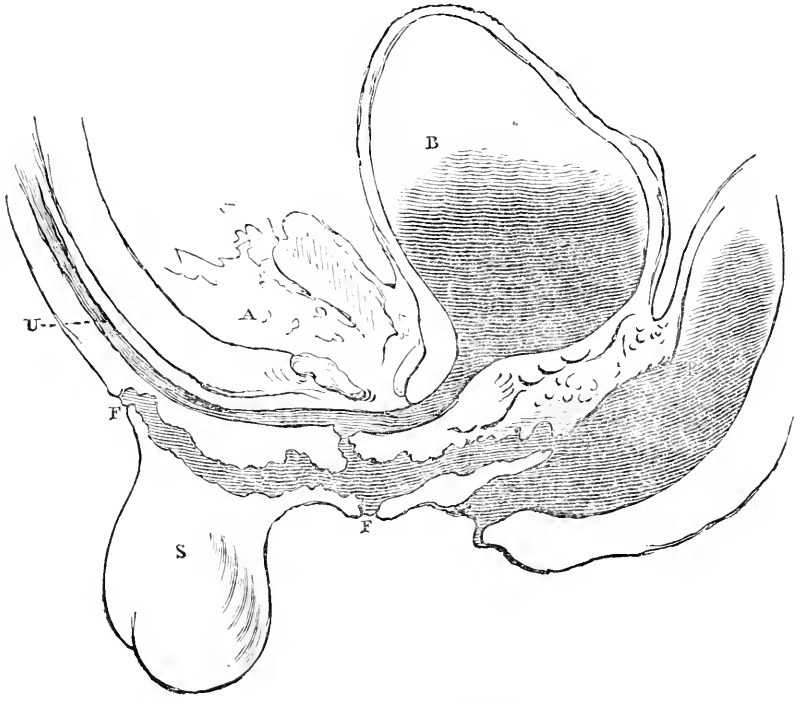
But in the consideration of this case I must beg more particularly to direct your attention to the ulceration of the urethra without stricture—an opening which it is exceedingly difficult to close. I remember that some years ago a young gentleman, a very fine spirited youth, was under my care, and his family were teazing him to marry, but this secret was on his mind—an ulceration had taken place anterior to the scrotum, and all that should have passed along the urethra escaped there. He went abroad; joined the army on the continent, and wished to throw away his life. But in every breach in which he exposed his life, and on every attack that was desperate he succeeded, was lauded, and promoted; and thus he was placed in a condition that made his escape from the importunities of his friends more difficult. You see by what secret motives a man may become a hero. But to the point: an eminent surgeon, to whom I have already had occasion to allude, (and whom I do not mention now only lest it should lead to the surmise of our patient's name,) by the application of nitric acid to the edges of the hole, drew them together, and succeeded in perfectly closing the passage. What a deal of misery was here removed!

And now let me tell you how this method by burning occurred to me: it was some years back, while my respected friend Mr. Cartwright was surgeon here. We were each of us plagued with a case: one to close a hole in the urethra, and the other to keep a hole open in the trachea: the last having a continual disposition to close, and the other shewing no disposition whatever to do so, with all the applications that I could think of. But at the same time there were in the house several cases of burns where the cicatrization, you know, takes place with such a disposition to contraction of the part that it is impossible to resist it. If a child be burned in the neck the head is all drawn down, and the parts consolidated; if there is a burn on the sides, the arm is apt to be drawn towards it; and I thought that if I could excite that disposition in the integuments around the opening, I would succeed in closing it. With this view, I took a red hot iron, about the size of this bougie, and put it on the margin of the hole, always with the point converging to the centre of the hole, and in that manner I at last succeeded in producing the *disposition* I wished. The cicatrix drew the parts together, and brought the hole from a very considerable opening to the merest pin hole, and that at last closed. That is the only method that I can suggest to you as likely to be effectual in closing an opening in the urethra when it has been made in the way here described, and is not a consequence of stricture, as I am about to explain, but a direct effect of ulceration.

[The following is a private case which I have introduced to you, but that does not signify. The gentleman who reads the case has had some trouble with the patient, and the patient now in the ward offers an exact parallel.]

CASE VI.—*Fistula in Ano, with Flatus coming through the Penis.*

J. K.—This gentleman had for many years been subject to piles. He contracted gonorrhœa, and, about the fifth week, he was seized with severe pain, deeply seated in the perineum, where an extensive abscess at length formed. The matter which was discharged was in large quantity, and it came from two openings, one in front of the scrotum, and the other behind it. It was found that the probe could be inserted from the posterior opening backwards into the rectum, and also into the urethra near the bulb. The probe also passed from the opening behind parallel to the urethra, so as to come out before the scrotum.



A—Pubes.
B—Bladder.
R—Rectum.
U—Urethra.
F F—Fistulous openings.
S—Scrotum.

All that I have to say on that narrative gentlemen, is, that it is another of those most complex and most tiresome cases that are proceeding, not from stricture, but from gonorrhœa, and occurring in an unfavourable constitution. You see, then, that this patient was in a most unhappy condition; he had an opening anterior to the scrotum; he had a large fistulous opening posterior to the scrotum; he had an opening by the side of the anus, the flatus came by the urethra; the fæces and the urine came by the opening in the perineum, and the urine fell back into the rectum. This is a sad complication.

When I passed my catheter into the bladder, there was no let or hindrance at all to its passage. That was unfortunate; because, if there had been a stricture, we should then have said, applying the great aphorism of the profession, *remove the cause* – the stricture is the cause—and, when the cause is removed, all the symptoms will be immediately alleviated. But there was here no stricture to remove. The next thing, then, was to pass a probe deep into this fistula, and then to introduce my finger into the rectum. It was with much difficulty that I made the probe pass into the rectum, so as to touch my finger; for it was at a depth of *two inches*.

The first thing to be thought of in this

case was to remedy the connexion between the rectum and the bladder, by which the contents of the rectum got into the urethra; and at the same time to attend to the free evacuation of the rectum, that the matter might not be constrained to pass into the urethra; in short, the operation of fistula in ano must be first performed. We could not venture to do this with a knife. I could not cut up all the sinuses; I could not cut upon the rectum, for the perforation is situated two inches deep, and the man would die of hæmorrhage. I am, therefore, constrained to adopt the old method of operating—to pass a leaden probe into the fistula, anterior to the anus, and so along into the rectum, and bring it out by the anus, to twist it, and gradually, by twisting from day to day, to cut down the septum between the rectum and this sinus. When you have carried the case so far that all the internal and deep parts are divided by ulceration on the wire or ligature, you may shorten the process by dividing the external part with the knife. Still in such a case you have a bad fistula in perineo to deal with, because you have an ulceration in the urethra, and the urine still passes into the sinus. Your only mode then is to correct the constitution, to free the parts from all irritation, and to prevent the fæces and urine lodging. The case I have been alluding to is greatly remedied; there is no disturbance of the anus; the parts are cicatrised, the rectum retains its contents, and it is simply a case of fistula in perineo; but with this peculiarity, that there is no stricture, nothing to remove in that way, and there is a difficulty, as I have just now stated, of closing the fistulous opening between the membranous part of the urethra and the perineum; but I think we are now succeeding in that respect. He retains his fæces, he retains his urine, and only a little moisture is observed when he makes water. This has not occurred in a patient in the house; but still the case is so similar to one that you know, that I think you may almost say you have conviction of its truth.

Case VII.—*Mortification of the Scrotum from Stricture and Extravasation of Urine, complicated with Fistula in Ano.*

P. Macarty, aged 49. This man was brought to the hospital Oct 23d. When examined in the waiting-room, the scrotum was found distended to an enormous size; it was of a bright red colour, except in one part near the perineum, where there was a black sphacelated patch. While he was crossing the hall on his way to the ward, the mortified portion of the scrotum burst. The surgeon, upon finding him in bed, made an extensive and deep incision in the lowest part of the tumor, and urine spurted out to a great distance. This was discovered to be mixed also with feculent matter; so that, in laying open the swelling, there was not only a communication with the urethra, but likewise with the rectum, disclosed.

This man was remembered by some of the pupils, as having been a patient in the hospital four years before. He was then labouring under fistula in ano, and underwent the operation for its cure, and was dismissed in six weeks. After leaving the hospital the same complaint recurred. But besides this source of distress, he has for seven years been subject to stricture of the urethra. This he confesses he did not inform his surgeon of when he was formerly in the hospital. It was so narrow, that the surgeon whom he has lately attended was fully three weeks before he could get any instrument inserted into it. A short time before he was seized with this last attack, he passed his urine in a very small stream and with great difficulty, and he had frequent calls to make it. He then perceived a swelling forming behind the scrotum, which grew gradually larger, until it suddenly assumed the dimensions which it presented when he was admitted.

For some weeks he remained in a very weak condition. The urine passed freely through the wound, and also partly through the natural passage. The sloughs gradually separated and presented a clean surface in the wound. Now he is able to get up, and he has gained flesh and a freshness in his countenance.

That is the man we have just been looking at up stairs. This is a case you see of extravasation of urine from stricture. The stricture formed in the urethra is necessarily attended with inflammation; and for this reason—that the push of urine is made behind the stricture, and the continual effort to force on the urine distends the canal behind the stricture. This at length produces ulceration of the membrane at that part. If the ulceration should go on slowly, and if inflammation should precede the ulceration, so as to consolidate the cellular membrane, you have only an abscess, and lastly a fistula; but if the ulceration should go on more rapidly, and if it should not be preceded by inflammation which causes a consolidation of the surrounding parts, and if the stricture be so narrow that the man is straining hard to pass the urine, it bursts out through the weakened membrane. He has a sensation of passing the urine because it flows from the bladder; but, unfortunately, it passes into the cellular membrane of the scrotum, instead of flowing through the penis. If the urine burst through that part of the urethra just behind the bulb, it gets access to the

cellular membrane behind the fascia of the perineum, and the fascia of the perineum directs it forward; so that the urine, instead of going backwards and shewing itself by a tumor in the perineum, shews itself in the loose cellular texture of the scrotum and penis, and those parts assume a most extraordinary and alarming appearance. You will find that after the urine has entered it the loose cellular texture is deprived of life. The cellular texture possesses very little life—its life is easily destroyed by the presence of acrid urine; so that if a man in this condition be neglected, he will come into the waiting-room precisely as this man did—like a creature half dead, having an older appearance than what should belong to his years, faint, sick, and pale; and when you disclose the part, there is a dark redness of the scrotum and penis, with a great patch of blackness at the lower part of it. As soon as I saw this patient his case was obvious, and I desired him to be carried directly to bed. I went to relieve him, but you are told that so far was he gone that the mortified part burst as they were carrying him along the passage. However, I put in a sharp-pointed bistoury, in such a way as to open the back part of the scrotum freely. Why not open it freely?—it is dead—mortified. But you should also use the instrument in such a way that the point goes under the fascia of the perineum, which answers two purposes: first, it lets out the extravasated urine, and, secondly, it prevents any more from collecting, by making the passage for the urine free. That is the object of this operation, and therefore do not take a lancet and puncture here and there on the enlarged scrotum. Recollect that besides getting out the fluid, you are to prevent more entering the scrotum, and you are to make a free passage for the urine from that part where it has burst from the urethra. The patient has suffered long with pain and difficulty in making water, with fever, before it has come to this, and when at last the urine is extravasated, and mortification has taken place (and mortification in a part will soon shew its influence on the constitution), the man is miserably low. It is your duty now, having made a free passage for the urine, to soothe the parts by warm anodyne fomentations and opiates, to support him by wine and proper diet, thus taking care that the powers of nature do not sink too low; for if they do, then he is seized with vomiting, and you lose him.

Now, gentlemen, it is in this condition that the surgeon, who is very, very fond of operating, must suspend his hand; for in this state the patient is reduced so low by suffering and by fever, and ultimately by mortification, that if you lay him on the table and attempt any protracted or painful operation, you will find that the powers of life will give way altogether. The first thing you have to do is to see that he revive a little, in short, that he exhibits such an appearance as this old man does, having a face twice the breadth that he had when he came into the house, with such powers as belong to a man of his age. His condition will then allow you to do that which is necessary in order to perfect a cure, or at least to afford him further relief.

The next case to be read is that of a narrow stricture where there is as yet no abscess in the perineum, and no fear of a bursting of the urethra.

CASE VIII.—*Impermeable Stricture, with Retention of Urine.*

Richard Peck, æt. 45, was admitted July 11th, suffering from retention of urine. He was relieved by the warm-bath, castor-oil, and opium. He is found to have a stricture situated near the bulb, which is so extremely narrow that it is with the greatest difficulty the finest bougie can be passed into it. Notwithstanding the narrowness of his stricture, he evacuates his bladder without much distress. A bougie is daily inserted into the stricture, and is allowed to remain for twenty minutes.

This is a case requiring me to be particular in describing to you how it is to be managed, in order that all those complex mischiefs which you see to be the consequence of a mismanaged stricture do not occur in any patient of yours. I must, therefore, ask you to give me your attention next week, when I will enter fully into the subject.

MEM.—The last case was one of a patient who had an injury of the perineum from being thrown on the pummel of the saddle—abscess and fistula in perineo.

LONDON HOSPITAL.

Encysted Tumor of the Labium Pudendi—Immediate Operation, in consequence of obstinate Constipation, inducing a slight suspicion of its being Hernial.

MARTHA LOCKWOOD, aged 40, admitted Wednesday, October 24th, under the care of Mr. Scott, with a swelling in the left labium pudendi. She stated that it appeared suddenly, about three weeks ago, in violently straining herself. Her bowels have been constipated since Saturday last (29th). On the Monday following she was seen by a medical gentleman, who ordered purgative medicines for her, but which did not procure evacuations

from the bowels. She took calomel and jalap, four drops of croton oil, and several clysters were administered, but without effect. She had vomiting, hiccupping, and tenderness of the abdomen. As this gentleman suspected that it was a case of labial hernia, he sent the woman to the hospital on the 24th instant. Upon examination, there was found a tumor, about the size of a large egg, situated in the left labium: it felt like an encysted tumor, and appeared to have a narrow neck extending upwards by the side of the rectum, but received no impulse in coughing. At a consultation of the surgeons, although the swelling was not supposed to be hernial, in consequence of the somewhat suspicious character of the symptoms it was thought advisable to set aside all doubt by an operation.

The woman being placed upon the table, as in the operation for lithotomy, Mr. Scott made an incision down its centre, and then carefully detached part of its connexion to the surrounding parts; in the performance of which, in consequence of its close adhesion, a small opening was made into the vagina. As no doubt now remained of its nature, a small opening was made in the cyst, when a quantity of brown fæcal-looking matter immediately gushed out. All fears were, however, immediately set at rest by the absence of any fæcal smell. The opening was then enlarged, and a serous cyst exposed, with a small opening at the bottom, which was found to terminate in a cul de sac. The whole of the cyst was then dissected out, and at the end of it was found another small cyst, containing a soft transparent fluid. Two vessels were secured, and then some sutures were applied. The woman was sent to bed, and ordered

Cal. gr. i. e. Extract. Cathart. gr. v. omni horâ donec alvus responderit.

25th.—Her bowels have been twice freely relieved this morning; is going on favourably.

The sutures were removed the third day after the operation; the communication with the vagina was united, and the wound soon healed by granulations.

Fracture of the Pelvis, of several Ribs and their Cartilages, attended with Emphysema of the Right Clavicle and of the Left Radius and Ulna—Death after twelve weeks, from Sloughing of the Back.

—— Ceely, about 60 years of age, and spare habit of body, was admitted, under Sir W. Blizard, July 18th, having sustained some severe injuries from the passage of the wheel of a waggon across her body. On examination, there was found a comminuted fracture of the right clavicle, a spicula of bone almost protruding through the skin; a fracture of both bones of the left fore arm, considerable emphysema, and a crepitus was felt midway between the anterior superior spine of the ilium and the spine of the pubis. There was also inability to move the left thigh. The woman was in a state of great depression, and was not expected to survive many hours. In the evening, as she was unable to evacuate her bladder, a catheter was introduced, and a small quantity of urine drawn off.

19th.—She has rallied a little, and was free from pain.

Ordered cold lotion to the injured parts.

She never experienced any difficulty in breathing, and in a few days was able to pass her water. She continued gradually to mend till about six weeks after the accident, when a slough formed on the lower part of the back, from which there was a very copious discharge; this sore extended until the greater part of the sacrum was exposed. Every thing was done to support her strength and to protect from pressure the affected part of the back, but without avail, for she gradually sunk, and died October 2d, twelve weeks after the accident.

Sectio Cadaveris.—The bones of the forearm and the clavicle were united; there was discovered to have been fractures of the four upper ribs, also the cartilages of two ribs on the right side; and of the three upper and fifth and sixth ribs on the left, all united. Adhesions existed between the surfaces of the pleura on both sides of the chest. Lungs and viscera of the abdomen healthy. There was a fracture extending through the obturator foramen completely united.

Medullary Sarcomatous Tumor in the Pelvis.

William Avant, aged 20, and apparently much out of health, was admitted September 27th. Since April last he has experienced pain in the hip and down the thigh, and been troubled with a frequent desire to pass his urine, which was attended with pain. Some time back he applied as an out-patient at Guy's Hospital, where a catheter was attempted to be passed into his bladder, but without success. Latterly he was under the care of a medical gentleman in the Commercial Road, who sent him to this hospital. He complains now of difficulty in passing his water, and of great pain in the region of the bladder. His urine is healthy; there is a swelling extending from the right groin into the perinæum and inner part of the right nates juxta anum. As the case was at first suspected to be an abscess connected with disease of the urethra, the symptoms of which did not appear urgent, he

was ordered the warm-bath, and leeches daily to the tumor. On the following day a catheter was introduced, and passed with the utmost facility apparently into the bladder; still nothing passed but blood, mixed with a soft gelatinous substance, which had no urinous smell. The fore-finger of the left hand being introduced into the rectum, the catheter could be distinctly felt apparently in the urethra; its point was gently elevated, but it would not pass into the bladder. A considerable tumor, however, could be felt by the finger.

Contin. Hirud. perinæo et Balu. tepid. Tinct. Opii, xxx. o. n. Mist. Camph. c. Ammon. Carbon. ter die.

October 5th. — Upon examination, a sense of fluctuation being perceived at the inner part of the nates, an incision was made, from which escaped a large quantity of a bloody gelatinous matter, and the fore-finger was passed its whole length into a mass of a similar substance. A catheter was again introduced, but with the same result as on the previous day.

Ordered a poultice to the part, and Tr. Opii ɱxl. statim.

In the evening he had passed about half a pint of urine, and was nearly free from pain, but complained of great weakness.

6th, 9 A.M.—Feels great distress from being unable to pass his water. Abdomen tense; pulse quick, small, and weak. A catheter was again attempted to be passed, but failed.

Ordered fomentations to the abdomen.

1 P.M.—The catheter was again tried, but without success. Abdomen more tense, but not tender. He takes scarcely any nourishment.

9 P.M.—Complains of considerable distress from inability to pass his water. There was some appearance of hypogastric tumor, but by no means evident. As his sufferings were supposed to arise from urine being retained in the bladder, an incision was made in the course of the linea alba, immediately above the pubes, and a long curved trocar passed in the direction of the bladder, when the stilette was withdrawn. As no urine flowed, it was passed to its full length, but no water escaped: the trocar was therefore withdrawn, when a quantity of the same gelatinous substance escaped from the pubes.

Ordered Tr. Opii ɱlx.

He died the following morning, at four o'clock, rather suddenly; and, shortly afterwards, his abdomen was observed to be enormously distended.

Sectio Cadaveris, 33 hours after death.—The body had undergone the most rapid putrefaction; not a feature of his face was distinguishable; the scrotum and penis were greatly distended. A quantity of gas escaped from the abdomen when opened. No appearance of peritonitis. The bladder contained a little urine, and was pushed over to the left side by a quantity of medullary matter occupying the greater part of the right side of the pelvis, involving various structures, and appearing to grow from the horizontal ramus of the pubes, the greater part of which bone was soft and implicated in the disease, which had just made its way into the acetabulum. The trocar had passed into the disease on the right side of the bladder. The vesicle end of the urethra was completely destroyed, so that there was no continuous canal to the bladder. The rectum was not pressed upon.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Dec.* 25, 1832.

Abscess	2	Fever, Typhus	1
Age and Debility	35	Hooping-Cough	15
Apoplexy	6	Inflammation	28
Asthma	13	Bowels & Stomach	5
Cancer	2	Brain	1
Childbirth	3	Lungs and Pleura	5
Consumption	44	Insanity	1
Constipation of the Bowels	1	Jaundice	1
Convulsions	18	Liver, Diseases of the	3
Dentition or Teething	9	Locked Jaw	1
Dropsy	11	Measles	6
Dropsy on the Brain	7	Mortification	3
Dropsy on the Chest	2	Paralysis	3
Fever	9	Small-Pox	12
Fever, Intermittent or Ague	1	Thrush	1
Fever, Scarlet	20	Stillborn	10

Increase of Burials, as compared with the preceding week . . . 13

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

December 1832.	THERMOMETER.	BAROMETER.
Thursday . 20	from 27 to 37	29·75 to 29 92
Friday. . . 21	27 46	29 63 29·65
Saturday . 22	39 51	29·64 29·70
Sunday . . 23	40 52	29 67 29 64
Monday. . 24	41 49	29 93 29 85
Tuesday . 25	40 48	29 73 29·82
Wednesday 26	29 45	30 02 30 07

Prevailing wind, S.W.

Except the 20th, 22d, and 26th, generally cloudy; with rain at times.

Rain fallen, ·275 of an inch.

CHARLES HENRY ADAMS.

BOOKS RECEIVED FOR REVIEW.

Mr. Rogerson's Treatise on Inflammation.
Dr. Wood on the Structure of the Skin.
Dr. Bardsley's Essay on Hydrophobia.
Dr. Murray's Materia Medica, Sixth Edit.
Mr. Phillips's Treatise on the Urethra.
Mr. Liston's Elements of Surgery, Part 3.
Dr. Alison's Outlines of Physiology, &c.
Dr. Hooper's Physician's Vademecum.
Mr. H. Bell on Diseases of the Liver, &c.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 5, 1833

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

HYDROCEPHALUS ACUTUS.

Morbid Appearances.—After death, gentlemen, from the disease of which I was speaking in the last lecture—hydrocephalus, you may find the same marks of inflammation and congestion in the brain itself and its membranes which I mentioned when speaking of phrenitis. Sometimes you will find nothing more than that, so that the strabismus or squinting, the dilatation of the pupils, and the coma, are not necessarily the result of effusion: you may find no effusion whatever, notwithstanding the child has died from this disease, and although previous to death there was strabismus, dilated pupils, and unconsciousness. Death will arise from the mere irritation and excitement which the child has undergone, and the compression and perhaps fulness of the vessels; but certainly it is not necessary that there should be compression from effused fluid. Frequently you will find the same congested and inflammatory state on the scalp that there is within, and a great deal of serum, just as I mentioned has been occasionally observed in common phrenitis.

But sometimes you will not find any of these things: you will sometimes find nothing. I have myself opened children who have died of this disease and found nothing; the congestion and the signs of an inflammatory state having subsided, I presume, after death, and the blood having left those vessels in which it ought not to have existed, and returned to its usual route. It is possible for even the marks of inflammation to cease after death before you examine the body.

If, however, there be fluid, it varies very much as to its clearness: as I mentioned, when speaking of phrenitis, it is sometimes perfectly limpid and uncoagulable. It will be found of course in the brain or upon the brain, and it is generally found to amount to from two to six ounces. The brain at large is sometimes found œdematous after this affection, especially at the corpus callosum, the fornix, and the septum lucidum, and this œdematous state exists either alone or in conjunction with ventricular effusion. In infants there is great ventricular effusion at the same time that you find œdema of the brain, and not unfrequently the same circumstance is noticed in adults; but it is generally seen in infants. The brain, after this disease, is very often found soft in particular parts; particular parts appear to have become softened by the inflammation; and it is not an uncommon thing to meet with scrofulous tubercles in the brain itself or its membranes, shewing the pre-disposition to disease in the brain. These of course existed before the hydrocephalus was set up; but they shew the tendency to disease of the brain.

The longer the disease has lasted, the greater in general is the turgescence of the vessels, and the softer is the brain, according at least to Dr. Gölis, who has had more experience, I suppose, of this disease than any one else. He also mentions that effusion will sometimes take place in a very few hours. Now and then we have marks of inflammation in the liver and in the intestines: it is not by any means uncommon for an inflammatory state of these parts to co-exist with this affection.

Age at which it usually occurs.—Now this disease, as I have already stated, is for the most part an infantile disease, and it chiefly affects children from two to ten years of age. Sometimes it occurs about puberty, sometimes afterwards; but it affects chiefly children from two to ten years of age. It is an affection that very much runs in families, so that you may meet with some who have lost several children by hydrocephalus. It frequently succeeds other acute diseases, especially hooping-cough; now and then, frequently indeed, it occurs during teething.

History.—As to our knowledge of the history of this disease, it is certainly true that Hippocrates speaks of water in the brain, and he mentions many symptoms of acute hydrocephalus; but this particular disease was only first accurately described by Dr. Whytt in 1768: he gives a full description of the inflammatory symptoms. Dr. Cook, in his work on Nervous Diseases, states that Dr. Gregory used to say it was described by a surgeon at Glasgow in 1753, and that M. Petit, a celebrated surgeon at Paris, gave many of the symptoms in 1718. But its description was not thoroughly given till the latter part of the last century.

Prognosis.—Our prognosis ought to be exceedingly cautious even during the premonitory stage; it ought to be still more cautious in the first stage of the disease itself, and it ought always to be unfavourable in the second stage, although this is sometimes recovered from, and even, it is said, the third stage, when excitement takes place. It is said to have been recovered from spontaneously; but I have never seen it. However, children have actually recovered from the disease in the very last stage. Even by medicine and the best means, recovery is very rare, and perhaps a favourable issue occurs quite as frequently by the spontaneous efforts of nature as by art. Indeed, to shew that the disease may be recovered from by a child apparently in the most hopeless state, it is said that there is no one symptom which indicates death with certainty excepting slow breathing. Recovery is rare, so that we should be cautious in our prognosis even when only the premonitory symptoms exist; it is still more so when the first stage has set in, and certainly we should not give any hope at all in the second.

Treatment.—The disease is clearly inflammatory, and the treatment of inflammation is that which is demanded for its cure. From the effusion which is generally produced by the disease, one would suppose that there is an inflammation of the arachnoid. The fluid which is effused in the greatest quantity is found in the ventricles lined by the arachnoid and upon the brain in the cavity of the arachnoid, and, therefore, one would suppose that the chief seat of inflammation is in that membrane. The effusion, I need not say, is the mere result of inflammation.

During the premonitory symptoms we have first to empty the bowels well, and, for this purpose, calomel in full doses answers better than any thing else; at least it is best to lay a foundation with it, and then carry it off by another purgative, such as castor oil. It is always best, in the first instance, to premise a dose of calomel; other purgatives then answer to a certainty, and the bowels are well cleared. This open state of the bowels is to be preserved of course by repeated doses of mild purgatives, such as castor oil, from time to time. Perhaps one or two very full doses of calomel would be advantageous. It might also be useful to give mercury in small doses, such as hydrag. c. creta, if the calomel operate too much; but the proper treatment is certainly to empty the bowels well, and, if you think it requisite, to give mercury in repeated doses, for the purpose of producing a mercurial action on the system. But if there be any tenderness of the abdomen, this of course should be carefully attended to, and leeches should be occasionally applied to it. In such a case it would be well to avoid giving acrid purgatives, lest you should increase the inflammatory state; and if mercury be still given, it should be in the form of hydrag. c. creta, or you may exhibit castor oil from time to time, in order to empty the intestines. Wherever the abdomen is tender, there leeches should be applied.

The warm bath is useful in almost all diseases of children; but, to render it advantageous, it should be employed twice a day, and I should think it an excellent remedy in the premonitory stage of hydrocephalus. The diet should be mild, and leeches should be applied from time to time to the head. If you do all this, you will very likely get rid of the morbid state, and the disease itself will be prevented.

But when the disease is fully formed, when you see that the disease is in existence, and not merely hanging over the patient, then you must act with the greatest vigour. You must consider that you have an acute inflammatory complaint to treat, and therefore you must bleed freely and early, and it is admitted on all hands that you should exhibit mercury with the greatest freedom. Those who are not aware, or do not attend to the circumstance, of the power which mercury occasionally exercises over an active inflammatory state of the system, all allow that in this disease it is of the greatest use: you will find that, in the treatment of this disease, all persons

praise mercury. As to bleeding, it is a very good practise to open the jugular vein, or a vein in the arm, if the child be old enough. Abundance of leeches should be applied to the head. While you are doing so you should carefully attend to the abdomen, and if there be tenderness, you should apply them there likewise. Very large doses of calomel are borne in this disease, both from the circumstanee of the disease being of a highly inflammatory nature, and subsequently, in the second stage, from the whole system being in a state of torpor. During the compression of the brain, or the softening of it, very large quantities of calomel are admissible. The bowels, I need not say, ought to be thoroughly cleared several times a day, and mercury given as rapidly as possible. The bowels will bear many doses of calomel in the 24 hours; but if from their irritability they will not bear calomel, you must try whether hydrag. c. creta will answer better, or you may lose the mercurial effect. It is a good practiee to rub mercurial ointment into the parts as fast as it can be done. The patient should be kept as upright as possible, and it is desirable, if the child be hot, to apply cold to the head, and you will find ice to be the best application. After proper bleeding, local and general sinapisms may be applied to the abdomen—or blisters. In the latter stage of the disease a blister to the nape of the neck, or the warm bath, may still be of use; but you cannot expect great benefit from them in such an active inflammatory disease as this. The bladder of iee should be kept on the child's head while it is in the bath.

In the second stage of the disease, when there are signs of torpor and paralysis, when the pupils are dilated and the patient cannot see, when the pulse is perhaps slow and apoplcetic symptoms prevail, the same plan should be pursued exactly, according to the strength of the patient. If the inflammation be still going on, the signs of compression may not arise from effusion, but from the great congestion of blood; at any rate, the inflammation may still exist. When you can apply leeches no longer, still you may continue the exhibition of mercury and antiphlogistic treatment, as far as you dare. You may now apply a blister to the whole head; there is is no danger whatever from it in this stage of the complaint, and it frequently does great good. When all these things have failed, it is said that some children have recovered by the use of elaterium, and others by the employment of digitalis and squills. If any thing of this description be given, it should be in small and repeated doses. If elaterium be given with the view of exciting an evacuation of fluid, it is best to put a grain into two ounces of liquid, and if the effusion be going on, to give the child a tea-spoon full of the mixture every now and then till it operates in the way you wish. As to digitalis and squills, it is best to give them in small and repeated doses. I never myself recovered a child in this state, but different persons have told me that they have seen a child so recovered.

In the last period of the disease opium has been given with advantage, not for the purpose of cure, but to procure sleep and tranquillity, and it has never been productive of harm. In the latter part of the disease it may be necessary to give good nourishment, in order to support the patient, and even stimulants may be required, for after the disease has existed for a length of time, you may have a state of irritation of the brain arising from mere debility. The inflammation may have all subsided, and an opposite plan of treatment to that which was at first imperiously necessary, may be required.

Spurious Hydrocephalus.

Symptoms.—It is very necessary that you should know that these symptoms, or many of them, may occur in a state of the system in which the loss of blood, even purging and starvation, would be fatal. It now and then happens that a child shall become exceedingly drowsy, shall have a dilatation of the pupils, shall perhaps squint, and appear to be labouring under this disease, and the patient may likewise experience more or less delirium. But usually in such a state there is no pain of the head, or it is only transient, and the skin is cool, or absolutely cold. The pulse, as in hydrocephalus, and other inflammatory diseases, is quiek, but it is weak, and the face is not flushed as it is in inflammatory diseases, but it is perhaps pale, or flushed only transiently.

Now in this state, if you apply leeches, or if you purge, in all probability the patient will presently sink. This is a state that will sometimes happen from the first. A child, perhaps after diarrhœa, after something which has weakened him very much, falls into a state of torpor of the brain; it becomes heavy, stupid, and half bliud; the pupils are dilated, and there is perhaps even squinting, but I do not know that that is common. This set of symptoms will come on at the end of the inflammatory stage of hydrocephalus, and sometimes it is the result, as I just now remarked, of some previous disease.

Morbid Appearances.—When children have died in this state frequently nothing has been found, or the vessels of the brain have merely been found unusually serous. There

may be a little effusion, but in many instances the vessels have been less distended with blood than usual.

Treatment.—When a child is in this condition it is best to give it beef-tea and ammonia every three or four hours. The rapidity with which improvement takes place is very great.

I believe we are indebted for our knowledge of this state to Dr. Marshall Hall. It was imagined, and I myself fell into the error, that Dr. Gooch was the first person who described it, but Dr. M. Hall wrote me on the subject, and it appeared on referring to his book, that the priority of discovery was due to him, and that Dr. Gooch was himself indebted to Dr. M. Hall for a knowledge of the fact. It is a condition of which I was not aware when I began to practise; but it is of the highest importance to be acquainted with it, because inappropriate treatment will to a certainty destroy life.

In most inflammatory diseases, a stage may come on in which perseverance in the antiphlogistic plan is highly improper. A state of irritation comes on in the stead of inflammation, and the treatment appropriate to the one is most inappropriate to the other. It was only on Sunday last that I was sent for to a person who had evidently laboured under phrenitis. He had been bled, purged, and so on; but that morning the time had arrived for doing no more antiphlogistically, but adopting the reverse plan. His pulse was 120, and feeble; there was no flushing of the face, no redness of the eyes, but there was delirium and feebleness of pulse, indicating that no more evacuations were necessary—so far from that, we agreed to give him a full dose of opium. He took four grains, which would have been highly injurious in the inflammatory stage, but it immediately put an end to all the symptoms; he had a quiet sleep, he awoke without delirium, and with a strong pulse. Now it is just the same in children. After hydrocephalus has lasted some time, you may judge by the pulse and paleness of the patient that evacuations will increase instead of diminish the mischief; and you must be aware that just such a state will come on without inflammation. There may be a state of irritation and debility without inflammation having been present, as we shall see in the next lecture, in the disease called *delirium tremens*, which occurs in adults. In this affection the tongue is in a state of tremor, the pulse weak, the face pale, and the eyes not turgid. I shall mention that delirium tremens is sometimes inflammatory, but in the greater number of cases it is not; and though the patient is incoherent, talking, and trying to get out of bed, yet there is sufficient in his general state to shew that the disease is not one of inflammation, but of irritation and debility.

To return, however, to inflammatory diseases, adults will sometimes experience great effusion in the head during an inflammation of the membranes. Hydrocephalus is almost peculiar to children, but now and then it occurs in adults, although rarely to a great extent, or in the marked manner that it does in children; but after any inflammation within the head, it is very common to find more or less effusion.

Acute Convulsions of Children.

The acute convulsions to which children are liable are much allied to hydrocephalus acutus, and frequently require to be treated in the same way. Children, as you know, are very liable to epileptic fits and regular convulsions, from irritation of the bowels, teething, and other circumstances. Now these will sometimes depend upon the mere circumstance of teething, and cease if the gums be lanced; sometimes they arise from the intestines, and are cured by purging, so that other antiphlogstic measures are not required; but sometimes they depend on, and are connected with an inflammatory state of the head, and after death you find the same appearances as in hydrocephalus, at least you find that the lining membrane of the ventricles is as red as a piece of scarlet cloth.

Treatment.—The treatment, therefore, of convulsions, if you cannot discover an exciting cause in the gums or intestines which it is in your power to remove, should be, if the pulse will justify it, the same as for hydrocephalus. You must take blood away freely, give mercury, and put ice on the head. But it is necessary here to make the same diagnosis that you do in hydrocephalus. These convulsions may be connected with debility, may be connected with a weak pulse, paleness of the face, or only a transient flushing of it, and in such cases as these you may expect that assafœtida, or a small quantity of laudanum, or ammonia, may answer a good purpose. In these cases of convulsions cold affusion has frequently been attended with a very good effect. In the work of Dr. Currie on Cold Affusion—a sort of classical work in medicine, and well worth reading—he mentions several cases of convulsions in children where they ceased immediately on the sudden application of cold water. Now if these had arisen from an inflammatory state, the effect would not have been of this kind. You cannot cure inflammation by merely

throwing cold water on a patient. It is clear that the convulsions of children may arise from irritation without the head—irritation frequently connected with a distant part; but if there be an over fulnesss of the head in particular, or of the system at large, without marks of inflammation, or still more with marks of inflammation, it is not right to trust to any thing but the common antiphlogistic remedies vigorously applied.

Chronic Convulsions of Children.

As to the chronic convulsions of children, these are allied to epilepsy, and must be treated in the same way.

Chronic Hydrocephalus.

There is another form in which water or serum is collected within the head. You will recollect, that when speaking of inflammation and its effects, I stated that effusion was commonly the result of inflammation of serous membranes; but I stated that effusion in a serous membrane, will take place frequently with a very slight degree of inflammation, and sometimes there is scarcely any to be discovered, perhaps there is none, at least we are justified in saying so. I mentioned that the same is the case in respect to sweating. A person may sweat in acute rheumatism from the intense heat of the body, but a person will also sweat in the agonies of death, and in extreme debility. So with regard to purging. Purging frequently depends upon an inflammatory state of the mucous membrane; but in other cases after death from purging no inflammation can be discovered, and the person has been free from tenderness during life.

Now chronic hydrocephalus illustrates these general remarks. In chronic hydrocephalus there frequently is no sign of inflammation to be discovered; sometimes there is; sometimes it is pure dropsy, independent of inflammation; at least there is none that can be made out, and it is a very slow disease. Sometimes the affection is connate—born with the patient; sometimes it does not appear before the first or second year, and it has continued during a tolerably long life: a patient has lived with dropsy of the head till he had attained his 54th year. Gall and Spurzheim mention the case of a woman who arrived at this age in whose head four pints of fluid were found, and the patient did not then die of that disease, but of enteritis. When the water exists in this chronic form, its amount is sometimes very considerable. In the acute disease, where the effusion is the result of inflammation, there is seldom more collected in a child's head than from two to six ounces; but in the chronic form it is frequently so considerable that the bones separate, and the sutures and fontanelles do not close. Dr. Baillie in one of his plates, represents the appearance of the skull in this disease. The fontanelles are much larger than they should be, and they sometimes acquire a very considerable size. The sutures may be found distinct, each bone in some cases being separated. These are very common appearances, and such as any one may see.

Separation of the Bones after Cohesion.—Now there is nothing at all surprising in the circumstance of the sutures gaping and the fontanelles spreading when the water is collected, provided the bones have never cohered; but it is ascertained that the bones and sutures will open after they have been firmly united together. Dr. Baillie, in the fourth volume of the Transactions of the College of Physicians, mentions an instance of a boy, eleven years of age, in whom the fontanelles had closed and the bones become well united by sutures; but in whom they all separated again. Mr. Ford, who was formerly an eminent surgeon in London, observed the same occurrence in a boy nine years of age; they separated six weeks before his death. But it is to be remarked (I do not know that Dr. Baillie was aware of it) that in his (Mr. Ford's) case, the serrated processes were much fewer than usual: so that the bones had far smaller points of contact than they ought to have had, and separation, of course, would be more easy. It is most probable, that if the water had collected in persons in whom there was the natural quantity of serrated processes, the bones would not have separated. I think, that, in the instances I have met with of this affection, I have made the same remark as Mr. Ford; and such being the case, we can conceive that separation would be more easy. Until I read Dr. Yates's book on hydrocephalus, in which Mr. Ford's case is mentioned, I thought that Dr. Baillie's was the only instance on record.

Quality of the Fluid.—Now in this disease the fluid is almost always perfectly limpid; it is generally as clear as the purest water. On being analysed, it is found, as you may suppose, to contain scarcely any salt and scarcely any animal matter.

Morbid Appearances.—When the water collects to a very great amount, it is usually found in the ventricles, and they are therefore expanded, so that the whole brain becomes like a bag. On removing the cranium you find the brain spread out to a great extent—you find the fluid collected within it, and, on making a section, you find that the brain is exceedingly thin—not thicker than paper—and the fluid immediately gushes out. You see a large bag; and this led to the erroneous belief former

ly, that in this disease the brain was destroyed, as though the person had lived, eat, and drank, without a brain. However, although some made this assertion, and believed that a person lived and talked without a brain, others knew the contrary to be the case; and Morgagni reproaches those who published so absurd an opinion. If the fluid be collected above the brain, and not in it, I know that then the mistake may easily be made; and it may be imagined that the brain does not exist. I was present at an inspection of this description, where a child had a very large head, and had evidently laboured under hydrocephalus. On removing the bones, cutting into the sac which contained this immense quantity of water, and letting off the fluid, there was nothing more to be seen. On looking into the membrane which contained the fluid, it was like looking into a well, and there was nothing to be seen resembling brain; and it was immediately said, "here is no brain." But as the girl had been eating and drinking, sitting up in bed and talking like other children, till within a few days of her death, it was impossible; and we found the brain under all this fluid, perfectly sound. There was a large cyst which had existed upon the brain and spread itself out in every direction, so as to produce an enormous size of the head, and there lay the brain, quite little comparatively, at the very bottom of this cyst. The distention of the cranium, be it ever so great, is generally equal in all directions, but now and then it is not so. Gall and Spurzheim say that they saw a learned and well-educated man with a forehead so high that it must have contained three or four pints of water, while the rest of his head was not of an unusual size. The only effect in him was that he very often fell asleep. Now and then the bones of the internal ear become separated by the sac, so that deafness is produced. You will also observe another effect within the skull. The convolutions of the brain being enveloped by the collection of water, there is an irregular pressure upon the supra-orbital plates of the frontal bone; and therefore there is not that roughness, that irregularity which you see in ordinary cases. You know that the upper part of the orbital bone consists of so many depressions and elevations; but in this disease, as the convolutions of the brain are enveloped by water, you will generally find the upper part of the orbital plates perfectly smooth. The bones are sometimes thickened, but in a great number of cases they become thinner than natural. Dr. Gall mentions, that the head of persons in whom this disease exists to any extent, is generally scurfy; and since I read the statement in his book, I have looked out for this circumstance, and found the observation to be correct. The skin of the head is generally scurfy, in one part or other, when the cranium is greatly distended.

Occasionly in this disease the bones do not give way, there is no dilatation at all of the cranium, and it is said that they are even smaller than natural. I presume, in these cases the bone cannot give way, and, of course, in such instances the brain must shrink; the bones, however, generally do give way.

Size which the Head may attain.—The size of the head is occasionally enormous. There was a child, named Elizabeth Phillips, in St. Thomas's Hospital a few years ago, who was born with a head as large as that of a child seven months old. The bones were all distinct, her hair was scanty, and there was an abundance of scurf on her head. She was fat, and as lively as other children of her age, and there was no symptom indicating the existence of fluid except the size of her head. Though she was only eleven months old, the circumference of her head was twenty-seven inches five-eighths; from the top of the nose to the occiput, it was twenty-two inches; and from ear to ear, across the top of the head, it was seventeen inches one-eighth. When you consider the age of the child, the measurement was enormous. There was a poor man in St. Thomas's Hospital a few years ago, but who has now become a celebrated character, in consequence of a cast of his head having been deposited in almost every museum, whose head was thirty-three inches in circumference, twenty-two inches from ear to ear, and twenty-three inches and a half from the nose to the occiput. He was thirty-three years of age, and his cranium was ossified in the sutures. Of course the bones had separated originally, but fresh bone had afterwards been deposited in the membrane between the frontal, occipital, and temporal bones; so that he had as perfect a cranium as any one else. In him there were found as many as ten pints of water—nine pints on the brain, and one pint in the lateral ventricle; and what was curious in him was, that the corpus callosum was split by the distention. An opening existed in the posterior part of the falx, through which the water, in all probability, had passed from within to without. I say in all probability, because, in a great number of cases, the water is contained in the ventricle; and it is probable that, in this instance, it had made its escape. His brain only weighed two pounds, fourteen ounces and a half; where-

as the water in and upon the brain amounted to ten pints.

Andral mentions that water has been found in the fifth ventricle. I believe it is sometimes rather a quirk to ask where the fifth ventricle is situated, but there is a little space which may be called the fifth ventricle; and Andral says that Broussais has found dropsy even of the fifth ventricle.

Effect upon the Mind.—In this disease the mind is generally weak; sometimes there is downright idiotsy, but, as the brain is only expanded, and not destroyed, there is occasionally considerable mind. Cardinal, the man at St. Thomas's Hospital, had occasionally epileptic fits, and his mind was certainly weak. He prided himself on being able to say the Belief, but he generally stumbled when he got to Pontius Pilate. If he were asked his duty towards his neighbour, he got on pretty well at first, but he soon made a trip; and it was also observed that his memory was not like that of other people. He was an idiot—at least, what is commonly called a soft sort of person. He was also exceedingly vain, and pretended to have violent sexual desires, and, notwithstanding his great big head, he used to try to get hold of the nurses; so that one day we heard he had been behaving very badly,—and then he would say the Belief to you. He could walk, of course; but being top-heavy, and having thin spindle legs, he did so with the greatest caution, lest he should overbalance himself. Now and then, if he were not delirious, he was so ill tempered that we could scarcely manage him.

It is right, however, that I should mention, that this disease may exist when there is no brain. Dr. Gall asserted at first, that when there was water in the head the brain was always present; but he corrected this statement in a subsequent edition of his work, and acknowledged that people were sometimes formed without a brain. In fœtuses, where there has been nothing but the medulla oblongata, they have sometimes had water in the head instead of brain; not that the brain has been destroyed by the water, but it has been deficient by original formation; the fœtuses have been monsters. In these cases there are generally no marks of inflammation; but you will generally find at last that there is irritation; you will find the vessels of the head enlarged, and the head itself hot; the person has more or less feverishness, and emaciation occurs, which is generally followed by death in the course of a year or two. In the greater number of cases this is the course of the affection; but you see other cases where no such thing occurs. In Cardinal there were no signs of inflammation at all. He eat and drank just like other people.

You will find in the Edinburgh Medico-Chirurgical Transactions, vol I., a case recorded in which a female child only 7 months old had a head which measured 29 inches and a half in circumference, and from which there was let out after death 236 ounces of perfectly clear fluid, such as is usually found in chronic hydrocephalus. This fluid was contained in a bag; but then the brain was split in two. Now you of course know that when the brain is first formed it is not in one part, but it afterwards unites, just the same as the portions of the lips. The portions of the lips, however, do not always cohere, and precisely the same occurrence takes place with regard to the brain, so that it remains divided — it is never united, and the whole of the ventricle forms a continuous bag with the arachnoid and the surface of the brain. And in the case to which I have just referred, on opening the head a ventricle was seen at the bottom, simply from the brain not having united, as it should have done, in the progress of the formation of the body. This was merely a case of hydrocephalus, water in the ventricle, the ventricles not having united as they ought to have done. The rest of the brain was of course at the bottom. There is, however, a very curious instance mentioned of the actual rupture of the brain. In the case recorded in the Edinburgh Medico-Chirurgical Transactions there was a deficient cohesion of the brain; but in the 8th vol. of the Medico-Chirurgical Transactions of London a case is mentioned where, in this disease, there was so great a distention of the brain, that at last it actually ruptured; both the brain and the membranes gave way under the posterior fontanel, and an external swelling was seen to be produced, so that the whole head became œdematous, and fluid oozed from the mouth and nostrils for 11 months. The child lived that period after the giving way of the brain, and even of the dura-mater; but of course it must have been very local.

Treatment.—In this disease medicine, I believe, is perfectly useless; but still mechanical means have been found very beneficial. If a puncture be made, and a large quantity of fluid let out, the child may die very suddenly, almost immediately; but if a minute puncture be made, and a small quantity only let out at a time, it may be done with perfect safety, and the head has been known to be reduced; but I do not recollect having read of a cure till lately. I never saw a case of this kind; but it has been said very lately that some cases have been cured by a puncture being made, and a certain quantity only of fluid

let out at a time. Another mechenical means also has been of very great use, and in some degree I have witnessed it myself—that is, bandaging the head. It should be bandaged nicely, so as to have an uniform pressure throughout. I believe it was Sir Gilbert Blane who first suggested, or first attracted particular notice to this remedy. He has published some cases where, if there were not complete success, yet very great benefit was derived from the plan. I rather think it is said that some cases have been cured by bandaging. Some surgeons, instead of applying bandages, have employed adhesive plaister, so as to confine the head, and this has answered still better. The only case in which I have had any experience of this was at St. Thomas's Hospital, in the child of an Irish woman. I directed the head to be bandaged; and it not only became smaller, but the general health was very considerably improved—indeed, more than the head. Unfortunately, the bandage was neglected, and the child immediately grew worse. The bandaging was again attended to particularly, and the child again improved; but I do not know the result of the case, because the mother took it away. Supporting the body, and pressure of the head by means of equal bandaging, appear to be the proper means of treatment; and, I presume, after letting out a certain portion of the fluid, it would be well to employ bandaging—thus carrying on the two plans together.

I mentioned that in this disease the brain is not destroyed, that the convolutions are merely expanded, and the ventricles dilated; and, therefore, you are not to be at all surprised that the mind exists. Persons may be expected to be a little weak on account of something being in the brain, but nothing more. There is a case, however, mentioned by the present Dr. Heberden, in the Transactions of the College of Physicians, in which a chronic accumulation of water occurred in a man 80 years of age: at least eight ounces of fluid were found in one ventricle, and four ounces on the brain, after death. There was some little organic disease about the plexus choroides, a solid tumor of calcareous matter, and ossification of the basilar and internal carotids, and their chief branches. Now this man, although twelve ounces of fluid were found in his head after death, had suffered nothing except that he had been deaf many years, and which many persons of 80 are, and once or twice he had vertigo till six weeks before his death, and then he had a fit, from which he quite recovered, and was perfectly well, before he died. This shews how nature will accommodate herself to an inconvenience if it come upon her gradually. There is a singular circumstance mentioned by Morgagni: a considerable quantity of water pressed on the brain, so much that had it taken place suddenly, death most probably would have occurred; but from its taking place very gradually, no further mischief was produced.

AN ESSAY ON FEVER.

By Thomas Spence,

Assistant-Surgeon, 52d Regiment.

[Concluded from page 415.]

Remittent fever may arise from malaria, cold, or other causes; and, having continued of this type for some days, may assume the typhoid or continued form. This circumstance being admitted, my position will be established, that there are no specific differences in fevers, but only variations in symptoms, according to existing peculiarities: and to this must follow assent to the doctrine of non-contagion; for I fancy no one of the present day will attempt to prove that ague is a contagious affection—and it is typhus fever as much as the animal of different colours is the same chamelion.

Remittent fever, then (for I suppose it must still go by the old name), is a most serious variety, and particularly in a tropical climate. I may say it never exists without disease of one or other of the internal organs, and I am supported by facts in stating that the brain, liver, and stomach and bowels, are invariably implicated. This form of fever generally sets in with intense headache; the patient will complain that he is giddy, and that the head feels heavy and as if a tight cord were pressing upon the brain; the least motion, even setting the foot to the ground, causing extreme agony. There is aching and weariness of the limbs, cramps or pain in the calves of the legs, nausea, and vomiting (at first of bilious matter, but ultimately of whatever is taken into the stomach); the skin is sometimes burning and parched, at others moist and clammy; the pulse, for the most part, is hard, bounding, and quick, but again it may be soft, compressible, and but little accelerated; the eye is heavy, and the conjunctiva generally tinged with yellow; the expression of

the countenance is dull, and gives the appearance of intoxication; the tongue is covered with a thick yellow fur; the bowels are generally relaxed; the urine is dark, scanty, and deposits, on standing, a thick sediment. The patient can seldom bear pressure over the abdomen or side without pain, though perhaps, until the examination, he may not make much complaint. In the progress of the fever he becomes delirious, raving about subjects the most unconnected. Occasionally, however, he will recognize friends, express his wants, and answer questions rationally. The eye becomes glazed, and without expression; the tongue dry and brown, except during the remission, which, in different cases, is more or less distinct—in some cases succeeding the febrile paroxysms regularly twice a day (morning and evening), in other instances the remissions are less definite in the period of their occurrence or number during the day. As the disease advances, the symptoms increase in violence and the strength sinks. After each paroxysm the exhaustion becomes more manifest, till at last articulation becomes indistinct, the delirium low and muttering, the sphincters lose their power, and the pulse is exceedingly rapid and small; and then succeeds a train of ominous signs, which are well known to be the forerunners of death. Remittent fevers, particularly in India, often run a very rapid course, frequently terminating fatally in three or four days, or less. In England, too, patients sometimes die within a week after their admission. A very common result of remittent fever, in a tropical climate, is a sudden determination of blood to the head; in which the patient, having perhaps been previously convalescing, becomes in a moment comatose, from which I have seldom seen any means capable of recovering them. This usually takes place in old drunkards, or those who have indulged freely in the pleasures of the table.

The treatment of remittent fever is exceedingly difficult; and although general principles may be laid down, there is required, to lead to a successful result, much both of experience and judgment in the application. The great question for consideration is the propriety of general bloodletting. The symptoms and pathology both indicate the necessity, but it cannot always be employed with benefit; for it often happens, that, in this form of fever, even very robust muscular young men faint from the loss of a few ounces of blood. I have also known cases in which the operation seemed indispensable, where it was done with a sparing hand, but which induced such a degree of debility as to render the patient unable to struggle through the disease: nevertheless, other cases of this complaint have occurred to me, where the most decided success has attended free abstraction of blood more than once repeated; therefore I would warn the inexperienced to be guarded in this particular. It is to be remembered, that the repeated succession of febrile paroxysms has a most debilitating tendency, but also that inflammation of very important organs exists, which, to proceed unsubdued, must terminate in death. The rule can, then, only be to proportion the depletion to the powers of the individual; for although it may not be carried to the extent necessary to remove the disease, it will have a great influence in assisting the operation of other agents. Local bleeding will, to a greater or less extent, be applicable, nay, indispensable, in every case where general abstraction has not been had recourse to. In some cases, great relief has been experienced from the application of from four to eight dozen leeches to the head or side; and even spare habits have borne this, without much increasing the debility. Of emetics I cannot speak favourably; for irritability of the stomach being generally one of the most distressing symptoms, and exceedingly difficult to allay, it would be imprudent to administer medicine having a tendency to increase the irritation of the mucous membrane. In my early practice I adopted this measure, but was soon taught the inefficacy of it. Mercury, in this variety, ought never to be withheld, as it gives the patient the only chance he has of recovery: it should be administered with only one object in view, from the accomplishment of which nothing ought to distract the attention; for until the mouth be affected more or less, according to the severity of the complaint, the patient cannot be considered out of danger. This object, so desirable, is not always easy to be attained; for it often happens that no other effect than ulceration of the gums is the result of large and repeated doses

of calomel, which is not of the slightest benefit to the patient. Again: the effect of mercury is often overcome by the disease; thus there shall be free salivation one half hour, and the tongue be parched and black the next. These are amongst the most unfavourable indications, as I think all the cases have terminated fatally where they have occurred: but if free and continued ptyalism can be established, the patient will, in all probability, recover. To effect this end, I would recommend, in India, twenty grains of calomel three times a day; but in Europe, where the disease runs a less rapid course, three gains every three or four hours will be found sufficient. Should the stomach reject medicines, mercurial frictions must be adopted. Of purgatives, little need be said, as the necessity of keeping the bowels open once or twice a day must be evident to every practitioner; however, it will be well to bear in mind the inflammatory state of the mucous membranes, and therefore the impropriety of administering drastic purges, which will invariably do harm. Castor-oil, or rhubarb, are medicines best adapted, to merely remove vitiated secretions without debilitating the patient or irritating the intestines. The head should be shaved, and kept cool. The body, in the hot stage, should be sponged with vinegar and water; the diet must be of the simplest nature. Blisters to the back of the head and neck may sometimes be beneficial, and being applied to the pit of the stomach, frequently allay the vomiting. There remains one remedy which, under some circumstances, is beneficial—it is the sulphate of quinine; but it requires to be given with extreme caution, and its effects narrowly watched: I would advise that the administration should never be left to attendants, but that each dose should be given under the superintendance of the medical officer himself, and that the patient should be seen frequently between the periods at which it is taken, so that it may be ascertained whether benefit or evil is the result. The circumstances which authorize its exhibition, so far as my experience enables me to judge, are moisture of the tongue, a relaxed, soft, and perspirable state of the surface, and perfect freedom from pain in either the head or side. From this rule I have not had occasion to deviate, and have often been gratified by the amendment of the patient. It may be urged as an objection to this method, that the necessary favourable state will seldom be found, and that even in the remission there may be pain in the side or head. This I grant; but again repeat, that although the state may be unfrequent, and is always transient, still it does occur, and therefore requires the greater assiduity on the part of the medical attendant.

There occurred to me, in the autumn of 1828, whilst serving in India, several cases of remittent fever; one of which I may adduce to illustrate some of the above-mentioned principles. A remarkably fine young man, of the 6th regiment, who possessed every indication of physical strength and vigour, was attacked with fever of the bilious remittent type: there existed every apparent reason for copious depletion, and I felt more determined upon this measure from having attended him in an attack of inflammation of the lungs about eight months previously, for which he lost eighty ounces of blood at two bleedings—viz. fifty at 8 o'clock, and thirty more at 11—with the most decided benefit, and was at his duty in the course of a week or two; but such a difference was there under the two affections, that scarcely had I taken four ounces of blood when he fainted, and continued to labour under its effect for some time. However, by means of leeches considerable benefit was derived, and the system was in three days under the influence of mercury, the ptyalism profuse, and I had every reason to think him out of danger; but the following morning, in going into the ward, I found him laying on his back uncovered, comatose, and the salivation stopped. I opened the temporal artery, put him in a hot-bath, applied sinapisms to the feet, and blistered the head, but to no purpose—he was dead before the day was over. On examination, there was considerable turgescence of the cerebral vessels, and slight effusion into the lateral ventricles; a great quantity of blood was found in the vessels of the liver, and the gall-bladder was full of thick black bile, resembling pitch. I was never able, even upon strict investigation, to discover whether he had been guilty of any imprudence during the night to have checked the salivation, or whether it was the unavoidable effect of the disease: indeed, were it neces-

sary, I could enumerate many cases which would fully demonstrate the unmanageable nature of these fevers. One gentleman, of very stout habit, was appointed to a lucrative situation, when his duties were less active and his living more generous than formerly he had been accustomed to. He was attacked with bilious fever, in which the prominent symptom was extreme debility; being, in one or two days, unable to stand and scarcely to turn in the bed. He was treated with great judgment by the surgeon of the regiment to which he belonged, and was believed to be out of danger; but, on the seventh day of his indisposition, he became suddenly affected with determination of blood to the head, and died in three hours. I was, in the summer of 1829, exposed all night in an open boat, between Bombay and Pancode; and not having expected such a circumstance, was unprepared by clothing to resist the heavy dew which falls during the night in the hot season: for two days I remained in health, but on the third suffered a severe paroxysm of fever, attended with excruciating headache, which, continuing during the heat of the day, left me towards the evening apparently well. I was, during the remaining part of the march to Poonah, daily visited with a like attack, varying, however, in severity and length of duration different days. On the ninth, finding myself unable longer to contend with the disease, I was obliged to lay up, having intense headache, with pain in the right side, and at intervals considerable fever. Very free depletion, both locally and generally, with salivation induced by ℈j. doses of calomel, was had recourse to, and as the mouth became sore the fever gradually subsided; till, at last, the only indication I had of its presence was a slight flush of the countenance and brightness of the eye each day, unattended with any pain. I tried the quinine, but found it reproduce the pain in the side, and a tight heavy sensation in the head. My restored health, however, was of short duration; for, having been once affected, I was rendered liable to future attacks, of which I had two, of increased severity, during the three succeeding months, and, in October, was obliged to leave the country. The morbid anatomy of remittent fever is invariably to be found in the head, liver, spleen, and bowels; there will usually be great congestion of the vessels of the brain, and serum in the lateral ventricles; the liver generally much gorged with blood and increased in magnitude; the spleen is often double its natural bulk, and the structure much softened. The gall-bladder of those who died in India was much distended with dark bile; the peritoneal coat of the intestines, especially about the ileum, was on some occasions exceedingly inflamed, and the mucous membrane of the same, without any exception, was highly injected. If the case had been of any considerable duration, ulceration of the ileum and colon was a sure part of the morbid appearance.

The remittent fever is frequently seen to pass into the intermittent, which is the least dangerous, but often very tedious, form of fever. Of this there are several varieties, being distinguished as quotidian, tertian, or quartan, accordingly as they attack the person daily, every other, or every fourth day. The exciting cause of ague is for the most part an impure state of the atmosphere, arising from the decomposition of animal and vegetable substances, separately or conjointly; and from this necessary state of the air having been met with most frequently in the vicinity of swampy grounds or lakes, it has been termed marsh miasma: but I have nevertheless met with intermittent fever on a table land 5000 feet above the level of the sea, and a friend of mine had a great number of cases in Cutch, where the soil is dry and sandy.

Relative to the symptoms and treatment of intermittents, I have nothing interesting to remark, as when uncomplicated with other diseases, they are generally managed without difficulty. In a tropical climate ague frequently depends upon disease of the liver, which may easily be ascertained by investigating the state of the functions of that organ. In these cases little benefit can be obtained, except by the use of mercury, &c. &c. The quinine, in such instances, will generally prove prejudicial. The truth is, that cases of this description are so liable to recurrence, and the effect upon the constitution so distressing, that it is the duty of the medical officer to warn his patient of the necessity of a change of climate, which is the only chance of getting rid of so harassing a complaint.

CHOLERA IN PARIS.

ALLEDGED IMPORTATION OF THE DISEASE INTO FOLLY ISLAND.

Extract of a Letter from M. Moreau de Jonnés, dated Paris, 21st. Dec. 1832.

"The cholera leaves us very reluctantly. Its effects, however, are reduced to a narrow compass; but it still continues to exist in Paris, and most probably also in England, notwithstanding the cessation of your reports.

"During the month of November the disease produced the following casualties, viz.

	"ATTACKED.		DIED.
In their own houses.....	32	..	16
In civil hospitals.....	22	..	11
In military do.....	13	..	5
Totals	67		32

"The present month will give somewhat larger numbers.

"The greatest part of the private cases have occurred in the *Cité* and in the oldest quarters of Paris; those first attacked.

"The disease still lingers in four of the departments.

"An official letter, just received, gives information of the following well attested fact of importation of cholera.

"The city of Charleston and the whole of South Carolina had not yet experienced any attack of cholera, when, on the 31st of October last, the American brig Amelia, coming from New York, where the disease prevailed at the time of her departure, was forced to put into Folly Island, seven leagues from Charleston. On her passage she had lost several of her passengers and crew by cholera. With a view of getting some articles of merchandize on shore, four sailors, residing at Charleston, usually employed as salvage-men about the wrecks which take place on the coast, were sent on board the Amelia. The whole four were soon after attacked with cholera. One died in eight hours, and the others in the course of two days.

"The municipal council of Charleston gave strict orders forthwith to prohibit all communication with Folly Island; but there is reason to fear that these orders will not be faithfully executed."

CHOLERA IN LONDON.

WHAT HAS BEEN ITS EFFECT ON THE MORTALITY OF THE YEAR?

To the Editor of the Medical Gazette.

SIR,

You have, for some months, weekly favoured your subscribers with an account of the mortality in our metropolis, as derived from the "Bills;" and I am confident that there are but few among them who have not felt great interest in their publication. They have thereby been enabled to observe the comparative prevalence of diseases during the different months of the year, as well as to form a judgment respecting the progressive increase or decrease in the cases of cholera.

The pestilence has now so far declined as to permit us to hope that its most formidable ravages are past, and, if it do return, that it will be in a great measure "shorn of its terrors;" as was falsely predicted of its first irruption by some of those speculative philosophers, who, in their own conceit, saw more deeply into futurity than others, who had as much experience but less presumption.

This year, which will form an era in the history of the diseases of this country, is now drawing to a close; and it is still a question among many, both in and out of the profession, whether the average annual rate of mortality be increased or diminished, notwithstanding the destruction occasioned by the malady during the summer months. The total deaths given in the Bills of Mortality for the year 1831, exceeded 26,000, which would give an average of about 500 per week. Might I venture to ask you, Mr. Editor, or some of your numerous correspondents, to furnish, through the medium of your valuable publication, the data necessary to the solution of this interesting statistical question? MEDICUS.

[We beg to refer our correspondent to the account of the mortality of the year just ended, given in the last page of the present Number, by which he will perceive that the burials within the "Bills" exceeded those of the former year by 3269. The deaths from cholera are stated to have been 3200, so that it would appear that the annual mortality has been increased almost in the direct ratio of the ravages of that disease. The total number of burials last year is reported to have been 28,606, being about 550 per week.]

CHRONIC BUBO.

To the Editor of the Medical Gazette.

Sir,

Being extensively engaged in the management of venereal patients, I have lately met with several obstinate cases of chronic tumors in the groin and upper part of the thigh, remaining after gonorrhœa. These tumors resemble ordinary sympathetic buboes; but, instead of disappearing after the removal of the gonorrhœal discharge, they remained stationary, and resisted every mode of treatment which I adopted. I applied leeches, and gave powerful and repeated purgatives; and in some cases this was followed by a course of mercury—but all to no purpose. If this should meet the eye of any medical man who can recommend any thing which he has found practically useful, perhaps he will be so good as to communicate it through the medium of your journal.

As a constant reader of the Medical Gazette, I will take the liberty to say (although totally unconnected with the present communication), that the very able, liberal, and gentlemanly manner in which it is conducted, justly entitles you to the support and patronage of the profession: and this I may say, as an anonymous correspondent, without any imputation of interested motives.

I remain, sir,
Your most obedient
humble servant,
Medico-Chirurgicus.

December 29, 1832.

[We shall feel obliged to any correspondent who will comply with the above request.]

PROVINCIAL SCHOOLS, YORK.

(From a Correspondent.)

We understand that a general meeting of the medical pupils of York has taken place, for the purpose of endeavouring to induce the medical profession of that city to establish an anatomical school. The meeting was attended by nearly all the pupils, and the subject appeared to excite a lively interest among them. Since the meeting, some movements are visible among the medical practitioners; but whether they will eventually provide an anatomical school for the pupils is still left in doubt: we are, however, in hopes that some decided step will be taken towards affording the pupils every facility of acquiring that knowledge which they so judiciously as well as justly seek for. It is scarcely necessary to intimate the necessity of sound anatomical knowledge; to repeat the arguments in favour of it is but to retrace what has been already laid down by the most celebrated anatomists. If the pursuit is one which demands attention, the sooner it is entered on the better; and as there is much time during an apprenticeship which is too often squandered away, we can see no plausible reason why masters should not endeavour to present to their pupils a study which might be the means of beneficially employing that time.

But though the opportunities of acquiring anatomical knowledge may in some places be ample, yet we are led to suspect that many pupils are prevented enjoying those opportunities by the assiduous attention which too many masters require the pupils to pay to that part of his business, which is of more importance to the master individually than the information which his pupil acquires, namely, the dispensing of medicines. Much has been said with regard to the unjust manner in which pupils are sometimes treated by their masters, and therefore there is no need that we should repeat what has already been often brought before the medical public. The medical profession of York have as yet been spectators of the provincial schools around them; they have the opportunities of seeing what can be improved and what can be done away with. But we sincerely trust that they will no longer be *mere* spectators, but that they will be induced to impart to their pupils that knowledge which, as the general meeting of the pupils undeniably indicates, they are so anxious to obtain. In conclusion, we consider every medical gentleman who has pupils under him bound, by the same indenture which unites the pupil to the master, to afford his pupil or pupils every opportunity of acquiring a knowledge of anatomy and medicine, as well as of those branches of science which are connected with them.

LETTERS FROM A LONDON FOOT PASSENGER

TO A

TIDE-WAITER AT BRIGHTON,

Both M.D's.

London, Dec. 27th, 1832.

My Dear Friend,

When we chatted together the other morning on the sea-beach, I could not find time to tell you half of what you wished to know about London physic, for every wave that broke at our feet claimed (as you remember) my "special wonder," and so our dialogue was interrupted. Yet, believe me, I liked your questions. Physic, in its wide sense, as you and I are inclined to view it, is surely not "a bore." I could have talked to you on the "state of medicine," and on the "state of our profession," for hours together, had time permitted, and had I not promised to gather shells and sea-weed for my children. Why should not physic be discoursed where the air is freshest, and the skies are widest, by those who are in earnest in the pursuit of it? Is it not nature? Is it not charity? Is it less mysterious than the ocean tides? Who has fathomed its depths? How provoking in their cause are those ceaseless tumbling waves, to which I listened half the night, from the room in which you lodged me. How grand in their constancy! Is the blood's motion less so? Why! it is by the blood that we know the ocean; by the blood in our eyes, heart, ears—brain, if you will. Where could we muse fitly on life and death, (and this, my friend, is physic) excepting by night, and on the lone shore? Physicians, you know, are not physickers, not mere prescribers of drugs. There is nothing done in the world with which we have not to do. No stir of the elements is too rude for our philosophy, which can watch by the cradled infant as it sleeps. In the thunder-cloud, as in the floweret leaf, do we not learn physiology? I am writing drily now. My remarks apply to physic in its MATERIAL sense, to its "*facts*," as they are termed by the matter-of-fact dogmatists, who have of late years in this country monopolized the trade of physiology. Physic, as a branch of natural science, may be illustrated by all the *facts* in nature, and this with no help from sentiment; but physic without sentiment is Apollo stripped of his sun-shine, and thus we come again to the cliffs and the sea-beach. I took your questions home with me, and *à propos* of "sentiment," I will begin by telling you that our profession has of late been much disparaged by the want of it. "Sentiment," by giving a wider range to physic, would bring more *facts* to those who clamour for them exclusively, while broad analogical reasoning on the "*facts*" could not, under such an influence, be denounced as "anti-practical." We have not, I tell you, enough of *sentiment*—not half enough among us. Forgive the phrase! it is generally mawkish, but not as I now use it. There is "no soul," little or any, now-a-days, in the conversation and literature of physicians as a class. Shrewdness—hard headedness—yet not so much, even of them, as you would expect to find among us, worldlings as we are; but the grace and the delicacy of the classical mind, expanded, as in the physician's education, by all nature; softened by her thousand gentle influences (with which, who than he should be more conversant?): these, our peculiar attributes, it is our conventional habit to conceal from the public and from each other. This is a pity; for in our studies, as we have lately followed them, there is no severity which can be pleaded in lieu of grace. All that we utter in consultations is vague, and much of it is not true. I shall have more to say to you on this head of "Sentiment,"—a word with a real meaning, though denied by those who are not physicians—but let it rest for the present; perhaps *we* but share the reproach to which I have alluded with the entire public of mercantile aristocratic England; of which public, after all, we but form a part. Still it is certain that we want "sentiment," and that we must have more of it, if we wish to thrive.

You ask "what is newest in medicine," and "what is the state of the profession?" There is a crisis in both. It seems just now absurd to say so—but, like sundry other bodies of men, we are on the "eve of a revolution." There is a crisis imminent both in the science and politics of medicine, which it is well worth our while to study.

In conversing with you ten days ago, I threw out some hints of what was getting ready. I will tell you more in the letters which (leisure permitting) I propose to address to you, by the same

post that carries the weekly "Medical Journal" to your door; and, to save trouble and postage, the letter shall be made legible for you by the printer. I tell you, for the present, that the old principles of medicine are shaken; or rather, that we are now first beginning to establish *principles* in medicine. Do you remember ANY "principles" in our days of studentship? *Principles*, I mean—not *facts*. The dull, dry, sneering physiologists, who were then "lords of the ascendant," were never in want of "*facts*," true or false. Do you remember one *principle*, excepting the circulation of the blood? and THAT was made no use of in physic. The great principle, in which you and I were educated, of "*This* cures *That*,"—the "*assertion system* of physic"—is fast failing; for, on questioning its detail, it is found that in physic, as in love, "Men were deceivers ever." Theory (do you remember that poor stigmatized word?) is actually to be invited to keep the "*facts*" in order. The physician is henceforth to be allowed to reason; and his reasonings are to begin and end with the human body—with the body, living, entire, in all its several structures and functions, and in their combination; again, in all its relations with the world abroad. Now to such pathology as this where is the clue? What is universal in the body, conducting us to every structure, and to every particle of all structure? What unites them all with each other? what but the blood? What connects them, again, at every instant, all and every one, with the external world, with the universal air, with all that the air brings of influence? What in the body is nearer to external forms of matter, their impressions, and their agencies, than the blood? the blood in the lungs, the blood in all structure. The Nerve, you may say—but still the blood—for what is a nerve without its blood? Here comes the question! Let us keep it for another day; for the present, know that there is to be a new pathology, which, though supported by, and beginning from the blood, will rest on a basis not less "solid" than that of any of the systems which have preceded it; for in the extreme textures of the body, those in which the operations of life begin, who will affect to distinguish between the *solids* and the *fluids*?—of the blood, therefore, in its great anatomical relations—of the blood in structure—of the blood at every instant exchanging principles with the air, communicating again with the external world by myriads of absorbing currents—of the blood, living, and everywhere continuous,—not of the blood, a few ounces of it in a porringer, no longer in communication with all particles of all structure, receding at every instant from life, not of *this*, the *chemist's* blood, but of the entire living blood of the living body, of the blood of the physiologist, it will be my hint to speak, if I discourse with you of the new pathology. Will you listen, if I talk? Believe me (without the jest), blood is not a dry subject, though the dull, dry men would make it so. If I write a letter to you, then, about the "state of physic," it will be a letter about the blood.

Secondly (though this is not an essay, but a letter), with respect to the "state of the profession," you know (for you read the newspapers) that all Corporations and Charters are to be overhauled in the reformed Parliament; and it is supposed by many, hoped by some, that this inquiry will be extended even to the College of Physicians! This touches *us*. In the old book which I took away with me from your library, I found much that was interesting about our Charter, and will tell you (always provided that I have time for it) what inferences I drew from what I read. How little any of us know about the charters, and bye-laws, by which we hold our privileges! I am quite sure, from the very little I *do* know, that things will not long be suffered to remain as they are, in the administration of our college government. Here I shall have no difficulty in convincing you; so perhaps I may begin with the crisis in our politics, that I may find you more disposed to lend an attentive ear to the "new pathology." If I become didactic, remember that you are but a coasting trader, and that in lading from the port of London, you must be content to receive your cargo from Thames craft. However, you know that in these matters I am too much in earnest for vanity, that, as the galloping prescribers say, "I REALLY DO LOVE my profession," and that I am the less likely to vex you with a "lecture," from having been, for how many years past, your sincere friend,

MANILLA.

ANALYSES & NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Dublin Journal of Medical and Chemical Science. Nos. V. and VI.

FROM several good papers contained in these two numbers, we select for analysis one or two which we think more than usually interesting. The first, a paper in the fifth number—

On the Application of the Actual Cautery in Vesico-Vaginal Fistula. By DR. EVORY KENNEDY.

Dr. Kennedy does not lay claim to the merit of having been the first to suggest the actual cautery in the treatment of this distressing complaint: that he very properly refers to M. Dupuytren; but he deserves well of the profession for the clearness with which he describes the mode of effecting it practically. The whole paper is worthy the perusal of the surgeon: we can only abstract some of its leading particulars. The instruments recommended by Dr. K. are, a flat female catheter, two female sounds, a speculum (the French two-bladed one), and the cauterising iron. If the fistulous opening is in the neck of the bladder or urethra, the speculum may be dispensed with, and three curved spatulas employed. The cauterising iron, which should be a little larger than the opening, ought to be of an oval shape, with its longer diameter disposed so as to correspond with the fistula. The margin of the cautery ought to be rather more raised than the centre, as our object is to touch the edges of the opening without injuring the mucous membrane of the bladder.

" In applying the cautery, we should place the patient lying forwards upon a table, with her limbs hanging over the ends, which should be near a window; elevating the pelvis upon bolsters or blankets placed under it. The limbs should then be separated, and the light thrown as much as possible into the vagina. Where sufficient light cannot in in this way be procured, a candle must be used. The speculum is to be introduced, and the lesion brought into view; a flat female catheter must now be passed throgh the urethra, and placed across the opening, within the bladder; taking care, at the same time, to reduce any protrusion of the vesical mucous membrane, and retain it out of the reach of the cautery. When the opening into the bladder is very considerable, or the catheter is insufficient, it may be necessary to pass a second instrument through the urethra to effect this object. I have found the introduction of two female sounds answer remarkably well, where a second instrument was necessary. As folds of the vaginal mucous membrane sometimes protrude between the blades of the speculum, the operator must guard against this, and examine whether the instrument be so adjusted as to prevent the vaginal passage being injured by the iron; taking care that the interior of the bladder is well protected, and the edges of the aperture completely within his reach. Having satisfied himself in these respects, he is carefully to introduce the cautery, heated to a white heat, and, having steadily touched the edges of the fistula, to withdraw it and introduce a pledget of lint dipped in cold water, after which he may gradually remove the speculum. The cautery must only touch the part, for if retained too long in contact with it, might produce a sloughing eschar."

The operation, Dr. Kennedy adds, is extremely simple, and may be performed in a minute. Nor is there any difficulty in the after treatment. It is only necessary to keep the bowels gently open, and to see that the patient remain quiet. The catheter ought to be passed once or twice a day, to restore the urethra to its proper functions.

We should add, that the operation may require to be repeated several times; and it may happen, after all, that we shall not succeed in completely closing the aperture. This, however, is not indispensable; a substitute for the adhesion of the sides of the fistula is found in the extension of its margin or lip across the aperture, thus forming a kind of valvular closure; and the patient is enabled to retain her urine perfectly for several hours at a time.

From a letter addressed to the author of the paper, by Dr. M'Dowel, of Dublin, it appears that this gentleman had been very successful in two trials of the cautery. In one case, the opening was of the extent of fifteen lines, and situate at the junction of the urethra and bladder. Two directors, introduced by the

urethra, were sufficient to protect the mucous membrane from injury by the cauterization. There was but little secondary fever, or local irritation. The patient was soon enabled to retain her urine for nearly three hours.

Another paper to which we wish to direct our readers' attention, is one in No. VI.:—

Mr. Adams on Congenital Hernia.

The author treats of both inguinal and cerebral hernia. Of the first he relates a very interesting case, in which the patient was a child only a year and a half old. The intestine had become strangulated about forty-eight hours before proper advice was had. Mr. Adams discovered the ailment, and performed the operation, which was followed by the child's complete restoration to health.

But the greater part of Mr. Adams's paper is occupied with remarks on congenital encephalocele; one case of which he has treated with success. The history and the anatomical characters of the complaint are well detailed; but we hasten to the *treatment*, which, we may observe, is, for the most part, that which has been successfully employed by Sir A. Cooper in *spina bifida*. The following is an abridged account of Mr. Adams's statement:—

"A. B., aged six years, a healthy-looking little girl, of a muscular frame; both her eyes affected with strabismus. A little below the tuberosity of the occipital bone is observed a tumor, about the size of a hen-egg, placed transversely; it stands out from the parts which appear to afford it attachment, yet is inclined downwards and backwards towards the neck. It has a pulsatory motion in it, synchronous with the beatings of the heart, and is influenced and increased in size by coughing and sneezing, which give to it an impulse or shock, during which the whole tumor becomes momentarily suffused with a sudden blush of redness. It communicates to the hand examining it a soft woolly feel, and gentle pressure does not give the patient uneasiness. The tumor, where connected to the head, is narrow, and when gently raised up, and its neck is viewed from below, there is an evident puckering of the skin, which denotes a narrowing of the bony ring, through which the hernia has, as it were, protruded.

"The skin enveloping the tumor is thinner in some parts than in others, and somewhat transparent. The whole surface of the hernia has an uneven aspect, just as if the convolutions of the brain caused these inequalities; and that the two posterior lobes of the cerebrum form the chief bulk of the protrusion, seems evident from the position of the tumor, and the even, vertical depression, which divides it into two equal lateral portions.

"I saw this child very soon after its birth, when the tumor was as large, and possessed nearly the same form as it does at present. The skin, however, was redder, more transparent, and in many points so thin that it appeared ready to burst and give exit to a pellucid fluid which it evidently contained.

"As the spontaneous bursting of the distended sac at the thinnest part of the tumor seemed inevitable, if it were left to nature, it was agreed that it would be more prudent to anticipate such an event, by making a timely puncture, by means of a small needle, into that part of the tumor which was covered by the thickest and soundest integument, and consequently into a part of the skin most likely to heal speedily after the fluid contents of the hernial sac were evacuated.

"This was accordingly done, and about half an ounce of clear fluid escaped; the sac now became flaccid, and a tumor, the size of a walnut, evidently formed by the posterior lobes of the cerebrum, was found to form the principal part of the protrusion; the small wound was carefully dressed, and the child kept perfectly quiet. No unpleasant symptom whatever followed this trivial operation. The next day, however, to our mortification, the tumor was just as tense and shining as before, and, after a few days, the puncture was again repeated, and with a similar result. In short, this little operation was performed on this child seven times with a fine needle, and once only with a lancet, and on this occasion alone did the operation *itself* seem to be followed with any fever or unusual restlessness in the infant. Once, however, after the effectual evacuation of the swelling by a simple puncture, it was deemed prudent to give a fair trial to the effects of pressure, which had been so much extolled by Salleneuve. On this occasion, pressure was effected by means of adhesive straps of soap and diachylum plaister, and a tight bandage; but convulsions came on in the night, and bandages and pressure were then removed, and were never afterwards re-applied.

"Under the simple treatment by puncture, the limpid fluid was frequently evacuated, the skin gradually became thicker and better able to support the distending force of the fluid, and as the child grew older, and the brain became consequently

firmer, and its membranes less disposed to watery secretion, the intervals at which it became necessary to resort to the operation of puncturing became longer; finally, the quantity of water was so trifling, that the operation became no longer necessary. The bulk of the hernia, however, was not diminished by the disappearance of the fluid, for the solid part of the tumor was formed of the brain itself, and probably a small portion of the cerebellum remained behind.

"Of this I feel satisfied—that if the tumor had been left to nature, it would have gone on gradually increasing in size until the thinnest part of the sac gave way by a fatal ulceration.

"The repeated and timely punctures in this case kept the disease from progressing until the child arrived at that state of development when the brain and its membranes became less disposed to watery secretions, and the powers of the constitution enabled the infant to provide a stronger skin, capable of sustaining the weight of the hernia."

There are some other papers in the new number, which we wish our space would permit us to notice; particularly Dr. Corrigan's, on the *Diagnosis of Aneurism of the Abdominal Aorta*, and some of Mr. Kane's *Contributions to Chemical Science*: but we may have an opportunity of recurring to the journal.

Medico-Chirurgical Transactions; published by the Medical and Chirurgical Society of London. Vol. XVII. Longman, 1832.

The readers of this journal have the advantage of abstracts of the papers read before the Medical and Chirurgical Society at the time of their being presented; together with notes of any thing important which may have been elicited, in the form of remarks, from the members present. We thus devoted many pages, in the course of last season, to the contents of the volume of the Transactions which has but very recently issued from the press. Besides this, we have transferred into our pages, in a condensed form, one or two of the papers which deserved or admitted of a fuller account than we had previously given, and copied two very curious drawings of the uterus. The fulness of our previous digest of the papers, *seriatim*, renders it superfluous for us to do more than allude to the high claim to attention which they offer when thus presented to us as a whole. The names of Travers, Brodie, Lawrence, Langstaff, M. Hall, and many others of scarcely inferior note, appear in the list of contributors; and, upon the whole, the volume may be pronounced one of the best which has appeared for several years. One paper, though very important, we have not attempted any account of—we mean that by Mr. Travers. It consists of "Observations on the Local Diseases termed Malignant," and is a sequel, constituting Part iii. of a paper published in the fifteenth volume of the Transactions. This latter circumstance, together with its great length (for it occupies not less than 122 pages of the volume before us), and the elaborate nature of the details, have prevented us from undertaking an analysis, which we are satisfied could not convey any adequate notion of this valuable essay.

The papers read during the present season, of which we have given full reports, have also been of an interesting description, and promise well for the character of the Society.

MEDICAL GAZETTE.

Saturday, January 5, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

FRENCH SYSTEM OF CLINICAL INSTRUCTION.

"*Malheur, malheur à l'état qui a beaucoup d'hôpitaux!*" said Montesquieu, in one of those fits of French philosophy which led to such remarkable consequences. Previous to the French revolution, forty years ago, the state of the Parisian hospitals, and indeed of those institutions throughout France, was very deplorable: the *mot* of the learned jurist was almost justified, and the necessity for some change was apparent. This the spirit of the age attempted to effect—radically. It was proposed to *abolish hospitals altogether*; "liberty and industry, emulation and civilization, were to render man independent of such establishments. The days of former times were to be restored, when their existence was not required;" but our philosophers

failed in making due allowance for the alterations which the elements of society had undergone in the progress of ages. Their enlightened theory was soon found wanting: it could not long stand the test of experience: and a feasible plan was sought by Government from the Academy of Sciences for producing a better order of things. In the list of the commission appointed by that learned body on the occasion, we find the names of Laplace, Daubenton, Lavoisier, Bailly, and Darcet; and the result was, that hospitals were—necessary, and to be encouraged.

It is not our intention at present to enter into the modes of arrangement adopted in the French hospitals, except so far as may be requisite for illustrating the system of clinical instruction which is followed in those establishments. In a recent number of the Gazette we made some remarks on this subject, which, however, were chiefly comparative, and confined to a few of the resemblances between the French and English methods: but as we have reason to know that a further and more detailed account of the economy of our Gallic neighbours, regarding *Clinique*, may not be unacceptable to many readers, we have determined to make a few observations on the rise and progress of this branch of medicine, with particular reference to its present condition in France.

The origin of clinical medicine may be traced to the early Greek physicians, but its career among them was short: theory and speculation soon threw it into the shade; and from this period may be dated the beginning of the dark age of medical science. Hospitals there were; but they were mere receptacles for the sick, not places in which medical education was conducted. The propriety of founding the practice of the art on observation and experience, was never once thought of. Thus passed the fourteenth, fifteenth, and sixteenth centuries in Europe: the whole extent of teaching consisted in the delivery of lectures and disquisitions upon subjects of the most abstruse, and at the same time of the most trifling, description. The consequence was, that diseases were treated according to preconceived notions, without any attention to the various external circumstances which so often alter and modify their type: to defend those notions from the charge of being ill-founded, was the chief object of the more learned practitioners.

It was among the Dutch, and not till about the middle of the 17th century, that the first signs of improvement began to be manifested; and the illustrious physicians who distinguished the commencement of the succeeding century were too acute not to avail themselves of this mode of advancing the science. Clinical institutions were founded not only at Leyden, Vienna, and various towns of the Continent, but nearer home, at Edinburgh, the example was presently followed.

At Vienna clinical medicine was cultivated with great success, and the school of that city attained a high degree of celebrity. Lectures were given in the hospitals, and instead of arguments upon points of doctrine, only tending to bewilder the student, illustrations of the topics of each lecture were presented at the patient's bed-side. The distinctive characters of diseases were marked more minutely, and the effect of circumstances, whether external or internal, on the progress and appearance of the symptoms, was more particularly attended to. Among the most distinguished names connected with the Austrian school, during the last century, those of Van Swieten, De Haen, and Hildebrand, will long be remembered with honour.

The medical schools of Italy also acquired fame about the same period for their attention to clinical medicine; and they have latterly been brought to great

perfection in this respect by the labours of Scarpa at Pavia, and at Padua by those of Brera.

But in France it was not till the revolution, nay till the commencement of the present century, that clinical medicine obtained any footing. The middle of the eighteenth century, indeed, was not in that country a period in which any amelioration could be reasonably expected. "While theory and speculation formed the basis, if it may be so said, of every branch of science that was taught in the schools, and when the ideas of men were confounded by the specious opinions of writers whose works showed more ingenuity and sophistry than power of mind or depth of reasoning, it could not be supposed that medicine alone was to shake off the trammels imposed upon science in general. The whole ended, as might have been foreseen, in the destruction of every thing connected with science and improvement." It was a destruction, however, which, at least so far as medicine was concerned, led to a wholesome regeneration. Upon the reorganization of the schools, clinical instruction was particularly attended to, and clinical professorships were founded in Paris, Montpellier, and Strasburgh. In the capital it was fixed that there should be four professors charged with clinical medicine, three with clinical surgery, and one with clinical midwifery. Further alterations were subsequently adopted. By an ordonnance of the government, in July, 1824, it was settled, that in the Hôtel Dieu there should be a medical clinic as well as one of surgery; in La Charité a surgical clinic, with two medical in an adjoining establishment; and in the Hospice de la Faculté a surgical and an obstetrical clinic: and still more recently, we understand, a medical one has been appointed at la Pitié. Such is the whole provision afforded in the French metropolis for the legitimate study of this branch of medicine. We add a few particulars which we think deserving the reader's attention. The number of beds in those clinics varies from thirty to fifty, one half for men, the other for women. The patients are generally sent from the Central Bureau, whence, if the Professor wishes to obtain examples of particular disease, he may have them. "*Students who attend the clinics are admitted on presenting a ticket* signed by the Dean of the Faculty of Medicine and the Hospital Governor:" nor are the *élèves* permitted to enter the wards unless in the presence of the Professor, except in particular cases, when it is necessary that they should watch the progress of a case. Clinical instruction is given in the hospitals abovementioned between six and ten o'clock every morning throughout the year. "After visiting the patients, observing the change of symptoms for better or worse, and remarking any alteration or other circumstances connected with the patient's state, the professor retires with his students to the amphitheatre or lecture-room, there to make those remarks and observations which the preceding visit may give rise to, and to question his hearers as to the state of the cases under their charge. It may be mentioned as a proof of the importance now attached in the Parisian school to this branch of study, that in his fifth and last examination the aspirant to the doctorate of medicine or surgery is tested in clinical medicine or surgery alone, according as he wishes to follow the one or the other branch of the profession.

At Strasburgh the business of clinical instruction is conducted much, if not entirely, after the German fashion. The patients are distributed among the students; and when the physician or surgeon approaches the bed, the student in whose charge the occupant may be, comes forward; and on the *affiche* which is hung at the head of the bed enters the present state of the case, the change for better or worse since the last visit, the manner in which the night has been spent,

the state of the pulse, and other circumstances which may seem worthy of being observed. No medicines are ordered at the moment. After finishing his visit, the professor, with the students, proceeds to the lecture-room, where all the *affiches* are laid before him. He takes up each in turn, and calling upon the student whose name he sees appended, questions him about the case. A familiar discussion in this way takes place, in which the other pupils frequently take a share, and in turn question the professor as to his reasons for following this or that course of treatment, and as to the probable effects of the remedies prescribed, and his object in prescribing them. After some conversation of this kind, the professor asks the student what medicines or practice he would recommend, and under what form. If he receives a proper answer, he at once writes it down in the paper just mentioned; but should the answer be confused or unsatisfactory, he questions the pupil as to the grounds of his opinions, and alters the prescription to what it ought to be. The conversation during the visit is in Latin: in the lecture room French is spoken.

In Montpellier a system nearly similar is pursued; the clinical courses are given by professors of the faculty, and, as at Paris, the fifth examination of candidates for medical degrees is entirely confined to clinical attainments.

So much for the clinical system adopted in the schools of France: with regard to the *service*, particularly the clinical officers, it may be proper to add something more. "Throughout the whole of France, the physicians, surgeons, and apothecaries, are nominated to the hospitals *by the prefects of the departments*, from lists of five candidates given in by the respective commissions of administration. The prefects also possess the right of suspending them from their functions, but cannot deprive them of their situation without the sanction of the *minister of the interior*." It is in this respect, as we mentioned the week before last, that the hospital appointments on the Continent are so very differently circumstanced from those in this country: they are government appointments there, and the government duly provides for the remuneration of its officers. Here, the administration, we need scarcely remind the reader, takes no cognizance of the metropolitan hospital physician or surgeon; it knows him not, at least in that capacity. But not to recur to the advantages or disadvantages of the respective systems, proceed we with our detail.

The service of the French hospitals may be considered as consisting of the official attendants and the *élèves*. There are a physician and surgeon *en chef* attached to each establishment—appointed, immediately, as already mentioned, by the prefect; and the assistant and inferior physicians and surgeons, who are qualified for their places, by the *concours*. All these official personages are attended on their rounds by the other class, which we shall take leave to notice more particularly—the *élèves*. Besides the ordinary medical students who "walk" the hospitals, there is this distinct set, called, *par excellence*, the *élèves*, who are connected more directly with, and form in fact a part of, the medical service. They are divided into medical, surgical, and pharmaceutical *élèves*, and are attached accordingly to different parts of the establishment. They may be deemed somewhat analogous to the dressers in our hospitals; but their duties are much more important and multifarious; perhaps they more nearly resemble those of our house-surgeons. The *élèves* both of medicine and surgery are divided into two classes—*externes* and *internes*; the latter residing in the hospital, the former not. They are both chosen by *concours*, which is generally appointed to take place about the beginning of the season. The intern must previously have been an extern for at least a year;

and his promotion greatly depends upon his tried industry and good conduct. The qualifications for the extern are briefly these: that he should be eighteen and not above twenty-four years of age; he must be a bachelor in sciences, and have studied medicine and surgery for one year at least. The number of *élèves externes* in the hospitals of Paris is said to be about 150.

The *élèves internes* are distributed through the different hospitals of the capital, according to their periods of service: the lowest class in the Bicêtre, Salpetriere, and St. Louis; the highest in the Maternité and Vénériens; while the intermediate classes are appointed to the smaller hospitals, whence they are transferred, on the occurrence of vacancies, to the Charité and the Hôtel Dieu. They are remunerated in some degree for their services; if they are boarded in the hospitals, they receive 100 francs a year—if not, 500; and strict attention is paid to ensure the regular attendance of the *élèves* to their duties. They have to sign their names daily on a sheet of paper, which is forwarded regularly to the administration. Should an *externe* omit his signature three times in any month during his service, he is disqualified as a candidate for the *internat*.

It must be confessed that this system of *élèves* is a very admirable one, and one which, were it possible, we should be most glad to see introduced into our own country. "In the capital more particularly, with so many hospitals, in which every variety of disease may be studied, and every difference of treatment observed, it is hardly possible to conceive a form of education that can surpass it in practical utility. Three or four years' attendance, not only upon one, but upon several hospitals of all kinds, opens the mind and matures the judgment as to the superior advantages of one mode of treatment over another; and the opinions thus formed are not the result of theory and speculation, but of actual practice and observation." The advocates of the *apprenticeship* system, in this and the sister country, may well blush in contrasting the time *served* under each arrangement.

We have now, we believe, noticed every thing that is particularly valuable in the method of clinical instruction followed by the French; sufficiently so, at least, to guard the reader from being imposed upon by vague generalities, or misled by interested and false statements. To those who may be desirous of a detail still more circumstantial we beg leave to recommend the writings of Dr. David Johnston, to whose work on the Public Charities of France we acknowledge ourselves largely indebted in drawing up the foregoing particulars*.

ANATOMY.

The opinion which we have all along maintained with regard to the efficiency of the anatomical act is now fully borne out by the result—at least as regards the metropolis. The supply is now ample; all the schools are in full activity, and we believe both teachers and pupils are perfectly satisfied. The numbers during October, November, and December, have increased in a very rapid progression; and as almost all the parish authorities have now acceeded to the wishes of the government, there is every prospect of the supply being only limited by the demand. The expense to the pupil is about one-third of what it has been of late years, and may perhaps be farther reduced when the fees unavoidably paid to undertakers and parish servants have been reduced to the lowest possible scale. We need scarcely say that none of the teachers have any interest in the price paid for bodies, or that they exact more than according to the present rate of disbursement is required to cover the outlay. We understand, however, that should it be found at the end of the season that one sixpence more has been taken from pupils than the sum actually

* The passages in the text included between inverted commas, are taken from the work above mentioned—the "History of the present condition of Public Charity in France, by David Johnston, M.D. &c. Edinburgh, 1829."

expended, it is to be returned to them. The assertion of a contemporary, that Lord Grey intended to have the bill altered, is a pure fiction.

LEEDS ANTI-ANATOMICAL BANNER.

We blush to place on record the disgraceful fact, that on the occasion of the late election, certain of the medical men in Leeds joined in a procession, having a banner, intended to denounce the anatomical bill, and to ridicule and stigmatize Mr. Macaulay for the part he had taken in its support. The names of all the parties have been sent to us: we forbear to publish them at present, but shall certainly do so, with such observations as the occasion may seem to us to require, if we hear of any similar displays in future.

AUTHENTICITY OF LECTURES.

As some of our rivals are making a great parade about certain of their lectures being "revised by the Lecturer," we may state, once for all, that no lectures appear in this journal which are not "revised by the Lecturer," except Dr. Elliotson's;—that, with us, constituting the general rule, which with others is the exception. As to M. Dupuytren's lectures, they are published in Paris, under the learned Baron's inspection, from which edition we translate them; as do they who pretend to have them taken expressly for their own periodical.

CHOLERA *v.* INTEMPERANCE.

The New York Temperance Society have published the following facts in their last report. Of 336 victims to the cholera, 171 were white Americans, 24 black; 108 were Irish; 15 English; 8 Scotch; 3 Welch; 8 Germans; 1 Frenchman; and 3 of other nations. Of the same 336, 213 were males, 123 females; 195 were confirmed drunkards; 131 were moderate drinkers; 5 were sober people; and two were members of the temperance society. There were also 1 idiot, and 2 whose habits were unknown. With respect to age, 108 were between 30 and 40; 70 between 20 and 30, 55 between 40 and 50; and 36 were 60 and upwards. The statement is certified by nine physicians.

NEW SUBSTANCE DISCOVERED IN OPIUM.

M. Pelletier has announced the discovery of a new substance in opium, which, from its being found crystallized along with morphiae, he calls *paramorphiae*. It differs, however, essentially from morphine in its chemical properties: nor is it to be confounded with the codeine of Robiquet, or any other crystalline substance found in opium. Its taste is that of pellitory; its solubility in alcohol and ether greatly exceeds that of narcotine, from which it differs also in its fusibility and its crystallization. It acts powerfully on the animal economy, and in a very small dose speedily kills a dog, as M. Magendie has proved.

DEATH OF DR. JAMES CRAWFORD GREGORY.

It is with much regret that we announce the death of a very promising young physician, Dr. James Crawford Gregory, of Edinburgh, (second son of Dr. James Gregory, the well-known author of the "Conspectus,") which took place on the 28th December at Edinburgh. Dr. J. C. Gregory died, on the 12th day of the fever, of a malignant typhus, caught in the course of his duty in the hospital. The debility and depression were so alarming, that so early as the 5th day it was found necessary to have recourse to wine, which produced temporary benefit only. He was attended most assiduously by Dr. Abercrombie, and his cousin Dr. W. P. Alison.

Dr. J. C. Gregory gave the fairest promise of rising to eminence in his profession, and vindicating his hereditary claim to distinction in physic. He brought out, in 1829, in conjunction with the late Dr. W. Cullen, an edition of Cullen's First Lines, with notes. Dr. Gregory's portion of the work was executed with great judgment, and received from us, in our third volume, page 633, its well earned tribute of praise. He contributed to the Edinburgh Medical and Surgical Journal several very interesting papers. At the period of his last illness he was engaged in delivering clinical lectures on cases in the Edinburgh Infirmary, to which for several years he had been one of the physicians. His acquaintance with pathology was extensive, and few men (if any) in this country were more experienced

in the use of the stethoscope. He was one of Laennec's favourite pupils.

His suavity of manner and gentlemanly address, united with his excellent qualities of head and heart, procured for him a large circle of friends, by whom his loss will be deeply deplored. He was, we believe, in his 32d year.

LECTURES
ON
CASES OF DISEASE,
Treated in the Dispensary of the University of London.

By Anthony Todd Thomson, M.D.

Pulmonary Consumption.

Gentlemen,—Those amongst you who attended at this Institution last session will recollect, that I delivered my opinions on the nature and treatment of Phthisis, and stated that I would return to the consideration of the subject, when an opportunity offered itself; and those who were not then present will find the substance of my lecture, on that occasion, in the 9th volume of the Medical Gazette. The opportunity which I referred to has now presented itself, and I hasten, Gentlemen, to perform my promise.

Among the cases of this intractable malady at present upon the books of this charity, I have selected that of Charles South, because it is an *incipient* case of well marked Tubercular Consumption, and is in that period of the disease which is not often seen either at Dispensaries or at Hospitals. The patient, also, is an object of considerable interest—a printer, better educated than the persons usually are who apply here for medical advice—the only son of a widow, and the sole prop and stay of his mother in her declining years. It is some consolation, Gentlemen, in the exercise of our profession, whilst we are often doomed to look on and lament the inefficiency of our art in treating many diseases, that we have it in our power to smooth the pillow of affliction, and to allay the poignancy of the despair into which the contemplation of an individual labouring under an incurable disease must, necessarily, plunge his relatives, by kindness, attention, and earnestness in the performance of our duty.

Charles South is thirty years of age, of a melancholic temperament and corpulent habit of body. He caught cold from having been obliged to sit in wet clothes, about seven weeks ago; but he did not apply at the Dispensary until the 17th of December, when he became alarmed on seeing the sputa tinged with blood, and having that morning expectorated a considerable quantity of pure blood. He was attended by my excellent colleague, Dr. Quain, until the 23d of the month, when the case was transferred to me. As the patient was unable to come to the Dispensary, he has been visited at his own house. On first visiting my patient, I found him in bed: he had spit no blood for three days; the sputa was viscid, stringy, partly frothy, partly thick, opaque mucus: his pulse was hard, full, and 108; he complained of pain across the chest, and a sensation of tightness on taking a deep inspiration; his cough was short, hard, and teasing; the skin was hot, but not dry; the tongue furred; his bowels were confined, and his urine was not very deep-coloured, but deposited a straw-coloured sediment. On examining the state of the chest, both by percussion and exploration by the ear, there was nothing to indicate organic disease, except that the sound of respiration was weaker than natural on the right side, even when he breathed quick and full. These symptoms indicated the necessity of further depletion, for he had been bled on the previous day. I therefore ordered twelve ounces of blood to be taken from the arm in a full stream, and prescribed the following powder and mixture.

℞ Calomelanos, gr. vij.; Pulveris Jalapæ, ʒi. ℳ. sit pulvis primo mane sumendus.

℞ Antimonii Tartarizati, gr. iv.: Aquæ Distillatæ, f℥viij.; Solutionis Morphiæ Muriatis, f℥j.; ℳ.; Sumantur Cochl.: ij. majora, 4ta. quâque horâ.

Let his nourishment be milk, diluted with barley water or grit gruel.

24th. He was much relieved by the blood-letting, had a better night, and says that his cough has been less urgent. The bowels were well opened by the cathartic powder; the stools are bilious and very offensive. Perstet in usum Misturæ.

28th. He thinks he is generally better; he coughs less frequently, but the cough is that which characterizes incipient Phthisis; it is short, hard, and only accompanied with expectoration at intervals; the sputa remain untinged with blood, and display nearly the same aspect as before, but the breathing is more hurried. He is free from morning respirations. The bowels are again confined.

℞ Calomelanos, ʒi.: Ext. Colocynthidis, ʒiv.; Aquæ, q. s. ut fiat massa in pilulas xx. æquales dividenda—sumantur ij. horâ somni, pro re nata.; Perstet in usu Misturæ, addendo Sol. Morphiæ Muriatis, f℥ss.

The Lunar Caustic was now ordered to be applied on the right side of the chest,

immediately below the breast, to a circular portion of the skin about two inches in diameter.

31st. He complained greatly of the pain caused by the caustic, which raised a blister, surrounded by much inflammation; but he thinks the application has been useful, as he breathes more freely; the cough also is less frequent; the expectoration is diminished, and the pulse reduced to 96. He has had occasion to take the pills once, and they operated freely.

Perstet in usum Medicamentorum.

Such, Gentlemen, is the present state of our patient. I consider the case one from which much practical information is to be gleaned. Let us examine the grounds upon which this opinion is founded.

In the first place, you have a right to inquire upon what symptoms my diagnosis is formed, and why I venture to declare that the disease of this patient is incipient Phthisis, when the symptoms, in many respects, closely resemble those of Chronic Bronchitis. We know that in this variety of Bronchitis the respiration is sometimes interrupted in some part of the lungs; that the sputa is occasionally tinged with blood, and the expectoration frequently of a muco-purulent character. There is indeed, Gentlemen, much difficulty in tracing the distinction between Chronic Bronchitis and the early stages of Phthisis, especially as the stethoscope and percussion afford us, as in this case, little or no assistance. When, in Bronchitis, no bronchial dilatation exists, and, in Phthisis, when the tubercles are in the first stage of development, and the obstruction which they produce is scarcely sufficient to be obvious, the respiratory sound is so natural that the disease eludes the most careful exploration of the chest. In cases of this description, therefore, our diagnosis requires to be assisted by an inquiry into the family and the habits of the patient, and whether any hereditary predisposition exists in the parents. In this instance, we find that the father of the patient died of Consumption, and there can be no doubt of the hereditary transmission of this disease. Dr. Rollo, in his work on Diabetes Mellitus, mentions the case of a child who died of Hydrocephalus at the age of seven months, in whom the lungs were filled with miliary tubercles: the father of this infant had died of Tubercular Consumption. And many instances might be mentioned of both infants and adults who have died of diseases, not of a pulmonary nature, in whose lungs tubercles have been found. As some of you, Gentlemen, may never have seen these diseased growths, I might here describe them; but I have already detailed my ideas respecting their nature and their progress to suppuration, in the lecture to which I have already alluded, and to which I must refer you. Another reason for pronouncing this a case of incipient Phthisis is the coming on of hæmoptysis after the cough had continued for some weeks, and its following the symptoms which immediately preceded it, namely, a painful sensation of weight and tension at the chest, an increase of dyspnœa, and much anxiety about the præcordia. The age of the patient also is that in which most frequently Phthisis makes its attack.

It is a well-known fact that Hæmoptysis is often associated with the development of tubercles; and my experience leads me decidedly to accord with Laennec, that these always precede the hæmorrhagic effort. When Hæmoptysis, not referrible to external causes, has proved fatal, tubercles, the existence of which had not been previously suspected, have been found in the lungs; and it is easy to suppose that the irritation excited by these bodies taking on an active state, may produce determinations of blood to their vicinity sufficient to account for the hæmorrhage which follows. Even the obstruction to the freedom of the circulation through the lungs, which is likely to result from extensive tubercular development, is sufficient to account for the Hæmoptysis, and the more suddenly the tubercles have been roused into activity the more likely is this effect to attend their developement. Now such is exactly the condition of the chest in our patient: an hereditary predisposition to consumption exists; he catches cold; inflammation of the mucous membrane of the bronchial tubes is set up; and this, extending itself, calls into activity latent tubercles existing in the lungs;—these, enlarging, produce obstruction, and Hæmoptysis follows. It is true that Hæmoptysis sometimes also occurs in Bronchitis; but in that case, the pulse is weak, the expectoration more copious and frothy, and the blood itself thinner, and of a more serous kind, than that which is the result of tubercles in the lungs: the preceding symptoms, also, are different.

The nature of the expectorated matter has been supposed sufficiently to denote the presence of Phthisis; but I must warn you not to be misled by such an opinion. In the early development of tubercles there is often no expectoration, or, if it occur, the sputa closely resemble what appear in Bronchitis. When tubercles are very abundant, there is often a copious serous secretion. But here I must repeat, that little diagnostic information can be collected from the examination of the sputa in the early stage of Phthisis; and it is not until the tubercles have suppurated, and the sputa, besides sinking in water, dis-

play greenish-white, and white-curdy masses of irregular or ragged shape, tinged occasionally with specks of blood, or streaked with different shades of brown, that an examination of this secretion can lead to the formation of a correct diagnosis.

Admitting the correctness of our diagnosis, the next question which will, naturally, occur to your minds is—what expectations of benefit do I anticipate from the practice which I have adopted? and another will follow, upon what principles is it likely to prove salutary? In reply to the first of these queries I must reiterate what I stated in my former lecture upon this subject, that, although I am of opinion that the origin of every case of real Phthisis is tubercular developments, yet that we must arrest, if possible, the progress of the inflammatory action, while the strength remains unsubdued. With this view I directed blood-letting, catharties, and the solution of tartar emetic. Had I seen the patient at the time of the existence of the Hæmoptysis, the use of the lancet would probably have been repeated; and if the febrile excitement had continued, I should still not have hesitated to order another blood-letting; but it admits of a question whether, after the state of plethora be removed by the first bleeding, the repetition of this operation may not so much lower the strength as to bring on a state of nervous irritability, without removing the morbid excitement in the capillaries. Much, however, must depend on circumstances. In the present instance, although the patient be of a full habit of body, yet, his pale complexion and the soft flabby state of his muscles seem to point out the necessity of caution in the repetition of blood-letting. The same objection does not present itself to the employment of purgatives; and I do not hesitate to state my opinion, that, in the early stage of Phthisis, notwithstanding the assertion of Sydenham, that the use of Catharties in Hæmoptysis favours Consumption, their judicious administration will always prove salutary. The use of purgatives, at this period of the complaint, is of very ancient origin; we find it adopted by Prosper Alpinus, who ordered Scammony and Colocynth in Incipient Catarrhal Consumption; and, in more recent times, a better authority than Alpinus, Bayle, asserts that incipient Consumption may be checked by repeated emetics and bitter purgatives. But setting authority aside, there can be little doubt, if depleting measures be admissible, that the judicious administration of purgatives must be productive of benefit, both in preventing the too rapid replacement of the blood which has been previously abstracted, and also in removing any cause of irritation which may exist in the intestinal canal, and be likely to keep up this excitement, were constipation permitted to exist. The period of the disease, however, can alone authorize this practice. In the advanced stages of the disease, nothing is more injurious than the employment of purgatives, or a lax state of the bowels; on the contrary, I have found that even locking up the bowels, and obtaining an evacuation once in four or five days only, is followed by the greatest comfort to the patient: the cough becomes less troublesome, the appetite and digestive powers of the stomach improve, the morning perspirations are lessened; and, although, the cure of the disease is not insured, yet, life is protracted for some time, and the latter days of the patient are rendered more calm and supportable. If purgatives be applicable to the early stage of Phthisis, a question may arise, whether should the purgatives be of the saline kind, or the stimulant gum-resins? From what has been said respecting the necessity of depletion in this stage of the disease, it may reasonably be presumed that the saline purgatives would be preferred; but as these do not exert that influence on the surface of the intestinal canal, which is equivalent to counter-irritation, and at the same time debilitate almost as much as venesection, I am disposed to prefer the more stimulant Catharties, and at the same time to combine with them Calomel or some other mercurial. The intention of the latter is to correct that derangement of the hepatic and pancreatic secretions which originates the derangement of the digestive organs, attendant even on this stage of Phthisis.

On the principle also of counter-irritation, the application of the Nitrate of Silver to the chest has been ordered. You have heard that the patient has complained bitterly of the severity of this application; but this is to be ascribed to the mode in which it was applied. Too much was rubbed upon the part, on which account it operated as a caustic rather than as a blistering agent, and consequently it has caused, not only unnecessary pain, but has increased the general excitement, the prevention of which, to the extent usually resulting from Blisters and Tartar Emetic Ointment, was the reason for selecting it in preference to these contra-stimulants. This mode of producing a blister is little known in this country; it was first employed by Mr. Boswell, a surgeon in the Bengal Establishment, and is mentioned in a paper by him, in the Transactions of the Medical and Physical Society of Calcutta for 1831. "The Blister is formed by slightly wetting the part, and then slowly drawing the stick of Lunar Caustic over the surface to be blistered, first longitudinally, and then across. The fluid is discharged by small punctures in about ten hours after the application of

the Caustic; and no covering being used throughout, the surface becomes in two or three days sufficiently dry to admit of a second application in the same place, if necessary. I have (says Mr. Boswell) put on more than thirty of those Blisters in the course of treating a pulmonary case, making the intervals longer as the cure proceeds." I felt much disposed to prefer this mode of blistering, as no undue excitement is caused, if proper care be taken in applying the Caustic; and although this has not been the case, yet it is my intention to continue the applications as soon as the present ulcerated surface is healed. Another advantage is also the facility of the healing process, no dressings being required; and, by acting upon portions of the skin not exceeding two inches in diameter, the continued action of the contrastimulant can be more effectually maintained than can be effected either by Blisters or the Tartar Emetic Ointment.

As an internal c ntrastimulant, the Tartar Emetic is undoubtedly the best in this stage of Phthisis. The doses in which I have prescribed it in the present instance are much inferior to those employed by the Italian physicians; but they are adequate to maintain some degree of nausea, whilst its sudorific effects are aided by the addition of the solution of the Muriate of Morphia. With respect to the latter preparation, I have seen more advantage from its use than from that of any of the preparations of Morphia; it abates the cough, does not affect the head, and appears to exert less of the primary stimulant influence of narcotics than any of the other salts of Morphia.

It has been asked by one of your number, Gentlemen, why I have not prescribed Digitalis in this and in similar cases. The question is a very natural one, from those amongst you who have been educated in the belief that Digitalis is a direct sedative; but those students who have attended my lectures on Materia Medica will clearly see the reasons for my rejection of this remedy, in the early stages of Consumption. They must be aware, that I consider that the primary influence of Foxglove, like that of every other narcotic, is stimulant, and, consequently, that it cannot be advantageously administered under the pressure of increased arterial action: it is fitted rather for the advanced than for the early stage of the disease; for that period when the tubercles have attained to the state of open ulceration, than that in which they are under the influence of direct inflammation, and require the aid of the lancet and of counter-irritation. For the same reasons I have not directed the inhalation of Chlorine, which has been found so beneficial in the advanced stage of the disease.

I trust, Gentlemen, that you are now fully in possession of my opinions on the nature and the treatment of incipient Phthisis. If tubercles may exist, and, yet, may remain latent for many years, or even for a life-time, and are dangerous only when they are rendered active by inflammation being set up in the habit, it is obvious, by subduing this at its commencement, that we may at least arrest the progress of the impending danger, may place our patient at the point he occupied before the attack, and afford one chance of altogether securing him from a disease which, when fairly begun, has hitherto defied all the powers which medicine can muster against it.

HOTEL DIEU, PARIS.

CLINICAL LECTURE ON VITAL AND MECHANICAL DILATATION OF THE URETHRA.

By Baron Dupuytren.

Strictures of the urethra have given rise to the most opposite opinions and the most varied treatment. It is only necessary to glance at the long list of authors who have written on the subject, to be convinced of this truth. My design is not to give you on this occasion a complete history of these diseases, but to take the opportunity afforded by the patient now under observation of making you acquainted with improvements I have introduced in this branch of practice.

The patient, a coachman, about 40 years of age, of small stature, was in the act of mounting his box when the horses set off. Taken by surprise, he fell on the wheel, with his legs separated. He experienced at the moment an acute pain in the perineum, and passed a considerable quantity of blood by the urethra. Unable to resume his business, he entered the Hôtel Dieu in March, presenting the following symptoms:—Tumefaction of the parts which were the seat of the contusion; very acute pain along the course of the urethra; the penis, scrotum, and perineum, much ecchymosed. He could not pass his water, though on questioning him it was found that he had a desire to do so. He had several times suffered from gonorrhœa, and had long been tormented by the necessity of frequently emptying his bladder.

There could be no doubt about the condition of this patient: a sound was introduced, but it could not be passed beyond three inches. A bougie, with a fine point, was substituted, but this could not be introduced any more than the other. There were thus two lesions—a stricture and a rupture of the urethra. With regard to the first case, it would be necessary to destroy

or dilate the parts; with regard to the second, if left to itself the recovery might be nearly certain, but stricture became inevitable. It is doubtless one of the circumstances under which it is most difficult to effect a cure. I have had twenty or thirty cases of this kind, and I have always encountered many obstacles in their treatment. In order to prevent stricture the cicatrization must be made to take place on a sound of the largest size.

About five months ago a person who had had some family quarrel provided himself with a pair of small pistols, which he carried in his pocket. In a fall which he met with one of these went off; a ball passed through the urethra, pierced the testicle, and lodged in the thigh. If ever any one was exposed to the risk of a stricture, assuredly it was this person. I introduced a sound into the urethra: at the end of three months the wound was entirely healed, and from that time he has never ceased to pass his water perfectly well: the only accident was wasting of the testicle.

To return to our patient. It is evident that his old stricture required to be dilated, and that the laceration equally required the introduction of a sound. This, then, was attempted, but the instrument at first could not be passed. I advised that it should be tried every hour. Next day the bougie had made some progress, and the patient could pass his water: at the end of three days a bougie of middle size could be introduced into the bladder. For a long time it was imagined that when there was stricture, in order to make the patient empty the bladder it was necessary to overcome the obstruction by force: such, it must be confessed, was the practice of Desault. There was at that time a kind of vanity in conquering all impediments. I affirm that in the patients on whom this practice was carried into effect, half had the urethra torn, with swelling of the penis and infiltration of urine; and often with even fatal results. Forcing the obstacle is bad, not only because it is painful, but because it is dangerous. Thus I think I have done what is eminently beneficial in changing the method which was in established use in this hospital.

Whenever, in consequence of a stricture, there is only dysuria, the forcible introduction of the catheter ought to be abandoned. What is to be done then? Experience has convinced me that the best plan is to temporize with prudence. We ought only to employ violence when the retention might occasion laceration and inflammation, so as to bring the life of the patient into danger. But what are the relative proportions of these two cases? The events constantly occurring at the Hôtel Dieu enable me to say, that of thirty instances of stricture there is at most not more than one in which force ought to be employed in the introduction of the catheter. In the twenty-nine others we have not only some hours, but many days, before us. For eighteen years I have followed this practice, and always with success.

Let us see what has happened in the case before us. The man had had three or four gonorrhœas, which had produced stricture: the contusion of the perineum, and the laceration of the canal, had given rise to retention of urine. Did we employ the least force? None. Nevertheless we succeeded in reaching the bladder. You saw me this morning, the third day after his admission, introduce a middle-sized sound, whereas the first day I could not insert a bougie with a taper point. What had happened? The contact of the instrument produced an abundant secretion of mucus; next day it was still more considerable: at last, on the third day, the catheter, the point of which was ten or twelve times larger than that used at first, passed the stricture. As a general rule, when we can wait a few hours, recourse is not to be had to force; still less, if we can do so for some days. We ought merely to introduce a bougie or catheter, and fix it where it ceases to advance. It is this method which I have called slow dilatation—dilatation by disgorging—vital dilatation;—*(dilatation lente, dilatation par degorgement, dilatation vitale.)*

I may remark here, that where there is stricture without laceration, and the urine flows between the instrument and the side of the urethra, it is a favourable sign, because it shews that the urine tends to increase the dilatation; but if there be rupture of the tube, the passage of the urine may produce infiltrations—urinary abscess—gangrene. We ought, therefore, not to suffer the urine to collect, but to keep a catheter in the bladder opening into a vessel, and the patient placed on his side.

Overcoming the stricture with patience and gentleness, then, is the only proceeding which is applicable in the immense majority of cases. But this dilatation is not accomplished solely in the manner which I have pointed out; it may also take place in consequence of what I have called, in contradistinction, *mechanical dilatation*,—of which I shall speak by and by.

About eighteen years ago I was called to a man in good circumstances, nervous, and endowed with great vivacity of spirit and prodigious susceptibility. He suffered much from dysuria. I advised him to wear a bougie in the urethra. The very proposal alarmed him, and forthwith he

exaggerated in his imagination the pain and inconvenience of this treatment: he felt assured that the instrument must needs wound him, and that if already the urine only flowed drop by drop, it could not come at all when there was a solid body in the stricture. After various explanations, which reassured him a little, he consented to allow the introduction of a blunt-pointed bougie; but scarcely had it entered the urethra when all his apprehensions were renewed. He wished me to remove it again, and it was not without much difficulty that I persuaded him to allow it to remain. I passed it down to the obstruction; but here I encountered an insurmountable obstacle, and the patient evinced so much fear, and so much pain, that I found it necessary to suspend the attempt for some hours: but to avoid fresh difficulty I resolved to fix the instrument where it was—namely, just before the stricture. The patient only consented to this on the express condition that I should see him every two hours, to remove it if too much pain were produced, and particularly if it interrupted the flow of urine, as he was convinced would be the case. I returned according to my promise: the patient had made water without difficulty, and the instrument could easily be passed into the stricture. Some hours after it penetrated yet farther, and the day had not come to an end ere it was already in the bladder. Some days after it was replaced by one of larger size. From this time the treatment was continued without difficulty according to the ordinary method, and the dilatation rapidly increased. At the end of a fortnight the patient made water easily, without pain, and in a large and powerful stream. This fact was not lost upon me: I saw that it was not necessary that a bougie should penetrate into a stricture to produce its dilatation, and I perceived how many advantages this method would possess in the cases of pusillanimous patients, gifted with great sensibility, and in short in all those cases where we are not obliged, by the nature or the severity of injuries, to overcome the obstacle by the immediate introduction of a catheter or bougie.

Since that time M. Dupuytren has employed this practice in many instances, as the registers of the Hotel Dieu testify. Obliged to restriet ourselves to a limited number of illustrations, we select the two following:—

Stricture of the Urethra—Dysuria and Incontinence of Urine, symptomatic of Catarrhus Vesicæ—Vital Dilatation.

C——, forty-nine years of age, entered the ward of St. Peter, February 20, 1827. He complained of being unable to pass his water, except drop by drop, though he made great efforts: frequently these efforts were followed by an involuntary flow of urine. He had acute pain in the hypogastric region, in the perineum, and along the urethra, especially at the moment of emptying the bladder, the sensation at such time being compared to that of having a hot iron passed along the urethra. The urine deposited, on cooling, a muco-purulent sediment. This patient had had gonorrhœa eleven times; the last continued upon him four years; it had ceased ten months previously, and it was precisely at the same time that he first perceived that he had difficulty in making water; the jet diminished in size, became twisted, and filiform; at the end of three years he could not pass his water at all. This patient was treated by means of dilatation, and continued for six years without any accident. But six months ago the dysuria returned, and he came back to the Hôtel Dieu in the state above described. A bougie was introduced, and it penetrated to the bulb, where it was arrested by a firm resistent stricture; no effort was made to insinuate it into the narrowing; it remained free in the canal, was fixed before the obstacle, and left in its place twenty-four hours. At the end of this time it passed into the bladder without difficulty. A gum elastic sound, of small calibre, was immediately introduced in its place. The patient experienced neither pain nor accident of any kind. Four catheters, of gradually augmenting size, were used till the largest passed. They were allowed to remain in the urethra, and after thirty-two days of this treatment he passed his water freely, and in a large stream. He quitted the hospital cured of the stricture, and of the discharge which it had kept up.

Stricture at the commencement of the Membranous part of the Urethra, accompanied by remarkable spasm of the urethra and incontinence of urine—Vital Dilatation.

C——, aged 36, of good constitution, was admitted at the Hôtel Dieu, February 6, 1827. He had only had one gonorrhœa, but it had lasted ten years. For seven or eight years, the period since it had entirely ceased, the stream of urine had diminished, and become scattered. During the last four or five months he only passed his water guttatim, and this with great effort; and when he had ceased to strain, the water continued to flow without his being able to restrain it.

7th.—A catheter, of middle size, was introduced, and passed to just before the membranous part of the canal; there it was arrested by a firm stricture, against which the instrument was pressed at first lightly, and afterwards with greater force,

but without being engorged in it, in whatever direction it was tried. A bougie was placed before the obstacle; but the patient, who was indocile, removed it in an hour after. In the evening it was attempted, but in vain, to replace it. The urethra was now in a state of spasm, so great that the instrument could not be carried beyond the fossa navicularis, and it was so grasped by the sides of the tube that considerable force was required to remove it.

9th.—M. Dupuytren tried a silver catheter, of middle size, and then one of small calibre, but both were arrested at the same point, and pressed with the same force as the bougie had been. The point of a blunt sound was introduced, and fixed in the fossa navicularis. It made little way at first; but at the end of twenty-four hours it had penetrated: it was replaced by an elastic gum catheter, of middle size. This was fixed in situ, and the dilatation continued during twenty days. Three sounds, of different sizes, were successively employed, the last being the largest. The patient, when he left the hospital, made water freely, and in a full stream.

The vital dilatation, observed M. Dupuytren, is so powerful that we frequently see the instrument enter the bladder in two or three hours; and this result is accelerated by turning the instrument from time to time in the canal. This proceeding does not require a dilater of any particular form; a catheter of silver, or gum elastic, or a bougie, may be indifferently used for the purpose. However, I give the preference to those of elastic gum, having a smooth rounded extremity, and of a length proportioned to the depth at which the obstruction exists. The elastic gum presents a smooth and supple consistence, which accommodates itself to the movements of the patient. Whatever instrument is selected, it is to be introduced down to the stricture, and fixed in the ordinary way. It is not requisite to insinuate it into the strictured part, the desired dilatation being accomplished by its mere presence in the urethra for a certain time; and, in fact, after some hours, or in less favourable cases, after some days, the obstacle may always be overcome without difficulty, without force, laceration, or hæmorrhage. The dilatation is such that the end of the instrument sometimes penetrates the stricture of itself; while in the greater number of cases they are easily made to do so by a little assistance, and yet in other cases the dilatation enables the stricture to admit a taper-pointed bougie; and then the patient must be treated by the mechanical means which we are presently to describe.

[To be concluded in our next.]

ST. GEORGE'S HOSPITAL*.

CASE I.—*Singular Lacerated Wound—Delirium Traumaticum.*

WILLIAM HURLEY, æt. 43, admitted October 18th, 1832. About three inches below the trochanter is a nearly circular opening in the skin, apparently not penetrating the fascia, which leads into a cavity of some extent round the trochanter, reaching about four inches upwards from the opening, and three or four inches broad. It appears that, while walking across the rafters on the floor of a house, he slipped and fell upon the edge of a loose rafter. There was not any thing in his pocket at the time which could have made the circular wound above-mentioned; his trowsers were not cut at all, and it does not seem that he struck against any sharp body which could have made the wound, carrying the trowsers before it, so that the integument must have been forcibly torn upwards by the rafter from the parts below, and the skin lacerated by the edge of the rafter, so as to make a circular wound by contraction of the skin around it.

The wound was dressed, and cold lotion applied.

19th.—Complains of no pain; but finding that he had been accustomed to drink porter in considerable quantity, Mr. Hawkins remarked that it would not be prudent to keep him altogether upon fever diet, for fear of delirium traumaticum, which so often occurs in such constitutions as this man seemed to have, and also because such a wound is often followed by extensive inflammation of the cellular membrane, which is not prevented by starving, and is less likely to be recovered from, when it does take place, if the patient is much weakened by medical treatment, after a habit of stimulating by drink has been indulged in.

Ordered some beef-tea. Haust. Sennæ cras mane.

21st.—A little irritation from constipation relieved by the following pills:—

℞ Hydr. Submur. gr. ij.; Opii gr. j.; Extr. Colocynth. Comp. gr. viij. M. h. s. s.

23d.—The wound has gone on well under a cold poultice till to-day, when it looked somewhat inflamed, and the interior was very sloughy; it was therefore enlarged upwards to the extent of four inches, which exposed the interior freely. The wound bled considerably afterwards, and

* The two cases which follow were intended for insertion with another, illustrating a *nervous* affection, which we gave in our number for November 17, page 223: not having had room then, we insert them now, to make the series complete.—E. G.

several vessels were tied. His system was also a good deal disturbed by the inflammation; the tongue loaded with a white crust; he passed a bad night and felt very unwell, and the pulse was very rapid and weak. His diet was now raised still more than it had been previously, and he was directed to have a quart of beef-tea, a pint of porter, and six ounces of Port wine daily, and to take the following mixture:—

℞ Mist. Camphoræ ℥iss.; Carbon. Ammon. gr. vj.; Confect. Aromat. ℈j.; Træ. Hyoscyam. ℥j. 6tis horis.

℞ Træ. Opii ♏xxv. h. s. s.

24th.—Much easier; the threatened inflammation of the cellular membrane completely averted by the incision.

25th.—Slight shivering and restlessness, probably from constipation.

Ol. Ricini ℥ss. statim. Meat diet in addition to the beef-tea, &c.

26th.—Bowels open freely; tongue still furred; wound less sloughy, and much less inflamed than when the incision was made.

Warm green dressing under the poultice.

27th.—Yesterday afternoon he became delirious and restless, with hurried manner when spoken to; a quick weak pulse, and anxious countenance; his delirium leading him frequently to tear off his dressings, and endeavour repeatedly to get out of bed. He took twice during the night a drachm of laudanum, but continues the same this morning, after a very bad night.

Ordered ℥vj. of gin, besides his wine, porter, &c., and to repeat ℥j. of laudanum at night.

28th.—Passed a good night, without delirium.

30th.—Last night the delirium returned again, though not to the same extent as before. On inquiry it was found that, during the preceding day (the 28th), he had taken double the quantity of gin ordered, and that yesterday he had only had the right quantity (six ounces) ordered on the 27th. Directed to take ten ounces of gin daily, and to repeat the opiate if necessary, in addition to the following pills this evening:—

℞ Calomel. gr. iij.; Opii gr. ij. M. h.s.s.

Nov. 2d.—No return of delirium; wound clean, part of the gluteus maximus, with the fascia, having sloughed away.

3d.—℞ Decoct. Cinch. ℥iss.; Træ. Cinch. ℥j.; Castor Ammon. gr. vj.; Conf. Aromat. ℥ss. M. ter die.

℞ Haust. Sennæ statim. Omit. Mist. Hyoscyam, &c. Cont. alia.

6th.—Going on quite well.

Quantity of gin to be diminished to ℥vj. and left off gradually.

10th.—Omit the gin. To have an additional pint of porter. Wound healing fast.

Fatty Tumor.—Hysteria.

Case II.—Maria Benton, admitted October 22, with a fatty tumor on the left side of the spinous processes of the dorsal vertebræ, about six inches in length, and about three in breadth. She had only discovered it a fortnight ago, and suffered no pain or inconvenience except when lying on it.

25th.—The tumor was removed by Mr. Hawkins by a single longitudinal incision, the vessels which entered at two or three joints being tied.

26th.—She has had a restless night without sleep, and complains of violent pain in the back, which seems to be exceedingly tender to the touch. Her pulse is very rapid, her tongue white, her countenance anxious; she has had repeated chills, and has frequently been sick. In short, she seems to have just such a set of symptoms as might arise from fœtid pus being confined in the wound.

On inquiry, however, she acknowledged that she had scarcely slept for a week, from dread of the operation. There was no swelling about the wound; she shrunk from touch at a distance from it, as well as when pressure was made on the dressings which covered the wound; her tongue was moist, though white; and on the whole it was evident that her symptoms were nervous only.

A draught, with Carb. Mag. ℥ss. Sodæ Tartar. ℥iij. Sp. Æther. Nitros. ℥ss. in Aq. Menth. Pip. ℥iss. was given her, but was vomited again.

The following medicine was also ordered:

℞ Opii gr. j. Hydr. Submur. gr. ij. Extr. Coloc. Comp. gr. x. M. h. s. s.

℞ Sodæ Tartar. ℥j. Sp. Æther. Nitros. ♏xx. Haust. salin effervesc. ℥iss. M. 6tis horis.

27th.—Less sick and nervous; bowels not open.

Contin. Mist. Enema commune vespere.

29th.—No bad symptoms remaining. The wound was dressed and found to have completely united by the first intention, except where the ligature came out, and since then this part also has nearly healed.

ST. GEORGE'S MEDICAL AND SURGICAL SOCIETY.

(From a Correspondent.)

A MEDICAL society has just been established by the pupils of St. George's hospital, the first meeting of which took place on Thursday, the 13th instant; on which occasion, Dr. Chambers (one of the presidents) was in the chair. An interesting paper on periostitis, by Mr. Clark, was read, and gave rise to an animated discussion. Dr. Wilson read a letter from Constantinople, communicating some important circumstances relative to the plague. The second meeting was held on Thursday, the 20th, Mr. Keate in the chair; when a valuable paper on Erysipelas, by Mr. Hutchins, was laid before the society.

Although but in its infancy, above one hundred and thirty pupils of the school are already enrolled as members of the society. We understand that it is in contemplation to give two prizes—one for the best essay on a medical, and another for the best on a surgical subject.

GENERAL ACCOUNT

OF

THE BURIALS WITHIN THE CITY OF LONDON AND BILLS OF MORTALITY,

From Dec. 14, 1831, *to Dec.* 11, 1832.

Diseases.

Abscess	185	Heart, diseased	118
Age and Debility	2948	Hernia	37
Apoplexy	470	Hooping Cough	677
Asthma	1050	Hydrophobia	3
Cancer	100	Inflammation	2555
Childbirth	343	Bowels	604
Cholera	3200	Lungs & Pleura	98
Consumption	4499	Brain	73
Constipation of the Bowels	35	Insanity	197
Convulsions	2075	Jaundice	56
Croup	100	Jaw-locked	11
Dentition or Teething	373	Liver, diseased	336
Diabetes	12	Measles	675
Diarrhœa	47	Miscarriage	19
Dropsy	978	Mortification	262
on the Brain	858	Paralysis	240
on the Chest	118	Rheumatism	60
Dysentery	22	Scrofula	18
Epilepsy	48	Small-pox	771
Erysipelas	75	Sore Throat and Quinsey	25
Fever	872	Spasm	106
Fever, Intermittent or Ague	31	Stone and Gravel	23
Fever, Scarlet	388	Stricture	28
Fever, Typhus	253	Thrush	121
Fistula	4	Tumor	29
Gout	65	Venereal	5
Hæmorrhage	60	Worms	6
		Unknown Causes	837
		Stillborn	912

Total of Diseases . . 28,111

Casualties.

Drowned	119	Killed by various Accidents	215
Died by Visitation of God	65	Murdered	3
Excessive Drinking	12	Poisoned	8
Executed *	1	Suicides	71
Found dead	1		

Total of Casualties . . 495

Buried.

Males . . 14280 | Females . . 14326

Total . . . 28,606

Increase in the Burials reported this Year, 3269

N.B—Deaths by Cholera, 3200.

The Clerks of the parishes of All Saints, Poplar; St. John, Wapping; and St. George, Hanover Square, have neglected to make any Report this year; nor has any Report been received from the Parish last-mentioned since the year 1823.

The church of St Katherine, by the Tower, having been taken down, and its burial-ground appropriated to the purposes of the Dock Company, no burials have since taken place in that parish.

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* Executed this year, within the Bills of Mortality, 4; of which number, only one has been reported to have been buried as such.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 1, 1833.

Abscess	1	Heart, diseased	3
Age and Debility	31	Hooping-Cough	21
Apoplexy	11	Inflammation	35
Asthma	14	Bowels & Stomach	6
Cancer	2	Brain	2
Childbirth	1	Lungs and Pleura	3
Cholera	1	Liver, Diseases of the	4
Consumption	82	Measles	11
Constipation of the Bowels	2	Mortification	3
Convulsions	37	Paralysis	7
Croup	1	Small-Pox	21
Dentition or Teething	6	Sore Throat and Quinsey	1
Dropsy	7	Spasms	1
Dropsy on the Brain	9	Stricture	1
Dropsy on the Chest	3	Thrush	1
Fever	4	Unknown Causes	1
Fever, Scarlet	12		
Gout	1	Stillborn	20
Hæmorrhage	1		

Increase of Burials, as compared with the preceding week . . . } 90

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ *N. Longitude* 0° 3′ 51″ *W. of Greenwich.*

December 1832.	THERMOMETER.		BAROMETER.	
Thursday . 27	from 29	to 41	30·09	to 30·01
Friday. . . 28	27	39	29·85	29·75
Saturday . 29	29	41	29·70	29.66
Sunday . . 30	28	37	30·05	Stat.
Monday . . 31	30	44	29·89	29·60
January 1833.				
Tuesday . 1	31	40	29·65	29·78
Wednesday 2	35	45	29·97	30·14

Wind variable, S.W. prevailing.

Except the 27th, cloudy; with frequent rain. Snow fell during the night of the 30th; depth, ·5 of an inch.

Rain fallen, ·55 of an inch.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 12, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

SPINA BIFIDA.

There is sometimes a collection of water low down in the spine, and a tumor is formed externally. From the bone being generally deficient and the spine gaping, the disease is called *spina bifida*.

Now this, like the accumulation within the head, is sometimes congenital, born with the child, and sometimes it is not. Sometimes a collection of water will exist with a sound spine, and sometimes the spine is bifid.

There is a tumor produced, sometimes more than one, and generally the tumor is situated at the lower part of the spine—that is, in the loins, and the higher the tumor is situated, the more rare is the case. The tumor is of all sizes, from merely a little elevation of the skin to the size of a child's head, and sometimes the tumor is diffused, sometimes it is very prominent, and sometimes it is both diffused and exceedingly prominent. It is also of all shades.

The skin externally is seen in all conditions; sometimes it is healthy, sometimes it is very thick, sometimes it is inflamed, sometimes it is gangrenous, ulcerated, and fistulous; and sometimes I have seen it very hairy. The subjacent membranes are likewise found in all sorts of states. Sometimes the membranes are diseased, while the skin remains healthy.

The fluid which is contained in these tumors is exactly like the fluid of hydrocephalus, for the most part exceedingly limpid, like rock water, and its quality varies from a few ounces to six or seven pounds. It will exist sometimes in the arachnoid, sometimes between the arachnoid and dura mater, and sometimes between the arachnoid and the pia mater—that is to say, it will exist in the arachnoid on either side, and it will be found between the dura mater and the bones; and it has even been found in the canal which you know runs along the medulla spinalis.

When there is a deficiency of bone, there is sometimes a fissure all the way through from the cervical vertebræ down to the os coccygis—that, however, is very rare: sometimes it runs from the last cervical vertebra down to the beginning of the sacrum; or it exists only in the loins: the latter is a common occurrence. The deficiency is sometimes a mere slit; sometimes there is an imperfect evolution of the lateral arches of the bones, and sometimes there is even separation of the body of the vertebræ also.

Besides this variety as to the state of the integuments, as to the state of the membranes, as to the situation of the water, and as to the condition of the bones, there is a great variety also, as to the situation of the spinal marrow. Sometimes it is precisely in its natural place; sometimes it runs outside the tumor; sometimes it is distributed upon the sac, and sometimes it has been seen deficient in the affected part. It has been noticed by some, that club foot frequently co-exists with this affection. You know when there is a species of monstrosity in one part of the body, it is very common to find a defect in another; if an important part, such as the heart or brain, be deficient, it is very common for more parts to be malformed. In this disease, then, there is frequently club feet co-existing; but very frequently there is not, because they are only minor devia-

tions from the natural structure of the body. I recollect an instance of a child having this disease, where the tumor was situated on the loins, and was surrounded by a considerable quantity of hair, and there were club feet, but the tumor ceased spontaneously; no measures were resorted to for the best part of a twelvemonth, although when the child was first born there was the appearance of ulceration and even gangrene. The disease, however, entirely disappeared, the surface became flat, and hydrocephalus commenced, of which the child ultimately died.

Treatment.—With regard to the treatment of spina bifida, I need not make any remarks. Medicine is of no avail in it, but cases have been much relieved, if not cured, by puncturing, and by the careful application of a bandage; exactly the same treatment that has succeeded in hydrocephalus. The part is frequently in a state of gangrene, and then no treatment can be borne, but when the employment of remedial measures is admissible, they are entirely mechanical, and therefore devolve on the surgeon.

DELIRIUM TREMENS.

I now proceed to speak of a disease which resembles in many of its symptoms inflammation of the brain, and yet in a great number of cases it would prove fatal if treated on the common principles applicable to phrenitis. The disease to which I allude is called *delirium tremens*, which is rather an improper word, because the delirium cannot tremble. It would be better to say, *delirium cum tremore;* but it has derived its name from the patient being in a state of agitation, and being delirious. I speak of it now, because it may be readily contrasted with the delirium of phrenitis, arachnitis, and hydrocephalus acutus, of which I have already spoken.

This state of delirium with universal tremor, is rather the effect of morbid irritability—a disease of irritation—than of inflammation. It is such a state as occurs in fever when delirium exists; it is very much the same condition as that which occurs after great loss of blood, in which there is headache, vertigo, and a disturbance of the mind; it is just such a state as frequently takes place after active inflammation of the brain: when the last stage of phrenitis has arrived, the patient will fall into a state of irritation of the brain, which resembles delirium tremens.

Symptoms.—As the disease is for the most part one not of inflammation, but of irritation, the face is not flushed, but pale. You will recollect that when I spoke of that state in infants which is frequently mistaken for arachnitis, and in which stimulants are proper, I mentioned that the face is not flushed, but pale, or if it be flushed, it is only transiently. Now in this disease the circumstances are quite analagous. The eyes are not red, and there is no intolerance of light and noise; at least nothing worthy of being mentioned, compared with what is seen in phrenitis, and frequently there is none whatever. The tongue is generally neither dry, brown, rough, nor white, as it is in inflammation, but is usually moist and covered with a creamy mucus, covered all over with a white soft mucus. Generally there is no great heat of body, and the skin is not dry, as in most inflammations, but is covered by a profuse sticky, clammy sweat, and sometimes this is of an offensive character. If the sweat be clammy, of course it is a morbid secretion; it is secreted in a morbid state, or it would not be clammy, and if it be secreted morbid as to consistency, it may be secreted morbid as to smell, so that the sweats are not only clammy but offensive. This is a very common occurrence. The pulse is quick; a circumstance which you may expect under simple irritation, as well as under inflammation, and at last it becomes very rapid; but it is neither full, nor is it hard. At length, of course, as in other diseases, the pulse will become fluttering, what is called by some writers, *pulsus vermicularis*, like the undulation of a worm. There is constant watchfulness in the disease—the patient can get no sleep, and there is constant delirious talking. He is constantly endeavouring to get out of bed, and out of the room, but you may easily induce him to lie down in bed, or lead him back to it, if he have escaped. There are no violent efforts in the disease, no such efforts as are seen in delirium ferox, but he is everlastingly chattering, and everlastingly restless, so that he will go on talking, and trying to get out of bed. He will sit up too in bed, constantly moving his hands and arms backwards and forwards, but not violently, and then in the midst of all this, as I have just now said, he tries to leave his bed. The delirium generally respects imagined wrongs, and an imagined unfortunate state of private affairs. He fancies that his affairs are in a dilapidated state, and that different persons are endeavouring to injure him. There is rather this extraordinary extravagance about imagined wrongs and deranged affairs, than any preposterous hallucination. There is, of course, great anxiety occasioned by the patient dwelling on these topics. You may excite the attention of the patient to what you wish for a moment, but a moment afterwards he has forgotten what the subject was; his ideas roll off again

to another subject, and he forgets what he had been talking about. There is no spite, no malice in this disease; the patient does not attempt to injure those around him. The whole body is in a state of tremor, and the tongue among other parts. There is great debility; it is a disease attended with extreme weakness, and of course, there is loss of appetite. There is likewise a catching of the tendons, what is called *subsultus tendinum*, and a picking of the bed-clothes. It is common in cerebral affections attended with delirium for a person to be catching at something which they imagine to be before him; and now and then there is hiccup.

The attack sometimes is very slow, and sometimes very sudden. If it come on slowly, there is at first anorexia, loss of appetite, and want of sleep at night, besides which, the patient is restless during the whole of the day, fidgety and boring people about him with his own matters. The eye at the same time is observed to be dull.

Causes.—It is a disease which occurs in adults and not in young subjects, except in affections which I have already mentioned as analogous to this. It generally occurs too in adults who have been addicted to dram-drinking, to drinking spirituous liquors, not always, but *generally*. It is said to have appeared sometimes after acute rheumatism, sometimes after scarlet fever, sometimes after typhus fever, sometimes after injuries of the head, and immediately after apoplectic and paralytic fits, and sometimes after long continued exposure to lead; but the most frequent circumstance producing the disease, is a continued habit of dram-drinking.

Diagnosis.—The diagnosis of the disease, therefore, appears to be made out from the weakness of the pulse; the want of violence in the patient; the want of a flushing in the face, and redness of the eyes; the want of furious delirium; the want of sleep, and the circumstance of the patient being in a state of tremor of the whole body, with a tongue not dry, but covered with a creamy mucus, with a skin not dry, but sweating profusely; from the circumstance of the patient talking incessantly about his own affairs, about some imagined distress, in attempting to get out of bed, being everlastingly restless, but easily managed and laid down, or brought back to bed.

Treatment.—The remedy for the disease is opium in full and repeated doses. One or two grains is not sufficient; it is necessary to give from three to five grains, and to repeat these doses according to circumstances. In some cases it is necessary to give five grains every six or eight hours, and you must continue it till sleep is procured. Three grains would be a proper dose to begin with, and while the patient continues well, it need only be given in small doses, but full doses must be resumed when the symptoms return.

The first book written on this subject was a little Treatise by Dr. Sutton, of Greenwich, who says, he learned the practice in Kent, where there is a great deal of the affection, on account of the people being so addicted to dram-drinking. Smuggling is carried on to a great extent on the east coast of Kent, and the people therefore drink to a great extent, and delirium tremens consequently prevails to a great extent. He found eminent practitioners adopting two different modes of treatment, the one antiphlogistic, and the other narcotic, and he soon saw the superiority of the latter. I believe I mentioned the other day, that last Sunday I was sent for to a case, which had been phrenitis, and properly treated as such, but then it was delirium tremens, and the patient's pulse was rapid and soft; his tongue not dry, and his body not hot, but delirium and tremor. Four grains of opium were sufficient to send him to sleep, and he awoke almost perfectly well.

Now this treatment by opium, and which requires to be backed by good nourishment, is the same that should be adopted after profuse hæmorrhage, after the spurious form of hydrocephalus, if I may use the expression, that state of the system which resembles hydrocephalus in appearance only—the treatment we should adopt in delirium mitius, and wherever there is great irritation of the brain with debility.

Recovery from this disease under the opiate treatment is very frequent, whereas under any other patients continually die. However, the affection will cease spontaneously, like almost any other complaint.

It lasts in general from three days to a week, and patients may then sink gradually, or pretty suddenly; or at the end of that time they may, but it is rare, recover. Now and then it has been known to be followed by apoplexy or mania. I recollect seeing a case of this description which terminated in complete mania.

If the disease yield under the use of opium, the opium may be continued twice a day for some little time, and then relinquished slowly, just as the symptoms of the disease decline.

Some writers have recommended a gentle ptyalisim to be produced, and some, notwithstanding the profuse sweat, have advised cold affusion. I have no experience of either of these modes. Good food undoubtedly is necessary, and sometimes it is found requisite to indulge the patient with drams. You know that in all cases where patients have acquired bad habits, from

the great demand made upon the system after an operation or an accident, you must indulge them. The system has become accustomed to them, and without them it cannot conduct its affairs, and we must allow drams or any thing else that has become a bad habit. However, good food is generally necessary—beef-tea and milk: slops the patient cannot take.

Notwithstanding, however, this is the frequent and most common character of the disease, you must remember, because I know it to be a fact, that this disease is not always of this nature. You may have patients with this mild state of delirium easily led back to bed, easily put down in bed, and trembling from head to foot, with the tongue in a state of tremor too, and yet inflammation may be present, requiring to be treated as you would treat phrenitis. You will find in such a case as this sufficient signs to point out that it is a disease, not of irritation merely, but of inflammation to some degree; the patient will be more or less flushed, his pulse more or less full and firm, and the delirium will be rather violent. I have seen cases deserving to be called delirium tremens, in which the patient was trembling, talking about his own affairs, believing that he was an injured person, easily led back to bed, with a moist skin and a moist tongue, and yet this disease was not benefitted by opium, was not cured till bleeding and starvation were had recourse to. It is therefore necessary that you should remember that you are not to prescribe for a name, but for the condition of the patient. There may be delirium tremens, but it may be accompanied by more or less flushing of the face, a pulse more or less full, a pulse that will justify you, if not in bleeding, yet in purging—at any rate in abstaining from opium. Antiphlogistic treatment is sometimes required in this disease, but usually it is only required in moderation, and there may be cases where it is perfectly right to employ moderate antiphlogistic treatment, and give opium also. You may pour opium in, but it will be fruitless without you adopt some antiphlogistic measures. You must keep the head cool, and for this purpose ice is the best thing: you may also apply leeches. It is said by Dr. Latham, whose experience must be greater than mine, for I only see cases now and then, that blisters are always bad in this disease; and he says that in decided cases of the affection, although it may have come on after apoplexy, opium is equally useful, provided it is a proper case for opium. The circumstance of the affection coming on after apoplexy does not prevent opium from being equally proper—that is, if the delirium do not arise from inflammation but from mere irritation. After inflammation of any organ whatever, when you have put antiphlogistic treatment in force, opium is proper. I mentioned, in speaking of inflammation, that when you had pulled down the powers of the patient, knocked down the disease, opium answered a good purpose, because a state of irritation was likely to come on; but if you gave it before, you would be likely to do harm by it. This disease has nothing peculiar in it; it is merely an instance of a general state of irritation. Opium is found useful in irritation of almost all the various organs of the body, provided no inflammation exists, or any that does exist has been knocked down by proper treatment.

It is said that after death a little congestion may be found in the head, and sometimes a slight effusion.

The work of Dr. Sutton is short and excellent, and it will be worth the while of every gentleman to read it when he has leisure.

TETANUS.

This disease may not have its source exactly in the head, but in the spinal marrow. I am, however, an enemy to all strict arrangement, and therefore I shall speak of it, and all other diseases of the spinal marrow, at the same time that I speak of those of the head. The head contains the chief part of the nervous system, and it is more convenient that I should speak of dissases of the nervous system at large, when speaking of the head, than that I should divide them, and speak of them at distant intervals.

Definition.—The name of the disease I am now about to consider—tetanus—I need not tell you is derived from the Greek word τεινω, to stretch, in consequence of the great stretching and spasm that there is in this disease. There is a constant rigidity in this affection, a contraction of certain voluntary muscles; but although there is constant rigidity and contraction of many voluntary muscles, not alternating with relaxation, yet there is a much more violent contraction at one moment than at another. There is a constant contraction of the muscles affected, but they are not constantly contracted to the same extent. There are paroxysms of spasm, as well as constant spasm; the paroxysms are more frequent, and also more violent, in some cases, and at some periods in the same case, than in others. Synchronous with these violent spasms there is violent pain, and the muscles so affected by spasm are always very hard. There is one extraordinary case mentioned by Sir Gilbert Blane of a man in the navy who had tetanus, and, instead of experiencing a violent agony from the spasm, he had nothing but pleasurable sensations. It is considered a

very extraordinary case, and the disease could not be trifling, for he died on the fourth day. I do not believe that Sir Gilbert Blane saw the patient himself; but he relates the case on the authority of a surgeon in the navy.

Varieties.—These painful spasms affect chiefly the muscles of the lower jaw, of the neck, and of the trunk. When they affect the jaw, that variety of the disease is called *trismus;* when the spasms are such that the body is drawn backwards and arched, the arch being forwards and the whole body drawn backwards, it is called *opisthotonos;* when the body, on the other hand, is drawn forwards, it is denominated *emprosthotonos;* if the body be drawn to one side, then it is termed *pleurosthotonos:* but trismus and opisthotonos are the most common. Sometimes the spasms affect the muscles of the extremities; but in general they do not, and the fingers are often flexible to the very last, while the trunk, the neck, and the jaw, are in a state of the utmost rigidity.

Symptoms.—The muscles of the face, however, are affected, and the consequence of this is that the brow becomes very much corrugated. The corrugater supercilii of each side suffers in the spasm, and the other muscles of the face are affected, so that the angles of the mouth are drawn up into an agonizing expression, and the patient is compelled to a wretched grin, and no doubt this spasmodic grin is greatly increased by the agony which the patient suffers. The nose is drawn up, and the eyes are fixed, staring, and startling. The tongue is continually protruded during the patient's sleep, if the jaw be not completely closed; and when it is protruded spasms continually affect the masseter and temporalis muscles, so that the jaws snap, and the tongue is caught, wounded, and bleeds. The diaphragm too is greatly affected, on which account there is a catching of the breath, and violent pain at the end of the sternum; at any rate these spasms produce a catching of the breath, and, I presume, the pain at the end of the sternum arises from the same source. From the spasmodic state of the abdominal muscles, the abdomen is extremely hard. The recti muscles are seen prominent in all their departments. The belly swells out, so that the abdomen is exceedingly hard and rather arched; it appears, in fact, as if it were boarded over—it is as hard as a board. The least motion, or the least attempt at motion, frequently excites these violent spasms, so that if the patient attempt to move in bed violent spasms follow. The sphincter ani seems sometimes to be violently contracted, so that a clyster cannot be given: this, however, is not invariably the case. From this violent muscular action there is great heat and great sweating. Dr. Fribo, of Geneva, found the temperature of the body 110 degrees in the axilla. In this disease the pulse is quick, exactly in proportion to the severity of the affection: it is much quicker at the moment of the aggravation of the spasm than at any other time. The first symptoms of the disease generally shew themselves about the neck and tongue. Usually the first symptom of which the patient complains is a difficulty in mastication and deglutition, and then there is generally a slight stiffness about the back of the neck.

Duration, &c.—The course of the disease is various; sometimes it proceeds very rapidly, and sometimes very slowly; so that it may last only one day, destroy life in twenty-four hours, or it may last many weeks; it frequently kills before the 4th day; and when it does terminate fatally, it generally proves so before the ninth day. As to duration, Dr. Parry mentions that a horse attacked with this disease did not die before the eighteenth day of seizure.

When a patient dies, it is either during the violence of the paroxysms, or he is completely exhausted.

The mind is usually quite unaffected in this disease, except sometimes towards the last: it is common to almost all diseases for the mind to become slightly affected. The bowels in this affection are always costive. If the patient recover, it is generally by a very gradual cessation of the symptoms, and the disease lasts from two to four weeks, and sometimes six or eight. It is from these long-continued cases that recovery usually takes place. It now and then, of course, remits, and then again it is aggravated.

Morbid Appearances.—After death in most cases nothing is found; and therefore the morbid appearances which are sometimes found are not essential, but incidental. Occasionally I know you will find inflammation of the spinal marrow, but occasionally (and I cannot but fancy I have seen instances of it myself) the congestion so common about the spinal marrow, if the body lie long, has been mistaken for inflammation of the spinal canal. In the ordinary position in which dead bodies lie, the blood gravitates towards the spine; (and you know that a great quantity of blood is seen in other parts) and if the body be not soon examined, and the weather be hot, you may expect great redness of the spinal membrane from the blood effused there, and yet there may be no inflammation. When, however, you consider that more frequently than not there are no signs of inflammation, one cannot but conclude, that although inflammation of the spinal marrow may sometimes give

rise to tetanus, yet the disease is not necessarily the result of inflammation of that kind.

Pathology.—All I can venture to say in the way of an opinion as to the nature of the affection is, that it is a peculiar state of that part of the nervous system from which the nerves spring; or if that be an improper expression, in which they terminate; that part of the brain or spinal marrow which is immediately connected with the nerves of the voluntary muscles. What that state is I cannot pretend to define, but that is the situation of the proximate cause, I have no doubt. The mind is unaffected in the disease entirely, and so is sensibility. It appears to be an affection of the voluntary muscles through the medium of the voluntary nerves; and of the voluntary nerves, I presume, through those parts of the brain and spinal marrow with which they are connected.

Predisposing Causes.—The predisposing causes of the disease are, in the first place, hot climates and hot seasons. The disease is far more common in hot climates than in temperate ones, and more common in hot seasons than in those which are mild. It appears in hot climates and hot seasons that it prevails most from the want of ventilation, the want of good food, the want of comfort, and the want of attention to the bowels. On this account it is much less frequent now in the army and navy than formerly. Dr. Lind says that in the West Indies, at the end of the former war, five cases of amputation out of six proved fatal through the occurrence of tetanus; but Dr. Dickson, physician to the Fleet, in an article published in the seventh volume of the Medico-Chirurgical Transactions, says there were not above six cases of tetanus under his care, arising from amputation, in the West Indies, for upwards of seven years. He ascribes it to the improvement in the treatment of sailors, both in sickness and in health, and to their having more comforts, and being less exposed to noxious causes. Dr. M'Arthur, of the Naval Hospital at Barbadoes, says that only two cases occurred there in the course of six years, and yet there were many wounds, and many amputations during the war.

This is another instance of the effect of external circumstances upon the existence and severity of various diseases. Fever prevails most amongst those who manifest a want of cleanliness, and so it is said do cholera and typhus. But diseases very dissimilar to each other will be predisposed to by a want of comfort; the more the comfort of the body is attended to, the less is the influence of all noxious agents and noxious circumstances.

Males are thought to be more disposed to the disease than females, but this is not proved, because males are more exposed than females to the exciting causes of the complaint. It is also thought that the strong and muscular are more liable to it than the weak; but whether that is really the case I do not know, because I have seen a great number of instances of tetanus in persons of all sorts of constitutions, both strong and weak. It is supposed to occur particularly in young adults, but it occurs also in the West Indies in infants. Children there—but now less frequently than formerly—die of locked jaw, so that one variety of the disease was called *trismus nascentium*.

Exciting Causes.—Among the exciting causes of the disease are to be mentioned cooling when the body is hot—sudden refrigeration; but the most common is a wound; and what is singular, it is wounds of the hands or feet that most frequently cause it; and among wounds of the hands and feet, it is wounds of the fingers and toes that most frequently cause it; and among wounds of the fingers and toes it is most frequently wounds of the thumbs and great toes that produce it. Every wound has not an equal tendency to produce tetanus; for contused wounds much more frequently occasion it than any other. A wound will sometimes not produce the disease till the person is suddenly exposed to cold, and then he will have it immediately. This is a similar occurrence to what I mentioned regarding ague, viz. that a person may be exposed to the causes of ague, and yet the disease will not appear until he is exposed to cold and wet: the cause then becomes efficient. So a wound frequently will not produce tetanus till another cause of the disease takes place—sudden refrigeration, and then the affection makes its appearance. The reverse, however, of this sometimes happens; the person is exposed to wet, but the disease will not shew itself until a wound takes place.

It occurs in all states of the wound—in healthy and unhealthy wounds; sometimes when the wound is nearly healed—sometimes when it is perfectly healed. It occurs, too, whether the wound be large or small. I had a case of tetanus, as severe as any I ever saw, where there had been merely a contusion of the thumb. There was no pain—no irritation; the nail was separated and loose, but under it all was dry, no secretion was going on, and there was no irritation to be found; and yet that contusion of the thumb produced the disease. There is a case mentioned in the Transactions of the London Medical Society, in which the disease occurred after a burn, at the time when there was merely a dry scab on the leg and no inflammation

around it: nay, the disease has sometimes declined and ceased, while the wound every day grew worse and worse. I had a case of tetanus from compound dislocation of the great toe, in which the disease declined and ceased while the pain continued in the foot; inflammation and suppuration went on, accompanied by great suffering, and yet the disease was declining all the time. The trismus nascentium, the lock-jaw of new-born infants, has been ascribed to the state of the navel—to the condition of the parts united by the umbilical cord; but it appears that it is greatly disposed to by the unhealthiness of the surrounding circumstances in which the children of the West Indies are placed.

As to the period of a wound at which the disease may occur, Sir James M'Grigor says, from his immense experience in the Peninsular as army surgeon, that it appeared, a person wounded was safe, as it regarded tetanus, if the disease had not begun by the twenty-second day after the infliction of the wound. But Sir Gilbert Blane, who had, if not equal, yet very great experience in the navy many years ago, says, that he has seen the disease occur at all periods of a wound between the second day and the end of the fourth week. Sir James M'Grigor found the twenty-second day the limit; but Sir Gilbert Blane has seen it up to the end of the fourth week from the time of the infliction of the wound: so that a person is not safe, according to him, even if he have passed the twenty-second day. Dr. Parry mentions seeing a horse seized with the disease on the thirtieth day. I may mention that tetanus is not only common in horses, but that lambs are affected with it, if their ears be bored with a red-hot iron to check the rot. It has been said to arise frequently from worms in the intestines.

Diagnosis.—As to the diagnosis, in almost every case you observe that the tongue is bitten. Before the mouth is completely closed, and the patient falls asleep, the tongue is protruded by the spasms; the spasms affect the entire set of muscles, and therefore you may expect, in most cases, a biting of the tongue. A second symptom, very characteristic of the disease, is the pain at the scrobiculus cordis. It is a pain not increased by pressure, but a sudden, violent, sharp, stabbing pain; it may be more or less constant, but at periods it is exceedingly severe. Then, again, you have a peculiar swelling and rigidity of the muscles; it is spasmodic, constant, not convulsive; it is what they call *tonic* spasm—*constant*; not spasm alternating with relaxation. Then, again, you observe the peculiar posture into which the body is drawn—opisthotonos, emprosthotonos, pleurosthotonos; and in trismus you find the jaw to be closed, or nearly so, without any inflammation around, and without any organic disease to account for it. There is no terror in this disease—no excitement of mind—no morbid corporeal sensibility, as in hydrophobia. We shall see that in that affection there is excessive terror—excessive excitement of mind—a great sensibility to external sensation—so that neither noise, nor light, nor a sudden draught on the body, can be borne; but in tetanus, although the patient is miserable enough from the agony, yet there is no *mental* distress—no terror of mind—neither is the body extraordinarily sensible to external applications. As to rheumatism, when that occurs it chiefly takes place in the joints, and not in the bellies of muscles; or if it do, the joints are affected likewise; and there is no spasm, but a difficulty of motion, great pain when the patient moves, and many joints are frequently affected at the same time. As to the distinction between a locked jaw and rheumatism, you will observe, that, in the latter, other joints are most probably affected: you may find the jaw stiff, but there is violent pain flying from one part to another, and the patient is not subject to a snapping of the tongue. In rheumatism, too, there is generally tenderness in some part of the jaw, and generally there is a great deal of heat, as well as constant pain. Tetanus, more especially trismus, is very frequently hysterical, but this occurs, in ninety-nine cases out of a hundred, in females; and there are other hysterical symptoms—such as globus hystericus, great flatulency, and irregular convulsions. If hysteria be present, and you see trismus, or any other form of tetanus, you may take it for granted that it is an hysterical affection altogether. I mentioned, when speaking of ague, that tetanus sometimes occurs during that affection, particularly during the cold stage; and I presume it is not dangerous. The utmost that I have observed is a constant tonic spasm of the arm—that is to say, I had two patients under my care whose hands were clenched during the cold stage. Narcotics sometimes have occasioned this disease. A tobacco clyster will sometimes occasion it, but it is strychnine more particularly which has this effect. In these cases, if you knew that poison had been swallowed, you would ascribe it to that; but if a narcotic had been taken, in addition to the tetanus, I presume in most cases you would find some other symptom present as well.

Prognosis.—The prognosis in this disease is always bad, unless it be a sympathetic affection. If hysteria be present, or the disease have been produced by a narcotic, the prognosis then would not be so bad;

for the narcotic will frequently be got the better of. In such circumstances, the prognosis is very various. If, however, the disease be what is called *traumatic*—if it arise from a wound, or if it arise from worms in the intestines—few persons recover from it. But every description of tetanus, whatever be the cause from which it occurs, may be recovered from. Dr. Parry says, on the subject of prognosis, that if the pulse be not above 100, or 110, up to the fourth or fifth day, patients almost always recover; but if the pulse be quicker early, the disease almost always proves fatal, and that there have been but very few recoveries when the pulse has been 100 the first day. There is less danger in proportion to the length of time which the disease lasts. If you be called to a case which has lasted some time, your prognosis may be favourable.

Treatment.

Bleeding.—As to the treatment, if the wound be inflamed, or if there be any internal inflammation (it is said that enteritis sometimes exists in the disease, though I have not seen it), or if there be fulness of the system, undoubtedly one would bleed. You are not to imagine, however, that because the blood flows freely, the patient must be benefitted by blood-letting; because, while there is such violent action of the voluntary muscles, the effect must be the same as that which we every day procure in common venesection, by making a person contract his hands so that the muscles may press on the internal veins. When all the muscles are in a state of violent spasm, as is the case in tetanus, you may expect that the circulation will be irregular—that a great quantity of blood will be forced to the superficial veins—and consequently that the blood will flow freely; and bleeding is not at all useful unless the wound is inflamed, or there is some decided internal inflammation, or the patient is clearly in a state of plethora.

Purgatives.—Purgatives are often useful, especially in the cases of children, when they are labouring under trismus nascentium. I believe there is benefit in general from clearing the intestines well out; and some cases have done well under the use of purgatives in adults, where there has been some irritation in the intestines—worms, or whatever else—producing the disease. In general both bleeding and purging do good: it is always right, however, to clear out the bowels. Among purgatives, I think the oil of turpentine is one of the best. It clears the bowels thoroughly; and in cases of hysterical locked jaw I have seen it produce an instantaneous effect. Cases are on record, and I have seen several instances myself, where, in trismus of an hysterical nature, the jaw opened the moment an injection of oil of turpentine was passed up, and in other cases I have seen it open a few hours afterwards. If two or three ounces of this medicine cannot be got down by the mouth, and it is of no use to give less, you may exhibit three ounces by the rectum, diffused in gruel. Should this not answer, a large dose of calomel should be given. If pills cannot be swallowed, you may place it in the mouth. Mercury to ptyalism has been said by some to do good.

Narcotics.—Opium and other narcotics have been tried in this disease; but the agency of all remedies is greatly resisted, and therefore very large doses of narcotics are borne. Dr. Morrison, a gentleman who has practised in the West Indies, says that he has been in the habit of treating these cases there, and that it is very common to give 100 drops of laudanum as a starting dose, and follow it up every two hours, increasing each dose by one-third of the preceding dose. He also allows the patient wine and ardent spirits, employs the warm bath, and exhibits mercury to ptyalism, paying due regard to the bowels; and he states that the result of this practice was the recovery of more than one-half of his cases, although the tetanus was of a traumatic character. However, we have all seen opium exhibited in a large quantity, even to stupefaction, without doing any good. Prussic acid appears to have failed entirely in this disease; it has been frequently and freely given, but it has failed, and so likewise has belladonna. Some cases appear to have done well by means of an injection of tobacco; it appears to have relaxed the spasm, and cured the disease. Dr. Latham, senior, praises opium and ipecacuanha, which he says produces copious sweating. He states that the success from a combination of these remedies has been very great.

Warm and Cold Bath.—The warm bath appears to have done no good, and sometimes to have been really injurious; and, on the other hand, the cold bath and cold affusion have relaxed the spasm, but sometimes they have killed the patient at once, as if he had been shot. I presume, if the cold bath or cold affusion be employed, it ought to be at the moment that the violent spasm is on. I know of an instance where a patient was taken out of bed, in the hospital, put on a chair, placed in a tub in the middle of the ward, and a pail or two of water dashed upon him, and he fell down dead as if he were shot, never spoke again, and all the other patients were very much shocked; and yet there are cases in which that very remedy appears to have cured the disease. There

are many cases of the latter description on record, so that the practice is justifiable I should imagine, though I have no experience of it. The error, if there be error, consists in the cold water not being thrown on the patient when he is at the very worst. The moment you find a catching of the breath, from a violent spasm, I would dash on the water, for I think its agency in that case would not be sufficiently severe to produce danger. But Sir James M'Gregor says, from the result of very extensive trials of the cold bath, in the Peninsular war, that it was worse than useless.

Blisters.—Blistering along the spine *may* be serviceable, but it is certainly often found useless, and unquestionably it is a very cruel remedy.

Sir James M'Grigor says, as the result of his experience in the army, that all things (except one that I do not see spoken of—iron) have been fully tried in some hundreds of cases, and there is little or no dependence to be placed upon them. I have looked over the list he has furnished, and upon my word there is almost every thing that ever was used in medicine. Sir James M'Grigor says that the mode of treatment is certainly still to be discovered; and as there is no analogy to guide us, there is little hope that any remedy will ever be found out. Recovery has taken place under all means of treatment, and recovery has taken place under no means. It struck me, from seeing the benefit that iron produced in St. Vitus's dance, that as this was a similar disease, although infinitely more severe, characterized, not by a slight catching of the muscles, but by a violent spasm, yet that iron might still have the same effect. I saw clearly, that, in the exhibition of narcotics, we were on a wrong scent; because you may give opium till the patient is stupid, and yet the disease generally proves fatal—at least in this country. Under these circumstances, I determined that, if ever a case came under my care, I would give iron a fair trial: at length a case did occur; this remedy was fairly exhibited, and the man recovered. The case was one of traumatic tetanus, arising from compound dislocation of the great toe. It was a well-characterized case, and several persons went to look at it. The carbonate of iron was made into an electuary, with double its weight of treacle, and each dose was mixed with a quantity of beef-tea, and stirred up well as it was going into the patient's mouth; being given to him every two hours. He took it *ad libitum*, and the man recovered. It was not long before I had another case, and that arose from a contusion of the thumb, and was the case in which I stated the nail was separated. This was as severe a case as ever I saw; I never saw one which did well, more severe. It was a frightful case, and in this patient it was got down in a still greater quantity; there was no limit fixed, and it was found that he had taken two pounds in a day! His bowels were carefully attended to, and an injection was given three times a day. The iron came away in large lumps, very similar to those which come from a horse, and the lumps were perfectly red. However, the man in two days was decidedly better, and he repeatedly came, after his recovery, to thank me for what had been done for him. A third case came under my care about two years ago, and occurred in a boy who had had a chilblain on his heel, or a little higher up. He was brought to the hospital in a most frightful state, and the disease was so violent that I had no hope of doing him good, fearing that he would die before the remedy could be brought into operation upon his body. It was prescribed for him, but he died before twenty-four hours had elapsed. This is a medicine that will not produce an immediate effect; to produce its effect upon the system, iron must be given for a few days. This patient died in a violent paroxysm. I saw him in the afternoon, about one or two o'clock, and he died early the next day; so that it was a case in which the remedy could not exert its influence. It is not a remedial agent like bleeding, which produces an instantaneous effect; you find, in St. Vitus's dance, that it is sometimes months before it produces its effect; and so it is in tic douloureux, and also when you give it as a tonic.

Now, whether these cases were cured by the iron I will not pretend to say; I dare not assert that they were. I employed it from the analogy of the affection to St. Vitus's dance, and both cases were traumatic, and the patients did well—not by lingering out, but in two or three days they began to mend, and were well speedily. There is a probability, but no certainty, that the disease was cured by iron: the cases, however, are interesting so far as that they make it an object to give iron a fair trial in any other cases that may occur.

I have had but three cases of tetanus from the time that I determined to give iron a fair trial. In two of these it appeared to succeed; in the third there was no time for the fair exhibition of it.

I was mentioning the circumstance to a gentleman whom I met in consultation some few months ago, who had practised in the West Indies, and he informed me that, in consequence of the publication of those

cases in one of the volumes of the Medico-Chirurgical Transactions, he had used it in the West Indies, and I think he said that eight cases recovered out of ten, and in the two cases which did not recover, the symptoms were so severe, the jaw so thoroughly closed, that it was impossible to get it or any thing else down the throat. There is a case mentioned by Sir James Macgrigor in the 6th vol. of the Medico-Chirurgical Transactions, and also in his reports, which are very interesting, of the diseases of the army in the Peninsular war, which proceeded from a slight wound in the finger. The patient, a soldier of course, was carried in a bullock car after the battalion to which he belonged, in a severe state of tetanus, in the midst of pouring rain, which completely drenched him in the early part of the day, the heat being 52 degrees only, and then they ascended the highest mountain in Gallicia, the snow on the summit of which was knee-deep, and there the temperature was only 30 degrees. He was exposed in this condition from six o'clock in the morning till ten o'clock at night, and arrived at his journey's end half starved from cold, but perfectly cured of his tetanus. Whether such a mode would succeed if it were put into practice intentionally I do not know. I stumbled on a similar case published in 1827. A horse which was in a state of tetanus happened to be in a wet park, and was drenched with rain, precisely as was the case with this unfortunate man, and the horse also did perfectly well. Whether the depressing power of cold and wet regularly kept up for a certain number of hours has a tendency to cure the disease, I do not say; but I think, that in a disease of violent excitement as this is, the constant, not *sudden*, but *constant* refrigeration, by means of a low temperature, united with moisture, is likely to be of great service. There are at least two such cases on record, and every one must be very much surprised to find a soldier so exposed from morning to evening recover, and the recovery completed in so short a time as one day.

Whirling Machine.—For the purpose of lessening the powers, some have proposed a whirling machine, to make the patient giddy and powerless, but I do not know that it was ever attended with success.

Amputation.—As to the removal of the part, if there be a wound, that is perfectly useless. I had a case of tetanus some years ago, in which an operation was proposed, in consequence of the disease having arisen from a compound fracture of the leg. The extremity was cut off, but the patient was no better, and now it is with me, and I believe most others, an established rule, when the disease has taken place from a wound, not to remove the wounded part. It is found in almost every case that the disease continues just the same. I have been unable to find, after a long search for cases in scores and scores of journals and medical books, only one instance where the removal of the part appeared to be attended with the removal of the disease. I have heard of such a case; but I believe the instances are so rare, that amputation of a part is never thought of at the present day.

Introduction of Cork between the Teeth.—It is right in treating the disease, whatever remedies you employ, to introduce a cork, or something of that kind, into the mouth, to save the tongue, or the tongue will be dreadfully bitten. This should always be carefully attended to.

Necessity of Support in the Chronic form of the Affection.—When the disease runs on and becomes chronic, it is necessary to support the patient well: if you do this, you will give him a greater chance of recovery. Dr. Currie, who wrote on Cold Affusion, has given in a paper published in the Transactions of the London Medical Society, an account of a man labouring under tetanus so chronic as to last 42 days, and who in this time drank 110 bottles of port (so that he got something by his tetanus), and yet not the least approach to intoxication occurred, and he perfectly recovered. Certainly 110 bottles of port in 42 days was very good allowance, and I should think made him pass his time pleasantly. There is also, in the same paper, an account of a horse labouring under tetanus, which, during the disease, drank as much port wine as he was worth. I do not know his value; but his owner was so fond of him, that he allowed him port wine, and he recovered, after drinking as much as his original cost. It is certain, therefore, that, in the chronic form of the disease, we ought to support the patient as well as possible, and that wine in the chronic form is highly serviceable.

ON PURULENT LARYNGITIS.

To the Editor of the Medical Gazette.

Edinburgh, 99, George Street,
January 2d, 1833.

Sir,

By inserting the enclosed in your valuable periodical, at your earliest convenience, you will much oblige,

Your most obedient servant,
J. P. Miller.

Of late years the attention of the profession has been directed to the diseases of

the windpipe much more than formerly; and, in consequence, our knowledge of their nature, and the modes of treatment, is more extensive and accurate.

We know that the fauces, larynx, and trachea, are very frequently the seat of disease, both acute and chronic; and that morbid action, commencing in any of these upper parts of the respiratory system, may continue limited, in a great measure, to that part; but that, in the great majority of cases, another, or all, are ultimately involved.

Experience has taught that the affections, particularly the acute, of the upper part of the larynx, whether originating there, or extending from the back of the fauces, are usually the most urgent and alarming, attended with the most harassing symptoms, rapid in their progress, and, if neglected, very apt to terminate fatally. We have, therefore, been made aware of the importance of understanding well the symptoms indicative of such mischief, both in its commencement and progress, and of the imperious necessity for prompt and energetic interference, to check the disease, and prolong existence.

The nature and progress of inflammatory action in these parts is known to vary. It may be established, increase, reach its acme, and then subside favourably; or serous effusion may take place into the submucous cellular tissue, becoming dangerous according to the rapidity and extent of its formation; or coagulable lymph may be deposited on the mucous surface, either uniformly adherent, or partially detached; and, like the preceding, dangerous, by mechanically impeding respiration. When the action is of a more chronic character, swelling of the glottis may also take place, from effusion into the submucous cellular tissue, of a more solid nature, partly serous, and partly lymphatic; more slow in its formation and insidious in its progress, but equally formidable; and, if unheeded, as surely fatal as the acute œdema. Or gradual thickening of the membrane itself occurs from effusion and organization of lymph in its structure—of itself a serious disease, but still more to be dreaded, as laying the foundation for ulceration of the membrane, and accompanied, after a time, with pulmonary changes.

In short, the diseases have now been classified, according to their symptoms and the organic changes produced, into simple laryngitis, œdema glottidis, acute and chronic, croup, and phthisis laryngea; and from the descriptions of those now recorded, we are enabled to detect and distinguish each with tolerable certainty.

Lately I have met with several cases of laryngeal disease differing from any of the preceding affections, but equally important and interesting; and as I cannot recollect having seen any similar, and have not been able to find any recorded descriptions corresponding to the symptoms and appearances, some account of them may not be uninteresting.

I allude to inflammation of the glottis and surrounding parts of a most acute nature, and terminating in *suppuration of the submucous cellular tissue.* The disease appears either to attack these parts at once, or to be an extension and increase of incited action from the fauces. It is sudden in its accession, and rapid in its progress, to a highly dangerous intensity. The patient may have been complaining of common sore throat for some days, or not. Suddenly great pain is felt in the fauces, and deep in the upper part of the neck: this increases, and breathing becomes quick and embarrassed. The pulse rises, and the whole system labours under the inflammatory diathesis. The voice is impaired, and attempts to speak or swallow are made with difficulty, and cause increase of the pain. Respiration becomes more and more embarrassed, the features express intense anxiety, the patient is restless, and much alarmed. Paroxysms of still more difficult breathing supervene, and in one of these he dies, suffocated; or the symptoms having continued for some time very severe, begin to decline, and subside much more slowly than they advanced. During the retrocession there is profuse expectoration of viscid mucus.

The disease is more allied to acute œdema of the glottis than to any other, but differs from it in its rapidity, and in the nature of the difficulty of breathing. In the œdema the respiration is slow, inspiration is exceedingly difficult, and expiration comparatively easy. Here the whole process of respiration is tumultuous and embarrassed, the patient being in the same anxious throes as we could suppose produced by the twisting of a ligature round the neck with the intent to strangle slowly.

Further detail as to the symptoms, and

description of the morbid appearances found on dissection, will be afforded by the following cases.

For the first two I am indebted to Dr. Simson, to whom they occurred; the others were in the Royal Infirmary, one under the care of Dr. Campbell, the two last under Mr. Liston.

Case I.—"Nov. 25, 1832. Mrs. Reid, æt. 50, very plethoric, has had hoarseness and sore-throat for two days past, which she attributed to having got cold. Has great difficulty in breathing and swallowing; fauces much inflamed.

26th.—Better, but still pain in breathing, and difficulty in swallowing.

28th.—Difficulty of breathing much worse; pulse 130; paroxysms of dyspnœa continue; anxious; face beginning to become livid; tracheotomy was performed.

29th.—A great deal of mucus has been forced through the tube during the night; still breathes quickly. Died on the 30th."

Inspectio Cadaveris. — Windpipe opened from behind. The tongue was considerably larger than usual, but without any apparent infiltration of its texture. At its root, on the dorsal aspect, several fasciculi of enlarged and engorged vessels, ramified from behind forwards, immediately under the lining membrane. The mucous membrane of the fauces, of the pharynx, and particularly of the air passages, shewed very evident marks of acute inflammation, being throughout of a bright red colour and considerably softened. In the lower part of the larynx, and in the whole of the trachea, the increase of vascularity was greatest; the membrane was of a deep purple hue, soft, and easily lacerable. Immediately behind the epiglottis—*i. e.* between this organ and the root of the tongue—there was a cavity, in size capable of containing an almond, communicating with the fauces by a small ragged aperture, flocculent on its inner surface, and apparently formed by elevation of the mucous membrane and destruction of the subjacent cellular tissue. At the right lower margin of the epiglottis, a similar cavity existed, but of much smaller dimensions and of a circular form; and on the corresponding situation on the left side a third was found, larger, more irregular, and superficial. Close to the last, and almost connected with it, was another of considerable depth, placed between the lower part of the epiglottis and the projection of the left corner of the hyoid bone; and extending downwards from this, along the upper and outer margin of the glottis, lay a paste of recent lymph adhering firmly to the membrane. A similar deposit, though to a much less extent, existed on the opposite side. Within the glottis, and at corresponding points of its margins, were two superficial abrasions of considerable size, but scarcely penetrating the membrane. The ventricles were shut, and apparently effaced by the vascular turgescence. Below the lymph on the left side, betwixt the cornu of the hyoid bone and the cricoid cartilage, lay a swelling of the size of a large almond, soft and globular. On removing the mucous membrane investing this tumor, a pulpy whitish mass was exposed; and on gently disturbing it with the point of a blow-pipe, purulent matter flowed out, and the swelling subsided. It had been produced by infiltration of the loose and fine cellular tissue by purulent matter, and on tearing up the cellular tissue the matter escaped, though previously the swelling had appeared of a nature more nearly approaching the solid. The tonsils seemed healthy. There was a good deal of serum effused in the intermuscular cellular tissue on the fore-part of the larynx, and the muscles had a blanched appearance. There was considerable effusion into the bronchiæ.

Case II.—"Sept. 1, 1832. Agnes Ruthven, ætat. 43, has had a slight attack of fever for three days past, having got herself wet. Complains to-day of a tickling in the throat, and an inclination to bring up something lodged there. Tonsils much inflamed; pulse strong and full.

2d.—Swelling and inflammation of tonsils increased, accompanied with great pain and difficulty of swallowing. Breathing also is considerably impeded.

3d.—Breathing and swallowing not improved. The voice also is affected, and she has fits of great difficulty in breathing. Spots of matter upon the tonsils.

4th.—Tongue very much swollen. Fauces cannot be seen. Great difficulty in swallowing, and laborious breathing. Countenance anxious. She died at four o'clock.

Bleeding, local and general, was repeatedly employed, diaphoretics, &c. were given, and incisions were made into the tongue.

Inspectio Cadaveris. — The tongue was found much enlarged. There was a small abscess at the root and in front of the epiglottis; a second on the right side of the rima glottidis, and a third on the left. The parts in the neighbourhood were much thickened. But the greatest enlargement was at the back of the rima glottidis, and just above the top of the arytenoid cartilages. The enlargement was from sero-purulent effusion into the cellular tissue, and there was an abscess in the centre of the mass. There was some lymph in the trachea, and the mucous membrane was considerably inflamed."

Case 3.—Isabel Hume, a servant, aged 19, was admitted into the Royal Infirmary, under the care of Dr. Campbell, Oct. 19th, with a hard, circumscribed swelling, little larger than a hen's egg, situated beneath the upper part of the sterno-mastoid muscle. She stated that, a twelvemonth ago, she perceived a small, hard, and painful lump in the site of the tumor; that this enlarged gradually, and attained the present size about six months since. The part had been leeched and blistered, some months previous to her application, without benefit; the tumor became more painful, and did not diminish.

The day after her admission she was put under a course of iodine, taking the tincture internally, and rubbing the swelling with an ointment, composed of the hydriodate of potash, with lard. This treatment was abandoned after a fortnight, having failed to make any impression on the tumor. Poultices were then applied, and under their use the swelling became less and softer, and it was thought that obscure fluctuation could be perceived in the upper part. Matters remained stationary thus for some days.

On November 5th she was seized with a smart attack of cynanche tonsillaris, in consequence of exposure to cold; the right tonsil was very much swollen, there was some difficulty of breathing, and deglutition was greatly impeded. The tonsil was scarified with relief, purgatives administered, and warm inhalations used. For three or four days she seemed improving.

During the night of the 9th she was attacked with intense difficulty of breathing. She got up, walked across the ward hurriedly, and returned; then threw herself upon the bed, and expired before any assistance could be rendered.

She had been seen by the house surgeon at eleven the same night, and then expressed herself as much better, saying that the pain in the throat had subsided, and that she breathed with comparative ease.

Inspectio cadaveris.—The tumor appeared to be a glandular enlargement, which had suppurated, situated beneath the sterno-mastoid, and extending from the parotid gland to the front of the thyroid cartilage. The cellular tissue of the uvula was fully distended with serum, the organ resembling a plump and ripe grape. The epiglottis was thickened enormously by a less fluid effusion; and there were several spots of purulent deposit beneath the mucous membrane, within the glottis, and around its margins. The whole membrane was turgid and highly vascular, and this diseased appearance extended throughout both the trachea and the bronchiæ. The bronchiæ were filled with mucus; the lungs otherwise seemed healthy.

Case 4.—James Skinner, aged 46, a labourer, underwent the lateral operation of lithotomy, by Mr. Liston, in the Royal Infirmary, October 17th. By the 29th he had almost recovered, the urine passing naturally, and the wound fast closing.

On the evening of the 29th he complained of sore throat, supposed to have arisen from premature exposure. He had much pain in the upper part of the neck; the fauces were seen inflamed; the uvula enlarged and relaxed; and there was some swelling of the glands below the angle of the jaw. Leeching, fomentation, and the antiphlogistic regimen, were employed.

On the 31st he could swallow nothing, and was annoyed by a frequent sense of suffocation. The fauces and uvula were much more swollen, and the pain had increased. A blister was applied over the throat, and he was relieved.

On November 2d the breathing became much worse; he was unable to lie down, and showed great anxiety. The tongue became much swollen, and abscess formed; great uneasiness was complained of about the top of the windpipe, and

there distinct swelling from œdema was detected by examination with the finger. A sinapism was applied from ear to ear, and in the evening he felt better. His voice was in some measure regained, but he could not swallow any thing. An elastic catheter was passed by the mouth into the œsophagus, and through these, by means of a caoutchouc bottle, nutritious fluids were injected.

On the 3d he was considerably better; and from this time he gradually improved, regaining the ability to swallow, breathing, and speaking more easily. The blisters were repeated. He now began to complain of pain in the left side of his chest, which increased, and it became necessary to blister the part: this removed the pain. Expectoration of viscid and tenacious mucus commenced with increase of pain, and frequent cough; in consequence of which the wound in the perineum re-opened for a time.

For a considerable period he continued unable to swallow solids; his voice was husky; and, on the least accession of cold, pain in the throat returned, with greater difficulty of articulation. The expectoration also continued long, but never was of a purulent character.

By attention and nourishing diet he recovered completely, excepting in his voice, which remained imperfect. He left the infirmary December 16th.

In this man there was every reason to suppose that the affection of the larynx was similar to that in the preceding cases, but the circumstance of the patient having recovered leaves this somewhat uncertain.

For the same reason, the following case is also obscure. In both Mr. Liston was fully convinced that the disease was the same as that which had destroyed the girl Hume.

Case 5.—Robert Concord, aged 9, admitted, under Mr. Liston, November 21st, on account of an injury of the head. On December 2d leeches were applied to the scalp, and erysipelas followed. By active treatment this soon began to decline. On the 8th he complained of sore throat, and difficult deglutition. The fauces were inflamed, and the tongue swollen. Metastasis seemed to have taken place; the erysipelas had almost disappeared; his lips were swollen; and the carotids beat violently. He was constantly crying out, and could not swallow any thing. The dyspnœa continued for some hours very severe, such as has been before described, and then began to diminish. On the 10th he was better; the lips and tongue were less swollen, and deglutition was easier. By the 14th he had recovered almost entirely from the affection of the throat. His health, however, is much shattered; and disease of the hip, of a violent and rapid nature, is advancing.

From these cases it appears, that inflammation may in the larynx, as in other parts, terminate in suppuration. First, the submucous cellular tissue is infiltrated by serum, and then, perhaps, by a sero-purulent fluid; afterwards, at one or several points, (more frequently at several,) secretion of purulent matter takes place, the cellular tissue is in part broken up, and a diffused abscess is formed. Or the matter may collect slowly, destroying completely a portion of the cellular tissue, or condensing it so as to form a circumscribed cavity: in this way a more perfect abscess is produced. There can be no doubt, that the cavities observed in the neighbourhood of the epiglottis, and along the rima glottidis in Case 1, were of this nature—the cavities of abscesses which had given way, and discharged their contents either by a spontaneous and gradual process, or by rupture, during violent coughing or paroxysms of dyspnœa. Lymph, also, we have seen, is sometimes effused on the surface of the membrane in the neighbourhood of the abscesses, but this forms a minor feature in the pathology. The swelling produced by the collection of matter, and by the surrounding serous effusion, is the fatal obstruction to respiration, closing the glottis, and favouring the impaction of vitiated mucus. The termination is hastened by the extension of the inflammation into the trachea and bronchiæ; and, in fortunate cases, the same circumstance retards convalescence.

From treatment not much can be expected, unless it be commenced shortly after the accession of the inflammation, and then it must be actively antiphlogistic. In this affection, as in the others of the wind-pipe, the whole respiratory canal becomes ultimately involved, and the treatment in consequence is rendered more difficult, and more likely to prove unavailing.

A question arises as to the expediency of tracheotomy. It would appear that the

operation is less likely to be successful in this disease than in those of a more gradual and chronic progress. It may probably delay the fatal issue for a short time; it may prevent death by suffocation from the swelling of the glottis; but it cannot arrest the inflammation of the trachea and bronchiæ. Repeated leeching and blistering of the neck, with the administration of internal remedies adapted to the circumstances of the case, seem to be that kind of treatment in which trust ought chiefly to be placed.

These observations are necessarily imperfect; but it is enough to have directed the attention of the profession to this disease, which I have ventured to term *Purulent Laryngitis*. Future experience will, I trust, produce a more copious and clear treatise on a subject so interesting.

CHOLERA AN *IMPORTED* DISEASE.

To the Editor of the Medical Gazette.

Sir,

The following is the total amount of the deaths and christenings within the Bills of Mortality for the four last years:—

Years.	Deaths.	Christenings.
1829	23,524	27,028
1830	21,615	26,713
1831	25,337	28,263
1832	28,606	26,974

From this table it appears, *first*, that out of these four years the deaths have, in this year *alone*, exceeded the christenings; and, *secondly*, that the increase in the burials of 1832, above those of 1831, amounts to 3269.

To account for this excess of 3269, it is sufficient to examine the following table, by which it appears that 3200 have died of cholera, while other diseases have maintained their usual rates of mortality: in other words, that the mortality of London this year has been the ordinary mortality, *plus* that of cholera. I require no more decisive argument to convince me that the cholera of 1832 was a *nova pestis*—an *imported* disease—a disease superadded to the ordinary complaints by which the population of this town is carried off.

I am, sir,
Your obedient servant,
George Gregory.

31, Weymouth-Street,
Jan. 7, 1833.

Table exhibiting the comparative Mortality of twenty of the most de tructive Disorders in London, during the years 1829-30-31-32.

	1829.	1830.	1831.	1832.
1. Consumption..	5251	4701	4807	4999
2. Cholera	..	..	18	3200
3. Convulsions ..	2761	2362	2980	2075
4. Inflammation..	2385	2196	2812	2555
5. Age & Debility.	2076	2242	2677	2918
6. Asthma	1131	1158	1061	1050
7. Dropsy	1021	919	986	978
8. Fever	1167	782	965	872
9. Hydrocephalus	855	723	853	858
10. Small-pox	736	627	563	771
11. Hooping-cough	633	552	1738	677
12. Measles	578	479	750	675
13. Inflammation of the bowels....	..	..	138	601
14. Apoplexy	129	404	185	470
15. Mortification..	286	271	307	262
16. Childbirth	261	281	310	313
17. Palsy	203	197	216	240
18. Inflammation of the Liver	197	195	296	336
19. Hydrothorax ..	106	102	122	118
20. Typhus Fever..	103	90	223	253

MAXILLA TO VESTIBULUS.

London, Dec. 31, 1832.

My dear Vestibulus,

If you cannot find a literal excuse for this clumsy appellative, suppose it in the "portal of thine ear" on which the lucubrations of "Maxilla" attend. But we trifle—and doctors, you know, are "solemn humbugs." Let us, then, be "profound, sad, and discreet," as enjoined in 14, 15 Henry VIII. Let us talk of the Blood,—not of charters and statutes to-day, according to our original plan of operations, but of the Blood—of the blood—unique—mysterious; at once the means and the end of this our physical existence—the spring and the life-stream of the human race. Since I last wrote to you, I really have thought of little else (I mean when I was not

keeping "holiday.") In truth, I may be said to have been labouring under a determination of blood to my brain, the symptoms of which have, for the time, superseded all other imperfections of that organ. Acts of parliament I have held in especial abhorrence since the "fit was on me," and I am "i'the vein," for nothing but the vein, and the vein's current. It is now the witching hour of night—the last of the old year; and, believe me, Hamlet was not more thirsty than I am for "hot blood." There is the man for the blood, my dear friend—Hamlet's creator! Shakspeare had a wider, better notion of the living blood in the living body—of the blood as an entire continuous mass—of the blood in all its great anatomical relations—than any physiologist that I know, living or dead. It has become trite to quote Shakspeare in physiology, yet I remember when it was not so: he, however, is still the same as nature, and custom cannot stale their infinite variety. You may find me often presenting you with a touch of his quality in these matters between us. Why should I not? What in the body is more influenced by the various states of human life, moral and physical—what expresses them more sensibly than the blood?—and whose business was it to watch all this, rather than his who had bread and immortality to gain by it? *Who* DID watch these states of life more closely; who DID describe them better than the Historian of Man? How I wish that anatomists, physiologists, and pathologists, would think of the blood as Shakspeare did, "all at once;" as next to all structure, as next to the Air, as liable to instantaneous universal influences *from* the Air: by which little word "Air," I mean, be pleased to observe, nothing less than the combined result of all that is done on the surface of our habitable globe, and in the skies above it—not merely a gaseous compound of oxygen and nitrogen, and carbonic acid gas, as dissected for us by the chemists, but a medium between all forms of matter, traversed by myriads (how infinite in number!) of agencies—solar, lunar, electrical, all that we have names for, all that are yet unnamed; myriads of which, as yet, "our philosophy has dreamed not of!" Unless we get a wide notion of the "Air," my friend, we shall not agree about the "Blood;" for the Air, in physic, means the blood. Whether "solidists," or "humorists," or what not, we all set store by the breath; but the importance of the breathing is in the blood that is breathed upon: and here just let me remind you, that pathology, with the blood for its principle, is not the Humoral Pathology. All the solids in or on the body are in the blood—flesh, cartilage, hair, bones, hoofs, horns, and all. The blood, if fluid and current in the large vessels, is, at every instant, capable of solidity—TENDING, I may say, to solidity. In its extreme vessels, in the "extreme textures," (whatever you may choose to call them,) beyond the capillary circulation, solids and fluids are terms that no longer help us. All in physic that has been based on this distinction is mere idleness. You are not a sneerer, or a caviller, but such things are, and I therefore tell you how I defend myself against the taunt of "humoral pathology." In studying life as beginning from external forms of matter, we must proceed from the air, through the blood, to structure—in itself a world! Now here is a fancy of mine: I like to think of the body as a miniature world, and of the blood as its atmosphere. Tell me whether this idea helps you in physiology? It is, indeed, not so vague, as now, at the first glance, it may seem to you, accustomed as you have been to consider the blood in the porringer of the phlebotomist, *out* of the living body, or as circulating by successive PORTIONS in the living vessels. The blood (pray let me repeat it), in health or in disease, should be considered "*all at once*," in its atomic distribution through all structure, in its atomic relation with the air;—again, in its great *double* current, connecting all structure, at every instant, with the air. This is the view which I delight to take of the blood; and the great truth presented by it is not, perhaps, impaired by the illustration which I have set before you: but if I chuse to illustrate the blood in this way—if I present it as the "representative of the air" to all structure, and so term it the atmosphere of the body—I must not fail to remind you that I mean, by the "air," the combination and the result of all that is doing, of all that has been done, between the earth and the upper heavens, the minister to every growth—to all that ever has grown; the refuse of all that rots—of all that ever has rotted,

IT (the Air) is always making, undoing, and "being made." You may object, as a grammarian, to the last phrase, but let it stand, if you please; it is useful here, for it well illustrates the blood. It is not by examining the air as the chemists present it to me—by analyzing a given portion of it under confinement,—that I know any thing about it in reference to life, the greatest of all its attributes. By no difference in the elementary properties of the air, in any way appreciable to my senses, can I learn its SPECIAL material agencies; now all the growths of the earth are influenced by it, each in its kind—how the chamois of the Alps, and the subterranean eel of the Carniolan mine, contrive each to find its special elements of nutrition in the same combination of particular gases—how it ministers to, and is formed alike by, the snow mosses of Lapland and the aromatic forests of the Tropics. There is nothing, I say, in the oxygen, nitrogen, and carbonic acid gas, obtained from any given portion of the atmosphere, that explains these differences in the different forms of matter depending upon it, and upon which it is in its turn dependent. Remember all this, I pray you, in reference to the blood, which *represents* the air. It is not when I study the air in the chemist's laboratory, cabinned, cribbed, confined over mercury, under a bottle, that I recognise it as *the breath of life*. It is when I spread it abroad, when I commit it to "the general air," that I begin to know it; for it is then that I observe it continuous, *identical* with that by which the whole earth is wrapped as with a garment: it is, I say, when I observe this same combination of gases every where the same and continuous, over the sands of Libya as on the world of waters, that I know it in its wide sense of *atmosphere*; as the medium of all forms of matter—as exchanging principles with all—as conveying principles from one to the other. Remember the blood!

In the simplicity of the air's analysis, I do not forget the infinite number and variety of sources from which it is produced, and I do not find more reason to wonder at what *it* makes, than at what makes *it*. The atmosphere, surely, is not formed by *one* division of matter, or in *one* corner of the earth; it is the result of, it comes from, the land, as from the ocean, and from "all that in them is;" from all these things in constant relation with itself. In reference to life, then, consider the Air as the universal medium, as traversed (to borrow a phrase back) by myriads of agencies, chemical, electrical, thermal, humoral, lunar, solar—all that we know, all that (not a few, be assured) we do not know and never shall know. Remember, I say, the blood! Now do not be impatient! all this, in my belief, is physiology; and I am fast becoming pathological. Convey these ideas from the air to the blood; the passage from the one to the other is easy, direct, and always open: you will find it in the lungs, by which we double, symmetrical, locomotive animals, are rooted in the Air. Let the several structures of the body, they and their parts, and the particles of their parts, growing, limiting, maintaining their growth—growing that they may decay—let these structures in their variety represent the different external forms of matter. Establish, I say, this analogy (by no means an extravagant one, for it assumes only material existence with nutrition), and see whether you cannot COMPLETE it by connecting the various structures with each other through the blood, as the external forms of matter are connected by their common medium of the air. The liver, for instance—our large anatomical viscus—is, in physiology, a congeries of livers, countless as the stars of heaven, as the sands of the ocean; each penicillus being a liver complete. Apply the same rule of multiplication to the muscular structure, to its fibres and fibrels, crescendo and diminuendo—and what a lively animal we make of the dullest fellow breathing. Think of the particles of parts in this way, and you have a number of animals grafted, if you will, on a common stock of blood, independent, more or less, of each other, but as immediately, constantly dependent on the blood as the several tribes of animals and the individual animals are on the Air which is represented by the blood. *Mutatis mutandis*—is not blood the universal minister and the universal result of all that is done in the body? Is it not common, essential, every where the same, in the arterial tubes of all structure? Is it made by one structure only, or in one corner of the body? Is not blood made AS BLOOD by itself, in relation with the Air and with other exter-

nal forms of matter dependent on the Air? Is it not elaborated in all structure? Would there be any blood if there were no liver, and would bile be formed from the blood if urine ceased to flow? Thus is not the blood, in its general current, the result of all these growths, the refuse of all these secretions, just as the Air is the refuse of all that grows and is separated on the habitable globe? What sensible difference is observed in the nicest analysis of blood as obtained from different vessels of the body? On which of its sensible properties does the secretion of the liver—on which does the growth of the muscular fibre—depend? Is not the blood always making, undoing, and "being made?" Is it not thus, at every instant, undergoing change in its atomic distribution through extreme texture, all over the body and in the lungs; and can we doubt that its general properties, as its special influences, are the result of this incessant change? How then, in considering the blood by PORTIONS, OUT of the body, and thus removed from all the influences of structure, can we hope to know it as the medium of all structure, and of all structure with the air? The blood is not less essential to structure than the Air to the external world; and, moreover, is in the closest possible relation with the air in the lungs, necessarily and at every instant. May we not, then, in truth as in fancy, speak of the blood as the Atmosphere of the body—as the Representative of Air to structure—as the representative, again, of structure to the air? Well, I care not for the analogy; wild, fanciful, ingenious, whatever you may choose to term it (with me, of course, it is not less than sublime). I will not insist on your designating the Air as the blood of the terrestrial globe and of all which it inhabits, or on your phrasing the blood as the atmosphere of all structure, provided I find you willing to consider the blood like the atmosphere in a MASS, in constant relation with, and elaborated by all structure — in constant relation with, and elaborated by the Air. My drift is to present it to your notice, not only in its great resulting currents, but in its drops—in the drops of its drops—in the atomic relation of its particles; from which, like the dews, the streams, the soil, the ocean, all that is gross in nature, it, AS BLOOD in material and function, begins. But whither are we led? What countless, mazy, devious currents invite us! Numbers without number, springing direct from the very sources of life; for at the end of every artery is the drop or atom in which life begins. You cannot come closer to structure than by following the blood into it. The only idea, I assure you, which I can get of structure, in its variety of material and of function, is that afforded by the various arrangements and special relations of the blood, in its atomic distribution through the extreme texture of the body. Is the nerve, then, quite forgotten in the "new pathology?" you say, or seem to say. There is a place both for nerve and "nervous system;" but that place is UNDER the blood, as it always should have been. I have a great deal to say (a great deal, indeed) about the "nervous system," of which you shall be informed as the year grows older. In the meantime, good night to you and 1832!

Yours ever,

MAXILLA.

CHOLERA.

To the Editor of the Medical Gazette.

Lansdown Place, Dec. 30, 1832.

SIR,

THE two following cases of cholera have occurred in the House of Correction within the last fortnight: some facts connected with them may appear interesting to the profession, and may be considered worthy of insertion in the Medical Gazette. Since the month of October the prison had been free from the disease; one solitary case only occurring in that month, which terminated fatally.

On the 14th inst. a female, aged 64, of good constitution, was admitted into the Infirmary with bowel complaint of some days duration, but unattended with pain. I saw her very shortly afterwards, and immediately pronounced it a case of cholera, with all the urgent symptoms of the disease, and having the pulse with difficulty perceptible. She was placed under the saline treatment, with the addition of small doses of the carbonate of ammonia, and in five days was out of danger, having had no secondary fever. During the period when she was suffering under the worst form of the disease, and the rice-water

evacuations were pouring from her, a young female, aged 18, of loose character, lying in a neighbouring room, but quite distinct from the infirmary, and under treatment for the pustular form of itch, contrived, during the night, contrary to my express injunctions, to make her way to the water-closet, through the room where the first patient was lying, and where her rice-water evacuations were emptied. Within three hours she was seized with the cholera, in as severe a form as I ever witnessed it. The saline treatment was pursued without making any impression upon the disease; and I then determined (thirty hours after the seizure) to make trial of the cold affusion, which had been practised with success at Berlin, and which was mentioned in a late number of the Medical Gazette, by Dr. Burrows, of Mortimer Street. The patient was carefully removed from her bed, and placed in a large bathing tub; she was then stripped to her skin, and I dashed five large jugs of cold water over her. The shock was considerable, but the last jug only seemed to distress her. She was with equal care removed to her bed, and well rubbed with dry cloths. No re-action took place; and although she lived twenty-four hours afterwards, the only advantage she appeared to derive from the cold affusion was the immediate relief of the intense burning heat in the abdomen, and the acute pain on the left side, in the region of the spleen, which is almost a constant attendant upon the fatal cases of cholera. The want of success which followed this trial of the cold affusion will not deter me from again making use of it when the opportunity offers, and I shall be happy to inform you of the result. I will not use either the word contagion or infection, but it does appear to me, from the relation of this case, that either the exhalations, or the dejections of individuals labouring under cholera, have the power of propagating the disease.—I am, sir,

Your obedient servant,

HENRY WAKEFIELD.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Essay on the Natural History, Origin, Composition, and Medicinal Effects of Mineral and Thermal Springs. By MEREDITH GAIRDNER, M.D.

THIS is, indeed, a very elaborate essay, and very unpretendingly put forth: we give the author great credit for his industry and research. In the four chapters and appendix in which his work is comprised, he seems to leave nothing unsaid that is in any way connected with his subject: his order, however, is lucid enough. After treating of the composition, position, and origin of mineral waters, Dr. Gairdner, in his final division, considers their medicinal virtues. With the two latter topics we have been much interested, and read with pleasure the author's account of the warmth of springs, as it may be derived from a general central cause of heat. From what he says regarding the sensible heat of mines, as a proof of this position, we extract a few passages.

"It is by observations made in mines, or other subterranean cavities, that we can alone infer the reality of a *progressive* increase of temperature, the deeper we penetrate into the crust of the earth, or determine the rate of this increase. The thermometrical indications obtained in this way are, however, liable to many fallacies, from the difficulty of excluding the disturbing influence of external causes. The warmth experienced on descending into mines very early attracted the attention of observers; but it was attributed, without farther inquiry, by one party, to the decomposition of pyrites, and by another to a central fire; two hypotheses by which the older philosophers were very fond of explaining facts by which they were in any way embarrassed. * * *. Gensanne seems to have been the first observer who carried a thermometer to different depths, and ascertained the important fact, that the temperature increases with the depth. His experiments were carried on in the lead-mines of Giromangy, near Befort." He descended to the depth of 1420 English feet.

Saussure, about 40 years afterwards, made similar experiments, but only to about the depth of 700 feet. Humboldt experimented at 1713 feet below the surface in the new world; and a number of other eminent naturalists took up the same inquiry, with the same general result. Great precautions, however, as our author observes, must be taken in order to arrive at correct conclusions;

and, perhaps, in this regard the most valuable inquiries which have yet been made are those of M. Cordier in France, and Professor Reich in Germany. The chief source of fallacy in such investigations is the state of the air in subterranean cavities. We should not omit to add that Dr. Gairdner has himself been personally engaged in making observations illustrative of this subject in the mines of Kurprinz, at Freyberg.

The hygienic and dietetic rules for invalids, which we find in the last division of the volume, seem to us to be rationally devised, and deserving the best attention of valetudinarians. The following is a most wholesome piece of counsel:—

"No invalid ought to undertake a course of a mineral water without placing himself under the direction of a physician, who can alone regulate the quantity of water which ought to be employed, the form in which it should be used, and the duration of the course, as well as insure the observance of the proper auxiliary rules. And as the physicians practising at watering places cannot be supposed acquainted with the constitution of their patients, they ought to be furnished with a short history of each, drawn up by the medical man previously in attendance."

We observe, that among other hints to the visitors of watering places, our author recommends a sober partition of time: late hours, he says, ought to be avoided, and all midnight exertion. We think this very good advice for people both in town and country; but, unfortunately, it is more easily assented to than practised. Lest, however, it should be too flagrantly violated in a certain instance, we close our prudent monitor's volume.

Dublin Journal of Medical and Chemical Science. No. VI.

We return to our contemporary chiefly with a view to notice a paper, which we take blame to ourselves for not having at least alluded to last week.

Cases of Irritative Erythema. By Robert Law, M. D. &c.

The cases which Dr. Law reports, (three or four in number,) are of the highest interest, as examples of a disease, or diseases, of the pathology of which little or nothing is known. The combination of symptoms strongly resembles the effect of dissection-wounds; the constitutional irritation is of a prominent character; and there is an eruption present, which indicates peculiar virulence in the disorder. We give one of the cases, which will serve to explain:—

"Ellen Read, ætat. 32, married; confined about two months ago, since when she has never been in good health. About a week since was exposed to cold and rain, and the next day was seized with shivering and pains in her bones. Her wrists now became swollen and red, and, being considered to be labouring under acute rheumatism, she was bled, purged, and got Dover's powder. After three days, she complained of headache and deafness, and fell into a stupid comatose state, for which a blister was applied to the nape of her neck. She now came under my care, when I found large condylomatous swellings, of a bluish colour, in different parts of the body; there were also numerous pustules, containing a yellowish purulent matter, and large vesicles or bullæ, containing a bluish serous matter, in various parts. The back of each hand was swollen, and covered with a deep erysipelatous blush. The nose was very much swollen and red; this swelling and redness extended to each lower eyelid, and involved the cheeks under the eyes, so that the angle betwixt the nose and cheeks was quite filled up; the skin covering the swelling was of a deep crimson hue, and was raised either into pustules containing a yellowish purulent fluid, or into bullæ, filled either with a dark serous matter, or with a clear transparent fluid; some of them had given way, and discharged their contents, leaving the skin shrivelled. Pulse 180 in a minute, small and compressible; respiration hurried and jerky (*saccadée*); frequent sighing; great restlessness and agitation; complains of the impossibility of becoming warm; bowels too free; excessive thirst; the body emits a heavy, sickening fœtor. No appreciable change took place in the symptoms for two days; she then fell into a deep coma, with stertorous breathing, and occasional muttering delirium, and thus expired.

"The examination of the body threw no light upon the nature of the disease. The blood was unusually fluid, and of a black, gory appearance. The condylomatous tumors contained an unhealthy, greenish pus."

Dr. Law is inclined to think that the complaint, of which the preceding is his shortest specimen, arises from "some unknown condition of that universal agent—the atmosphere;" and he instances, as analogous, the occasionally

violent epidemic spread of erysipelas, and that disease which raged a few years ago, with such fatality, in the Plymouth dock-yard.

The condition of the system in each of Dr. Law's cases was, he thinks, essentially that of *debility*. "Every symptom and circumstance connected with these cases bespoke a disproportion between the power and action of the system, or, in the expressive language of Hunter, an increased disposition to act without the power to act with; which is, in fact, the definition of an irritable habit, or an irritable condition of the system." And upon this view he founds his treatment.

He has recourse at once to tonics and antispasmodics: "the former to sustain the flagging energies of the system, and thus indirectly to quiet the tumult; the latter to bring down, or reduce, the irregular action to the level of the diminished power." Quinine, ammonia, and camphor, are his chief remedial agents under the circumstances; nor is he deterred, by the appearance of wandering or delirium, from giving wine and opium. In one desperate case, he gave forty drops of laudanum in camphor julep with the happiest effects.

MEDICAL GAZETTE.

Saturday, January 12, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

REFORM—COLLEGE OF PHYSICIANS.

REFORM is the watchword of the day. We have had parliamentary reform—church reform is in progress—law reform occupies the master-mind of the Chancellor—*medical* reform, though last, to us not least, is also spoken of in a voice which is heard from one end of the kingdom to the other. Medical reform!—what is the meaning of a term so freely used, and yet so undefined?

It is with medical as it lately was with political reform; every one exclaims, "Something must be done!"—but what that something is, few seem prepared to say;—men feel the necessity of a change, but without having precisely determined what that is to be, or how far it is to go. Some, who hope to gain, and, for obvious reasons, cannot lose by any change, are anxious to follow the example of the French at the period of their revolution, and would annihilate all existing colleges and corporations—all institutions—all grades—all educational regulations—all those means and appliances which fit men for the practice of a difficult art—all those distinctions which give a rank and a name to medicine as a profession. "Freedom!" is their motto; and under this most prostituted misnomer they strive—not so much to raise themselves, as to pull down those above them. In short, reform with some, in medicine as in politics, means not reformation—not the regeneration and improvement of existing institutions, but their destruction. There are medical as well as political *destructives*; and they are in this the same, that neither having any thing to lose, cannot be lower in the world than they are. Them, and their would-be College, however, we must for the present leave to the few dupes whom they may be skilful enough to catch.

But there is another College in which we are deeply interested;—one entitled to that name by all the claims of ancient prestige—of royal charters—and, far more than these, by names most honourable, and most honoured. And shall we still implore, expostulate, and threaten alternately, and all in vain?—Implore, as men anxious for *their* welfare whose downfal would be a heavy blow to British medicine; expostulate, as addressing ourselves to those who ought, for their own sakes, to listen to the voice of reason; threaten, as echoing the voice of hundreds of neglected (if not injured) sons, who, once admitted,

as they ought to be, to their common and hereditary rights, would stand between them and the coming storm. There may be, and probably there are, those in the College of Physicians who think,—to use a phrase more expressive than refined,—that this is all mere moonshine—a collection of words, strung together to fill up a few columns of the Medical Gazette:—they are deceived. We deliberately tell them, that there is a spirit abroad which, without some sacrifice, they will never be able to lay—one which may not, must not, be satisfied, without a fair and free participation in all those rights and privileges which chartered monopoly has too long withheld.

It is rumoured that some important changes are contemplated in the College of Physicians of London: some plans, it is understood, have been brought forward and discussed, by which much that is objectionable and invidious in the present system would be obviated. We most earnestly hope that such is the case; for the monopoly of that body has been, and is, of the most exclusive and unpopular description. We are satisfied that many of the Fellows are sincerely anxious to do what is right, but we fear that some know so little of the actual state of the profession as to be unaware how much is necessary to meet its wishes, and to satisfy its just demands. At present it is not knowledge, but the place at which that knowledge has been acquired, which is the passport to their halls. The consequence is, that the College, unless saved by some speedy change, must fall into decay; the temper of the times has deprived it of its powers—always rather doubtful—as a controlling body; while morally its influence is waning with the increase of intelligence, which leads the public to judge of men rather by their solid acquirements than by their chartered prerogatives. In fact, *as we observed five years ago**, the College of Physicians, without some effectual reformation, "will speedily become nothing but a large club of English medical graduates, with an old library, a handsome building, and a name—the sound only of powers that are no more;"—pretty well this, by the way, for the second leading article of a journal which some wiseacres said was intended, and bound, to support all existing institutions.

Most earnestly do we hope—though still, as it ever is with hope, the sentiment is not altogether free from apprehension—that no half measures, no mere temporising, no trifling concession, yielded only because it cannot decently be withheld, may be attempted. If so, the Fellows may be assured the matter will not rest there; better were it to follow old Chassé's example, and fight it out till their citadel be shivered into fragments. If they have made up their minds that it is better to have no College than a College the doors of which may no longer be shut against all science, save what grows on the banks of the Isis or the Cam, then let them say with Macbeth

> "Blow, wind! come, wrack!
> At least we'll die with harness on our back."

—time it is that they should buckle on their armour, for the period is not distant when it will be wanted—when they will have to assay what ancient usage, and musty parchments, and Royal letters, can do against common sense, general opinion, and the public press.

But, as we have said, we hope for better things. We know that some, the highest in station and influence, mark, with a discerning eye, the signs of the times, and perceive the necessity of gracefully yielding what is reasonable and just;—not merely as a concession, resisted to the last and

* Medical Gazette, vol. i. p. 35.

made with reluctance, but as a frank offering of peace, and proposal of alliance, made to those, a cordial union with whom would be beneficial to both. Let knowledge and acquirements be made the condition of admission to the College, and how prodigiously would this increase the power and influence of that Body, of which all the well-educated physicians of the empire would then form constituent parts. How different this from the limited, exclusive, suspected, and comparatively powerless association, which now forms the College of Physicians! The members of that body cannot but feel that the circumstances which constituted the foundation of their privileges and influence at an earlier period, have crumbled beneath the lapse of time, and now require to be supplied by other and more solid materials. Let them begin their repairs without delay; and let not jarrings and disputes amongst themselves shake yet farther their venerable but tottering fabric; else, under the rougher handling of a reformed Parliament, the whole may perchance be levelled with the ground.

We would neither pry with impertinent curiosity into their deliberations on these important questions, nor affect to know more than we really do; but it is certain, that the sounds of earnest pleading, and not less energetic dissent, have been heard beyond the walls of the College,—the former proceeding chiefly, but not exclusively, from the junior, the latter chiefly, but not solely, from the senior members. When, on a former occasion, (No. for July 14th,) we ventured to allude to the growing necessity for a reform—a reform in its kindliest sense,—a reformation in the medical aristocracy of Pall Mall east, we hinted at some points, which farther consideration has still more strongly impressed upon our minds as deserving of serious attention.

The first, and the only one to which we can now advert, was, "that the present division into Fellows and Licentiates ought to be abolished." Till this be done all other changes will be looked upon with indifference. The distinction is invidious, and grounded upon no superiority real or pretended, save that a few sentences of Greek are added to the examination! Is it fair or reasonable, in the nineteenth century, to subject men to repeated and elaborate examinations, and to the payment of a considerable sum of money,—to make them bend the knee and swear allegiance for the poor privilege of a *license* to practise a learned profession which they have already studied,—in which they have already obtained the Doctorate,—and from exercising which, we submit, the College has virtually no power to prevent them? The license of the College, at present, is but a gracious permission to pay fifty-seven pounds, and be constituted an alien to all its rights and privileges,—without one tie to bind the party to an institution which he ought to be ready to support, and from which he ought to have a certain portion, at least, of respectability, and character, and professional rank, reflected upon himself. So far, however, is this from being the case at present, that no physician ever adds "Licentiate" to his titles, however anxious to swell the list, knowing it can add no ray of lustre to his name, however unknown to fame. Nay, even they who think honour is derived from a *tail* including every obscure society in Europe, and half the letters of the alphabet, (some of them more unintelligible than the hieroglyphics of Egypt,) drop the obnoxious designation which associates them with publicans and pawnbrokers, and merge the "Licentiate" in the unauthorised and imposing counterfeit of "Member."

But while we advocate the abolition of the degraded order of Licentiates, we would by no means be understood as implying that all should stand on a pre-

cisely equal footing. From the general list of members, a certain number ought to be selected as the governing body, holding rank as such within the College, but not beyond its walls. Let the present Fellows continue to enjoy their privileges in this respect, but in practice let all be "members"—physicians meeting on equal terms—or, at least, let seniority be the only grade—let not the beardless physician from Oxford or Cambridge claim precedence over the oldest in London for no other reason than that he is a "Fellow." Let the Licentiates, or as we would call them—Members, pay an annual subscription, and let them have by right admission to the library; do not compel them, as now, humbly to sue for a written passport; or, what is more common, to go to the library of the College of Surgeons, which they can enter on easier and more equal terms. By this additional fund, too, the library might soon be made what it ought to be, and not be as it now is—a century behind the literature of the age.

We can easily conceive that it is no very easy matter to decide in what way this amalgamation of Fellows and Licentiates may be best effected, or to get a sufficient number of those with whom the decision rests to take precisely the same view of the subject; but much may be done if the parties be once fully convinced of the necessity of the step:—it then requires but perseverance on one side and a candid spirit of concession on the other. How far ought any measures to be retrospective,—how far only prospective? How far ought those feelings of partiality towards the English universities, which the existing Fellows must naturally entertain, to be suffered to influence them in legislating for the great body of physicians? These, too, are points which admit of much discussion; and we shall only say, that although it may not perhaps be possible to prevent the operation of efficient measures from being in part of a prospective nature only, yet, in order to meet the exigencies of the case, some great improvement, which admits of instant application, must be made; and with regard to Oxford and Cambridge, though it may be too much to expect that no preference be shewn to them, yet ought the display of this to be of a very different nature from what it is at present; let it be made to depend upon some palpable advantage obtained from a residence at these ancient seats of learning; and, above all, let it be wholly separated from religious distinctions.

We are by no means disposed to join in the common cry of the day against the time spent at our English universities; nor do we think that that course of study which makes an accomplished gentleman in youth is at all hostile to the formation of a learned and skilful physician in maturer years. But what we protest against is, that such preparatory education should at once give the young graduate that rank as a practitioner in physic which is only bestowed on others after years of study and experience, and professional distinction; and that, too, only as a special favour, and at the galloping pace of one such promotion in the year!

Again we repeat, that no arrangement which does not constitute the Licentiates integral parts of the College, and which does not, as practitioners, associate them with the Fellows, will or ought to satisfy them; but, if this be done, we venture to predict, that all the physicians in England will press forward to add their names, and their subscriptions, and their influence, and their right zealous fealty, to a commonwealth in whose privileges and honours they would have some participation, in whose prosperity they would rejoice, and whose glory they would feel to be their own.

Sir Henry Halford has done much for that department of the profession over which he presides. To him chiefly, if

not exclusively, is to be attributed the merit of accomplishing the removal of the College of Physicians from its old and ruinous building, and its smoky and inconvenient situation, to its present splendid locality and handsome edifice. To him the credit is due of reviving the privilege of nominating annually a Licentiate to the Fellowship. To him belongs the praise, not only of establishing, but of almost entirely supporting, those meetings which have tended so essentially to promote good feeling in the profession. Let us hope that, by aiding in the accomplishment of some important reformation on this occasion, he will add another claim to our gratitude, and that hereafter it may be said of him, "it was during *his* presidency that the College of Physicians was rebuilt, and its constitution reformed, and adapted to the liberality and spirit of the age in which he flourished."

SCHOOL OF MEDICINE, PARIS.

The Annual Distribution of Prizes.

This public ceremonial took place on the 31st ult. in the large amphitheatre of the faculty. M. Orfila, the Dean, presided. The crowd assembled to witness the ceremony was as great as the capacity of the place would admit. In the front benches appeared M. Clot-bey and his young Arabs, in their most brilliant costume. The professors and agregés also attended in their robes, so that the *tout ensemble* presented an imposing scene.

M. Chomel delivered the address. He gave a rapid but faithful sketch of the occurrences during the late epidemic; he praised the generous efforts of the profession, and feelingly deplored the loss of those who fell victims to their zeal. About thirty, he said, had so fallen; and he distinguished several of them by name. After this, he paid tribute to the memory of Cuvier, and of Portal and Chaptal, whom this too fatal year had carried off.

M. Chomel then alluded to the numerous improvements recently introduced into the school: these were the great dissecting theatres, capable of accommodating 600 pupils, and of being converted, in summer, into chemical apartments, where the students might practise the manipulations so essentially necessary in chemistry and in legal medicine; the three new clinics of midwifery, surgery, and medicine, the establishment of which was at last accomplished after "so much exertion" in the removal of difficulties. The services of M. Orfila were then alluded to; and the mention of the learned dean's illness and precarious recovery created a sensible emotion in the audience, but which was followed by the most enthusiastic plaudits when the labours were noticed which he had survived to effect.

After the conclusion of the address, M. Berard announced the prizes, and the medals were distributed by the dean.

CLINICAL LECTURE
ON THE
DISEASES OF THE URETHRA,
(Concluded)

Delivered at the Middlesex Hospital,

By Sir Charles Bell.

Gentlemen, — I shall have recourse to the notes which I hold in my hand, which I have taken in going round the wards; and if my expectations be realized regarding the assistance to be obtained by me in this hospital, this matter will become much easier to me and more satisfactory to you.

Many circumstances of interest, which I might be tempted to comment upon, have occurred since the last lecture; but one or two important cases have presented themselves in that division of our subject with which we were engaged, and to them we shall now attend. I saw you grouped round a boy who was insensible, and who has subsequently died, and on your countenances there was that natural expression of interest which convinces me that I shall have your attention now, while I endeavour to explain the child's condition.

A boy, named James Ludlow, only five years of age, was brought into the hospital in a very sad condition indeed. The scrotum was enormously distended, there was a large slough at the posterior and inferior part of it, the integuments of the penis were also distended, and there was phymosis; the boy was much emaciated by long suffering. The mother gave a very imperfect account of his previous condition. She said that the parts began to swell only two days before, and that they

became gradually more and more distended. She could not inform the house-surgeon whether the boy had received a blow, or if he had fallen astride upon any thing. The surgeon laid open the serotum and perineum freely, and a dark offensive fluid with a slight urinous smell, was evacuated: the cellular tissue appeared mortified. Fomentations were employed, and he had an opiate. The bed afterwards was wet with urine, but he was not observed to pass his urine in a stream. The next day he appeared better, but at night was sensibly worse, and he was now convulsed. He died on the evening of the second day after coming to the hospital.

On examination of the body after death, the urethra, having been opened in all its length, appeared quite free—there was no stricture, no obstruction; but the orifice of the prepuce was closed, and an ulcer was found extending back into the cellular substance of the integuments of the penis—an ulcer at the back part of the fore skin, at the angle which that membrane makes with the frænum. The penis, the bladder, the ureters, and the kidneys, were natural.

I shall now make some remarks to you, gentlemen, on the stricture of the prepuce—on the phymosis, being quite sure that you will see the importance of the subject. I remember being called to see a patient at Seven Oaks, and there I found a boy of this age suffering excessively, and extenuated by long-continued irritation. Understanding that the complaint was a difficulty of making urine, we got the little boy to attempt to make water, when there came from him a very fine stream hardly perceptible, and the prepuce was distended like a bladder. He cried the whole time, stamped with his feet, and gave every sign of great agony. I passed the point of a bistoury into the small opening, and cut the prepuce so as to expose the glans. There is at any time but a very short interval between the tear and the smile upon such a boy's face. He presently got the better of the terror he had for me: he made a full stream, such a stream of water as the little fellow had never seen, and looking up in his father's face, he said with a smile, "I shall now be able to piss against the wall like papa."

In the case that I have described, and in the one that you have seen with so much interest, you observe the consequences of neglect; that when the child makes water, the prepuce is distended like a bladder; from this distention irritation occurs, and consequent upon that, ulceration. It is exactly in the same way that the bladder of urine itself is sometimes ulcerated from distention, and then the urine gets into the abdomen. Ulceration in this instance occurred just where the inner skin of the prepuce is reflected upon the lower part of the glans and the frænum. This weakening the membrane, the urine that distended the prepuce got into the cellular texture, passed by the integuments of the penis into the serotum, and the case at last presented us with a remarkable resemblance to that which we considered a few days ago, where the urine, bursting from the urethra behind, was directed forward over the fascia of the perine m into the scrotum. Here, you observe, that the urine, being forced backwards, found access to the looser texture of the scrotum, distended it, and produced similar effects to what occur in bursting of the urethra from stricture. The urine killed the cellular texture, and the cellular texture being mortified, you see how the whole system of the child suffered under it. What with the long continued irritation, the difficulty of making water, the extravasation of urine, and the mortification of the integuments—without stricture, without inflammation of the bladder, without distention of the ureters, without pressure upon the kidnies, the child died, purely from the effects of extravasated urine. It therefore is a lesson to us how important a matter that is of itself, independently of what the patient usually suffers from inflammation of the bladder and urethra.

You have before you, then, gentlemen, the effects of the first or greatest degree of stricture in the prepuce, or natural phymosis. You perceive that the natural phymosis is followed by inflammation and thickening, that the orifice becomes smaller through the thickening of the margins of the hole, and you see the unhappy consequences. Marking this as the first or the greatest degree of strieture of the prepuce, we come, in the *second* place, to common phymosis, where the prepuce permits the urine to flow freely, and consequently without distending it. Now the prepuce not being washed by the urine, a foul secretion from the glands about the corona-glandis collects within it, and so inflammation and thickening, with the discharge of purulent matter, and sometimes ulceration, follow. The third instance to be noticed is where there is only that degree of narrowing of the prepuce that it prevents the foreskin from being drawn freely over the glans; and when by accident the prepuce is so drawn, it is in danger of producing paraphymosis. There is a *fourth* kind, and it is to it that I will particularly draw your attention, because the effects of it are not noticed, and yet they are very terrible, so that patients are almost inclined to part with life from the distress that it produces. This distress does not arise from the urinary organs; the difficulty is not in discharging the urine; there is just that degree of tension at the margin of the prepuce that it can

be drawn over the glans, and then it produces a strictnre; but it is only during priapism, and emission is obstructed, not urine; and the consequences are exessive irritation and great distress of body and mind. Thus you are acquainted with the first degree of strictnre; you see that the second is where there is an accumulation of the secretion and consequent inflammation caused by the strictnre; the third degree is where there is danger of paraphymosis; and a fourth degree is where the skin can be drawn backwards and forwards, but is too narrow for the distention of the penis in a state of priapism, and then it produces strictnre, not upon the urethra as the canal for the urine, but as it belongs to the organs of generation.

I will now beg your attention to the case of Richard Midland. He is a man 42 years of age, and his complaints began a twelvemonth ago by gonorrhœa.

I find that there was nothing in the treatment of the disease to produce the violent symptoms that we have to contend with. Here indeed no injections had been used, and he acknowledges that he applied to no one for advice; the violent inflammation of gonorrhœa was permitted to take its course. It is only about six months since he began to be alarmed, and to suffer from a difficulty of making water, a small stream only issuing, attended with the necessity of his rising, according to his own account, two or three times during the night.

Now observe his present condition. The prepuce and the integuments of the penis are enormously enlarged. They have formerly been distended with urine, I have no doubt; but they are now fleshy and firm from the deposit of serum and coagulable lymph. A small abscess opens upon the back part of the swelling exteriorly, which is anterior to the scrotum altogether, and the urine comes under the skin of the penis, betwixt the skin and the body of the penis, and makes its exit through the inner membrane of the prepuce. He has in conjunction with this a very narrow strictnre. A fine bougie has been two or three times passed through the strictnre, and on withdrawing it the house-surgeon informs me that the patient makes water more freely than when he does not use it.

What is the peculiarity of this case? It just shows you, gentlemen, the advantage of studying this or any other subject in practice, by having the instances fairly before us; for I confess to you, that I was about to speak of strictnre, without having drawn your attention to this occurrence, which is one of the consequences of gonorrhœa; this case being, I beg you to notice, not one of simple strictnre. The original inflammation of gonorrhœa had here fixed upon one of the lacunæ, matter was discharged from it, ulceration took place, the urine got into the lacuna, and kept up the ulceration and inflammation of the parts around. Such a state of ulceration and continued irritation cannot take place without considerable surrounding inflammation, and the membranes of the urethra and the spongy body partaking of the inflammation, have become condensed and contracted; so that you have here, you will observe, a strictnre not of the fine membrane of the urethra, which I will presently describe, but an encroachment upon the canal, consequent upon more general inflammation, accompanied with thickening and deposition of coagulable lymph around the urethra.

The circumstance of interest here is the resemblance of this case to the last. You saw that the ulceration of the lacuna not only let the urine into it, but out of it. In this case the urine has escaped through the membrane of the urethra, through the spongy body, has got into the integuments of the penis, and has been propelled forwards, between the integuments and body of the penis, until it made its exit under the prepuce; so that the urine got out at the very spot that it got in at, in the former case. However, that is a circumstance more of curiosity than of practical interest. But you have now seen with your own eyes one effect of neglected gonorrhœa; that it fixes upon the lacunæ, and notice, I beg of you, the more common consequence of this, that there is a condensation not only of the delicate cellular texture exterior to the membrane of the urethra, but of the cells of spongy body itself. The spongy body being condensed by the throwing out of coagulable lymph, the penis makes an angle downwards in erection, which is attended with great pain; and in this, as in all other cases, pain is the sure forerunner of more inflammation, so that very distressing consequences result. This inflammation of the lacunæ is a very troublesome complaint, and will sometimes continue long after the gonorrhœa has entirely subsided, being attended with tumor and thickening of the integuments opposite to the part. It is to be treated, first, by all the possible means of subduing inflammation; then by an injection; I have touched the point with caustic from the inside, and have sometimes been forced to make an incision on the outside. We shall be satisfied in the present case with the use of the bougie and the gradual dilatation of the thickened membrane of the urethra. Respecting the use of injections, let me remind you, that an injection for gonorrhœa, comparatively mild and innocent, will be made

most effectual if you take care that the patient compress the urethra just anterior to the scrotum, and also that he prevent the injection from coming back on the syringe. This method of injecting the canal will produce fulness and tension in the part which is the seat of the original specific inflammation of gonorrhœa. You may thus manage a gonorrhœa by an injection which is comparatively mild, and without the necessity of increasing its strength, so as to endanger the bringing on of inflammation from that new cause: and this manner of distending the urethra is particularly necessary when the inflammation fixes upon the lacunæ, for without it the astringent does not reach the diseased surface.

I mentioned to you that there was a case of common stricture of the urethra, and also another of injury of the perineum followed by fistula in perineo from falling upon the pummel of a saddle while riding, and I was about to offer a few remarks on the mode of treatment in these cases, so as to avoid the various mischiefs which we have been dwelling upon for these two or three days past; but I must still defer them until a future occasion.

HOTEL DIEU, PARIS.

CLINICAL LECTURE ON VITAL AND MECHANICAL DILATATION OF THE URETHRA.

By Baron Dupuytren.

[Concluded from our last number, page 462.]

Mechanical Dilatation.

I believe there is nothing mechanical in the mode of action of those instruments, (the catheter, sound, and bougie,) and I am also convinced that it depends upon a vital principle. I have already remarked that there is an increased secretion produced, which facilitates the passage of the instrument. Let us consider this, and take into account the effect produced by the contact of a foreign body at the entrance of other vital canals—the lachrymal, for example. The first effect of this contact is a retraction of the edges of the lachrymal points, that a very fine stilette cannot be made to enter; but if the application be continued, they cease thus to contract; they become dilated so as even to admit the stilette that they at first refused, and a mucous secretion may be seen to take place round the orifice. The same happens in stricture of the urethra; the first contact of the bougie makes the canal contract so much that the instrument can sometimes scarcely be disengaged without effort, so powerful is the spasm; but after a few turns it subsides, and the instrument can then be moved with freedom. To the dilatation is added another phenomenon to which I have already called your attention,—I mean a greater or less mucous, and sometimes even purulent secretion. This, in some cases, is so considerable, that it gives rise to a discharge which may probably alarm the patient for the moment, but which will pass away of itself, either during the time the bougies are in the passage, or after they are withdrawn. But through both these phenomena the stricture becomes dilated; and after a few hours, or at most a few days, the canal, which at first had not the calibre of the twentieth of a line, is now enlarged to a line.

This vital dilatation, however, is not the only method which is available for overcoming strictures: we may have recourse frequently to another mode, which consists in introducing a very fine bougie and fixing it in the obstacle. The foreign body expands, and in doing so, by pressure opens out the tissues which form the stricture: this is what I have called the method of *mechanical* dilatation.

The bougies which I usually employ for this purpose are conoidal in shape, and composed of a roll of silk covered with a layer of gum elastic: their extremity is very fine, almost filiform: but from this point they gradually enlarge in size to the other extremity which constitutes the base of the cone. Bougies of this shape are well adapted for insinuating themselves into strictures of the urethra, how considerable soever, and to dilate them when the thick part is made gradually to succeed the thin. They are introduced in this way: taking the sides of the glans between the first finger and thumb of one hand, the penis being a little elevated and on the stretch, we then hold the bougie (previous greased) between the finger and thumb by the other hand, and introduce the point within the urethra: it is then pushed forward with slight force and with a rotatory movement. It soon reaches the obstacle. When it fails to become fixed in it, it bends and doubles back with the very force employed to push it forward, and it recovers its form when the force is discontinued. These two signs are quite sufficient to warn a practised hand that the bougie has not yet become fixed in the obstacle: such, however, is the delicacy and the elasticity of this part of the instrument, that it cannot by any possibility produce either perforation or laceration, or any alteration whatever in the sides of the passage. But when the filiform extremity has penetrated the stricture, the instrument is found gradually to proceed more or less—that is to say, to the extent that the stricture will permit. In

the event of the bougie recoiling before the obstacle into which it cannot penetrate, its tendency is always outward, and the least traction suffices to withdraw it: but when it has succeeded in gaining a position in the stricture, not only has it no tendency to come out, but it is even so straightly pressed and held by the spasm and contractility of the tissues, that it would require a very considerable effort to remove it.

When a conical bougie has cleared the stricture and entered to a suitable depth, it should be kept there by fastening it to the penis, or to a suspensory or other bandage.

The object of fixing the bougie is to await the possibility—the necessity—of pushing it still further by means of the hand, or to allow it to exert itself continually against the sides of the stricture. In the first case, said M. Dupuytren, I do not try to push it, or to force it; I merely leave between the tie and the obstacle a length exactly limited by the space indicated. In the other, I press on the bougie, I bend it and tie it higher up, that is to say, nearer to its base, so that in its tendency to right itself, it may exert a continual effort to overcome its obstacle—the stricture which it has to dilate.

The mode in which these bougies act is easily understood. Their mechanism is that of a wedge employed to widen—to separate—parts between which it is fixed: but the wedge acts on inert bodies, the bougie on living ones, and its action is compounded of the volume of the bougie, together with its vital force on the sides of the obstacle.

As to their efforts, observation shows that whenever their filiform extremities have once lodged in a stricture, we may conclude to a certainty that the remainder, how thick soever it may be, will ultimately make good its way. In many cases we may push on the bougie at once; but in others we must wait some hours or some days, and that not so much in consequence of the degree of the stricture or the volume of the bougie, as of the variable extensibility of the tissues which compose the obstacle. This extensibility is sometimes very great—it is sometimes also very feeble. Thus in some individuals, bougies which have been fixed in the stricture with great difficulty, will, when once entered, go forward with little difficulty even to the bladder; in other persons, spasm and retraction of the tissues present more resistance: after some hours, however, the bougies are found free and moveable, which at first were tightly jammed and closely locked. It is rare, even in cases of the most intense stricture, not to find at the end of a few days the bougie quite moveable in the urethra.

This freedom of motion which bougies acquire after a certain lapse of time, is one of the most remarkable phenomena, and admirably calculated to establish the point (if any one indeed doubted it), that every thing which takes place in the living body, even when it seems to be the result of mechanical causes, is always more or less dependant on life, or in other words, that in such bodies the vital phenomena are so mixed up with the mechanical, that the latter are altered, changed, or modified, according to rules which cannot be fixed by mere physical calculations.

Here are two cases in which this method was employed.

1. *Stricture of the Urethra: Mechanical dilatation.*

D—, a man aged about 62, middle sized, and of a dry fibre, was taken into the hospital on the 19th of February, 1827. He complained of a difficulty in making water, which he said began with him two years before. He had contracted a gonorrhœa sixteen years before, and had a discharge of that nature even on his entering the hospital. The dysuria had augmented, and the stream of urine, after having gradually diminished, at last ceased altogether; the urine came only drop by drop, and that with considerable effort: but the urethral secretion was abundant. Some baths were administered: the urine, upon careful examination, deposited no sediment; in consequence then, of the patient's story of himself, the existence of a stricture was presumed. On the 23d a silken bougie was introduced into the urethra, and stopped just before the membranous portion; presently by slight pressure its delicate extremity became engaged in the obstacle: but although grasped by it, the instrument passed on, followed by its thicker part; and thus was commenced a complete mechanical dilatation of the stricture. This bougie, after remaining in the passage for twenty-four hours, was replaced by a gum elastic sound of small calibre. The scrotum was evenly supported, and the dilatation kept up for thirty-nine days. Five sounds were employed during this period, and their volume successively augmented: the last was of the largest size; the urine passed between it and the canal; it was withdrawn on the thirty-ninth day. The stream of urine was now easy and large. Nothing remarkable happened during the treatment.

2.—*Considerable Stricture at the Bulb of the Urethra—Mechanical Dilatation.*

P—, aged 42, of good constitution, came into the hospital on the 28th Feb. 1827. He was affected with dysuria, now

of 10 years standing. It supervened on two blennorhagies; the first, contracted when he was 20 years of age, lasted three months, and was suppressed by a drastic purgative; the second, which he caught two years after, was still existing. A mucous, white, opaque liquid made its appearance on pressing the urethra from behind forwards. This discharge, of 22 years duration, must be supposed to have been the cause of the stricture; but, however this be, the dysuria began with a smarting—a feeling of a jamming-up of the urethra at the moment the urine was passing. The stream diminished, became tortuous, and at length came only drop by drop, particularly after his taking spirituous liquors. During the three months previous to his admission into the Hôtel Dieu, the dysuria considerably augmented; great efforts, and sometimes traction of the penis, were necessary, to produce a discharge of urine, which, however, at other times came involuntarily and by a sort of overflow. On the first of March a silken bougie was introduced, which, towards the region of the bulb, became fixed in a considerable stricture, and was so completely locked by it, that it could not be withdrawn even by much force. In eight hours after, however, it penetrated the bladder with moderate pressure. On the 4th a moderate sized gum elastic sound was left in the canal. Other sounds, more voluminous, were subsequently introduced and suffered to remain; and, after twenty-two days of treatment by dilatation, the patient was able to make water freely, and in a large jet.

We shall conclude this lecture with some remarks applicable to different modes of dilatation. In every case we can, in 10 or 12 days at farthest, pass from the finest bougie to the thickest sound, or, in other words, bring the canal from the tightest stricture to the loosest dilatation; and this by increasing each day the size of the bougies and sounds which are introduced and allowed to remain. But the dilatation will be found less durable the more rapidly it has been effected; whence, in place of hastening to the last condition, we ought rather to keep it back, for the dilatation is the more durable the more slowly it has been produced.

Rapid dilatation of urethral stricture has still other more serious inconveniences; pains of the sharpest kind, lacerations at the place of the stricture, acute (*sur-aigues*) inflammations, gangrene, and more or less of destruction of the canal: such accidents, in short, as we have seen equally supervening on forced catheterism. It would seem that the texture of which the stricture is composed, like all the other tissues of the animal economy, has a certain degree of extensibility, which must not be exceeded without danger of laceration; but that the same texture is capable of almost indefinite extension when it is coaxed to it gently, and almost insensibly.

But whatever precautions may be taken to effect dilatation of strictures of the urethra, it should be remembered that the result is only temporary in the far greater number of cases, and that the stricture has the strongest tendency to recur. This recurrence, said M. Dupuytren, has led me to introduce from time to time a bougie into the passage. If this be done every ten, twelve, fifteen, or twenty days, and the bougie be allowed to remain for two, four, or six hours, or for a whole night, according to the nature of the case, it will be found sufficient to prevent, or at least to retard considerably, the return of the complaint.

LONDON HOSPITAL.

Removal of the Superior Maxillary and Malar Bones, for Osteo-Sarcoma; the External Carotid being previously tied.

Elizabeth Button, æt. 48, admitted under Mr. Scott, September 8th, in consequence of a large osteo-sarcomatous tumor of the left superior maxilla.y and malar bones. She had attended as an outpatient for a fortnight previously, and stated then that she had experienced pain in the face for about six weeks, and which was attributed to decayed teeth: she had, in consequence, a tooth removed, but was by no means relieved. When she first presented herself at the hospital, she complained of pain in the face, and there was an apparent enlargement of the left malar bone. Her countenance was remarkably dejected, her complexion of a sallow colour, and her health was evidently much deranged. She was ordered, at this time, leeches to the tumor, with cold applications, and to take the compound decoction of sarsaparilla. As the disease continued to advance, and the tumor increased in magnitude, it was thought necessary to admit her into the hospital. The swelling was principally in the situation of the malar bone, and, on removing the last molar tooth from its socket, a probe was readily passed into the antrum. The palatine process of the superior maxillary bone seemed sound, and resisted the passage of a sharp-pointed probe. Dr. Davis's grooved needle was introduced beneath the upper lip into the swelling, and on withdrawing it the groove was found filled with a thick medullary substance. As the disease was advancing rapidly, Mr. Scott proposed to the woman its removal, to which she readily consented.

Operation, September 12th.—Mr. Scott made an oblique incision behind the angle of the jaw, and, carefully dissecting down to the digastric muscle, he soon came in contact with the external carotid artery, just as it passes up behind the angle of the jaw; it was readily secured with Weiss's aneurismal needle, armed with a double ligature. An incision was now made, extending from the angle of the mouth obliquely upwards, and backwards towards the zygoma, and the integuments were dissected upwards from the surface of the tumor. The eye was then separated from its loose cellular connexion with the floor of the orbit, and the left ala of the nose detached. With the strong cutting pliers, the malar and temporal bones were disunited at the zygoma. He next detached, with the same instrument, the malar from the frontal bone, and then cut through the nasal process of the superior maxillary bone, and, lastly, separated the connexion of the two maxillary bones at the longitudinal palate suture. The whole of the tumor readily came away, and was detached from the soft parts behind by the curved scalpel. The chasm in the face was filled up with dossils of lint, and the edges of the wound were then brought into apposition and maintained in connexion by means of three hare-lip pins and the twisted suture. Three additional sutures were afterwards introduced at the upper part, the face was dressed, and the woman being sent to bed an opiate was given her.

No unfavourable symptom occurred. On the third day after the operation the wound was dressed, when nearly the whole of it appeared united by the first intention; subsequently, however, the upper part, where the skin was exceedingly thin and with difficulty supported, gave way to about two inches from the angle of the mouth. The ligature came away from the external carotid artery on the twelfth day after the operation. At first her health became improved, she gained strength, and took her nourishment; shortly afterwards, however, she was troubled with a short cough, with night sweats, and became hectic; in which state she continued sinking till October 20th, when she died.

On examination after death, the face was found entirely free from any return of the disease, the parts about appearing very healthy; there was necrosis of a portion of the zygoma. The lungs were studded with tubercles.

The disease was composed of compact medullary matter, which had destroyed the whole of the malar bone, and appeared to have grown from the outer wall of the antrum.

MILITARY HOSPITAL, ALGIERS.

WOUNDS OF THE GENITALS.

Cases reported by M. Baudens.

However serious may be the affection consequent on tumefaction of the scrotum, from effusion of urine through a rent in the canal of the urethra, matters are not quite so bad when such tumefaction is occasioned by a gun-shot, even though it be complicated with lesion of a testicle. The two following cases will illustrate this.

Lesion of the Scrotum and one of the Testicles—Cure.

In the case of a soldier belonging to the Ambulance, I was called to see a perforation of the scrotum, attended with laceration of the substance of the testicle, which formed a hernia through the exit passage of the bullet. In spite of low diet, rest, bandage, bleeding, and cold applications, the testicle attained, in twenty-four hours, the size of one's fist, and the scrotum was enormously enlarged. I persevered, however, particularly with the antiphlogistic treatment, and gradually got down the swelling: in two months the patient was well. The cicatrices formed strong adhesion to the subjacent tissues; there occurred neither abscess nor seminal fistula: only the testicle, which had suffered great loss of substance, presented ultimately a less voluminous appearance than in its normal condition, and seemed, in short, atrophied.

Tumefaction of the Scrotum from a Gun-shot—Cure.

A volunteer of the Parisian corps was in a ravine, firing at the enemy on the heights, when he received a ball which traversed the raphe of the scrotum from top to bottom, after having grazed the integuments of the penis at its root. Next day, the scrotum was enlarged to the size of a moderate melon, and the swelling of the penis was considerable. I ordered general bleeding, low diet, application of cold compresses, and a bandage. The swelling soon began to give way; the suppuration, which was abundant, disappeared; and in twenty days the cicatrices of the entry and exit of the ball were the only traces left by the injury.

Tumor of the Upper Eyelid, weighing fifteen ounces, and containing numerous little Serous Cysts—Removal—Cure.

A Moor, of the town of Blidah, twenty-four years of age, applied at the hospital for relief. He bore, for several years, on the upper eyelid of the right side, an enormous tumor, the origin of which he attributed to a blow with a stick. The tumor, which hangs nearly down to his chin, measures six inches in its vertical diame-

ter, five in its transeverse, and rises in relief above the prominence of the nose. It is developed between the palpebral conjunctiva and the tissues external to that membrane; at its lower part it is marked by the boundary of the conjunctiva, which is very red and covered with tears, secreted abundantly when the parts are exposed to the contact of the air. In its upper part the mass projects into the orbit, and adheres to the globe of the eye, which is partially atrophied, and the transparent cornea of which it has rendered opaque. When the tumor is raised, however, and the light suffered to fall on the eye, the sight (the patient says) is not totally destroyed, but it is considerably injured.

Upon closely examining the nature of this mass, I thought there was reason to expect the possibility of its complete removal. The patient was evidently much harassed by it; it deranged his whole system, disturbed his nutrition, and reduced him to great leanness. I called a consultation of my colleagues, shewed them the bearings and connexions of this morbid structure, and explained how I should dissect it out from below upwards, and, in removing it, should leave in the cutaneous integument a portion sufficient to supply the loss which the conjunctiva would suffer. I demonstrated how, by operating in this way, I should protect the fibres of the orbicularis muscle, the attachments of the levator palpebræ superioris, and the fibro-cartilages of the lid. My opinion was adopted; but the operation was more troublesome than I had calculated upon—more especially on account of the unmanageableness of the patient.

Portions of the tumor were lodged detachedly among the fibres of the orbicularis; and my difficulties were augmented when it remained for me to separate the diseased structure from the eye-ball, which I was most desirous not to injure. But I contrived to manage it by using my fore-finger as a guard between the eye and the tumor; and syncope having come on, I availed myself of the moment to dissect the integument, which I wanted for the new eyelid. The lashes also I secured by a few sutures. Simple dressings were then applied, and the patient was put to bed. In four-and-twenty hours I removed the sutures, the cicatrix being solid; and in eight days the Moor, who was now almost quite well, begged me to allow him to go and see his wife and children, promising to come back again soon. He returned in three days, loaded with bulky presents, which he insisted on my accepting. He even wished to carry me to Blidah, among his countrymen, who, he said, were astonished at the marvellous cure which I had effected.

In the course of two months the cornea had recovered a great part of its transparency, and the eye generally was much restored to its functions. The lid could be raised and lowered, and its dimensions nearly corresponded with those of the opposite side, excepting a slight excess of substance, about the size of a pea, towards the inner angle, which the scissars will easily remove. As to the tumor itself, it was found strongly embedded in a fibrous envelope several lines in thickness; it weighed fifteen ounces, and resembled, in every respect, a mass of pale fibrine, such as is obtained from abstracted blood. A number of little serous cysts were seated in its centre.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 8, 1833.

Abscess	1	Hooping-Cough	33
Age and Debility	58	Inflammation	36
Apoplexy	8	Bowels & Stomach	1
Asthma	27	Brain	4
Cancer	3	Lungs and Pleura	2
Childbirth	4	Insanity	1
Cholera	3	Jaundice	3
Consumption	87	Liver, Diseases of the	7
Convulsions	34	Measles	23
Croup	7	Miscarriage	1
Dentition or Teething	9	Mortification	1
Dropsy	11	Paralysis	5
Dropsy on the Brain	16	Small-Pox	18
Dropsy on the Chest	3	Sore Throat and Quinsey	3
Erysipelas	1	Thrush	3
Fever	12	Tumor	1
Fever, Intermittent or Ague	1		
Fever, Scarlet	7	Still-born	22
Fever, Typhus	1		

Increase of Burials, as compared with the preceding week . . . 94

METEOROLOGICAL JOURNAL.

January 1833.	THERMOMETER.		BAROMETER.	
Thursday . 3	from 33 to 43		30·31 to 30·40	
Friday. . . 4	31	37	30·44	30·46
Saturday . 5	29	37	30·40	30·37
Sunday . . 6	25	36	30·39	30·41
Monday. . 7	22	35	30·44	30·50
Tuesday . 8	29	36	30·51	30·55
Wednesday 9	27	35	30·53	30·41

Prevailing Wind S.E.

The 5th clear; otherwise generally cloudy, but rendered very pleasant by frequent intervals of sunshine. The Barometer has been remarkably high throughout the week, especially on the three last days.

Rain fallen, ·25 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

The paper on Phlegmasia Dolens, in our No. for December 29th, was by "Mr. Salter," not "Mr. Slater," as erroneously printed.

Mr. Stafford's paper was received too late for insertion this week.

Mr. B., of Wimbledon.—As Dr. Elliotson does not revise his lectures, we do not think that we should be justified in publishing any remarks upon them.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 19, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

HYDROPHOBIA.

I now proceed to another disease, bearing a certain resemblance in some of its symptoms to tetanus, of which we spoke at last lecture—I mean, hydrophobia.

General Character.—The disease is so named from a fear of water, because it is imagined there is a fear to plunge into, to swallow, and even to look at water. However, there is a fear of swallowing in many nervous affections; and in some common sore throats there is, of course, a dread of swallowing. On the other hand, the fear of water—the fear of swallowing, is not universal in hydrophobia. Although the disease has its name from a dread of water, yet this dread of swallowing water, as well as other things, is seen in certain common affections. People will take an antipathy to all liquids, and sometimes, in common sore throat, there is such a spasmodic disposition in the throat, that the attempt to swallow excites great irritation, and the recollection of it excites fear at the very sight of water, while the attempt to drink it is terrific. On the other hand, you will see persons swallow very well in hydrophobia, and put their hands into cold water; dogs will swim across a stream, and some persons, it is said, drink in hydrophobia quite well to the very last. I believe I have seen this occurrence myself.

In many cases of this disease there is as great a difficulty in swallowing solids as liquids, an instance of which is published by Dr. Marcet, in the first volume of the Medico-Chirurgical Transactions. Still, in this disease it must be allowed that it is most usual for a person to have a fear of swallowing, touching, seeing, or hearing the sound of liquids. About two years ago there was a patient in St. Thomas's hospital labouring under this disease, and the circumstance of one of the dressers who sat up with him making water within his hearing, threw the boy into a violent agitation. But this dread of drinking, and the dread of touching water, is only a symptom, and there can be no doubt that death would occur equally if it never happened. The real character of the disease is to be taken from the circumstance of the extreme sensibility of the surface of the body, the extreme sensibility of the nerves of deglutition and respiration; so that any attempt at swallowing, the application of cold air to the surface, the application of a drop of fluid to the surface, whether warm or cold, if made suddenly, as by sprinkling—even the circumstance of an insect crawling on the face or hands, or the slighest agitation of the bed-clothes—will produce a catching of the breath, perhaps a sudden inspiration, just such as we experience when we step into a cold bath. The diaphragm descends just as if cold water were thrown upon us, or the wind blew suddenly upon us. Contemporaneous with the descent of the diaphragm there is a violent spasm about the larynx and pharynx, so that swallowing is impossible, and likewise breathing. The diaphragm will descend, but a spasm of the glottis occurs, and the air will not go down. The glottis will relax again, and a number of successive closures take place, and at the same moment, from the fear of being choked, there is extreme anguish and extreme terror. Even noise and light

will produce this; not merely the circumstance of cold air blowing on the patient, but the mere draught occasioned by a pocket handkerchief, or waving your hand, so as to cause the air to come with full force against him, may produce this violent spasm; and not only so, but the mere reflection of a looking glass will have the same effect. If you take a looking-glass, and allow it to play before the eyes, or if you make a loud sudden noise, this descent of the diaphragm, and this closure of the glottis, immediately take place. Bright colours will have the same effect as the use of a looking-glass, at least when the disease has become very severe; nay, at length the very mention of swallowing will have the same effect. From the recollection of what is suffered, the very mention of swallowing will produce extreme agitation, and every muscular effort whatever has the same tendency; and if the patient be compelled to make an effort to swallow when he really cannot, it will throw him not only into agitation, but absolute convulsions. There is extreme anxiety of mind and extreme despondency, and you see the patient looking around him with an eye of suspicion; he has a great aversion to strangers, and the countenance is expressive of his anxiety and distress. You notice, too, in this disease, very frequent sighing; if you sit by the bed-side, you hear the patient continually sighing. Breathing is not carried on in a regular uniform manner, but is altered. The patient is extremely restless, tosses about his hands, rolls his eyes, and whatever he attempts to do, he overdoes. Such is his agitation, that if he attempt to rise he makes more effort than is necessary, or if he attempt to take any thing into his hand, or swallow, he dashes the cup to his mouth, and gets it all down at once.

There are also violent fits of passion in this disease. There is such extreme irritability both of body and mind, that violent fits of passion are induced, and these are more particularly observed on a proposition being made to swallow, and in their fury patients will sometimes bite; not that they will bite like a mad dog, but the temper is so irritable in the disease that they will bite a stranger. This I have seen myself, but I believe it depends very much upon the natural temper of the individual; and yet the mind is so strong in the midst of this, that at the moment they have attempted to bite or strike, they will apologize, instantly regret it, and endeavour to make all the amends they can. They are conscious of their morbid irritability, and they beg others to get out of the way, lest they should injure them. They will make very great efforts to swallow, in order to please by-standers, but for the most part, after declaring they will swallow, or after taking up the cup into their hands, as soon as they have got it near their mouth they turn their heads away, and declare it is impossible. Sometimes again they have more firmness of mind; they will open their mouths, put the liquid into it, and then a regular paroxysm of the disease will occur. They are seen sometimes so to command themselves, that they will not only drink, but even wash their hands, to please you. I had a patient under my care only a few weeks ago, who, to please me, washed his hands, stirred the water about, and played with it.

Those paroxysms which I have mentioned as coming on in the disease, come on, however, without any external excitement, and when the disease has become more violent, these paroxysms occur from time to time without any external circumstance having occurred to provoke them. There is for the most part sleeplessness, or if the patient do drop asleep, he wakes in great agitation; and sometimes the sufferer is delirious. The delirium, when it does occur, is generally of a peculiar nature, and the patient will talk violently of the past as though it were present, and yet in a moment he will become calm and perfectly rational; at last, however, there is sometimes complete delirium.

The eyes, towards the close, do not roll, but become red and glassy; the pupils are dilated, and the mouth is very clammy. There is extreme thirst, and from the clammy nature of the secretion the patient suffers as much as if his mouth were dry. It very frequently makes them cry out for something to relieve their thirst, and yet when fluid is brought to them, for the most part they cannot take it. From the clamminess of the mouth, you will see them continually hawking and scraping their tongue against their teeth, and in the midst of their rage they will spit at you. They will sometimes put their fingers into their mouth, just as you will see monkeys do, and persons in delirium, and pull out a very viscid secretion. The pulse is very rapid and irregular, and during their agitation it is particularly so. It is for the most part feeble at last, but it is constantly quick, even when respiration is slow. Patients generally at last sink very rapidly; you are surprised on your visit to find that they are dead.

Duration.—The duration of this affection may be from rather less than twenty-four hours to six or seven days; but they generally die in two or three days, or at the utmost on the fourth day from the first appearance of the true signs of hydrophobia—the dread, the fear, the difficulty of swallowing, and the extreme sen-

sibility of the surface. I had two patients with this disease, little girls, who died in less than twenty-four hours from the symptoms being first observed. In two American cases which I have read, one occurring in a subject under four years of age, and the other in a person aged 73, both patients died on the sixth or seventh day, showing that the duration of the disease has not any relation to the age of the patient. I might have imagined, from having had two patients under ten years of age die in less than twenty-four hours, that the young die soonest; but here is a case of a child and an old man, both of whom lingered the same length of time, and I have found this verified in other cases. Old persons will sometimes die very quickly, and young ones will sometimes live as long as I have stated. This is the general character of the disease.

Symptoms.—Now the first symptoms in hydrophobia are uneasiness or feverishness, and a general feeling of indisposition, a dizziness in the head, together with chilliness and flushes, and these symptoms may continue some days. Dr. Parry furnishes instances where these symptoms lasted five or six days, and I believe they may go entirely off, just as other specific diseases, diseases from morbid poison, are seen to do. We all know, in the case of gonorrhœa, that a person will have every trait of the affection one morning or one evening, and it will entirely go away, although he knows he has been where he was very likely to contract the disease. Continued fever will thus go off, so I believe will plague, and ague certainly will do so. A person who has been exposed to malaria will have merely a shivering, which will go away and not return. I believe it is just the same in hydrophobia. I saw two little girls, sisters, who were bitten at the same moment by a dog, and in the same place, the face. One of them died, and the sister had exactly the symptoms I have described as ushering in hydrophobia, but after lasting four or five days they ceased, and she did perfectly well.

After these symptoms have continued, however, some little time, perhaps a couple of days, suddenly the person is surprised by a difficulty in swallowing liquids, and all at once he finds a spasm and an impossibility of swallowing. At the same moment, perhaps, he has great anxiety and great terror, or perhaps a draught of wind suddenly blows upon him, his breath catches, and he wonders, and also those around him, what is the matter. That was the case in a boy whom I saw about three years ago. The first symptom of his disease was induced by a draught from a door. A person went into his bed-room in the morning, and on opening the door the draught occasioned by it came full upon him, and he was observed to go almost into fits; the sudden impression of the air took away his breath, and agitated him to this violent degree.

Intermittent, Remittent, and Periodical.—In the course of the disease there is sometimes a remission; the disease does not *necessarily* go on in an uniform tenor. In a case published by Dr. Satterley, one of the physicians to the Middlesex Hospital, the patient had fits of biting, and between these he was perfectly well—even took warm fluids, and had a sound sleep. The disease is not so continuous but that in some persons there will be a decided remission, so that the patient can absolutely swallow liquids very well, and will go into a quiet and sound sleep. Some say, but one can hardly believe it, that there are absolute *intermissions;* that the disease altogether, every symptom of it, will sometimes cease for a time, and even become *periodical!* There are even cases of remission and recovery mentioned as having occurred in dogs, but it is doubtful whether recovery ever took place in the human subject.

Peculiar Symptoms.—Now and then, of course, you will have peculiar symptoms, such as are not observed in ordinary cases. One case of this kind occurred at Guy's Hospital, the particulars of which were published by Dr. Marcet in the first vol. of the Medico-Chirurgical Transactions. From some disturbance of the brain or the olfactory nerves, the patient complained of an intolerable stench around him. This is sometimes observed in ague. In some cases, too—from irritation, I presume, in another part of the nervous system—there has been an erection of the penis, and an oozing from the mouth of the urethra. These are all accidental circumstances.

Inability to swallow not universal.—Sometimes in this disease there is no inability to swallow either liquids or solids; there is a mere tremor, a mere agitation, and that not very considerable, great debility, rapid pulse, and extreme restlessness. This has been said chiefly to occur when a cat has inflicted the bite. Dr. Fothergill mentions this circumstance in the 5th vol. of the Medical Observations and Enquiries, but it is not an universal fact. I saw a man myself who had been bitten by a mad cat, and who swallowed perfectly well. I saw him eat a pint basin full of bread and milk an hour or two before he died, and even then there was no difficulty whatever in swallowing. All his symptoms were, rapid pulse, extreme restlessness, and great agitation. He thought nothing about the

cat—his mind seemed at ease on that subject, and he sat up, if you wished: during the whole of the case there was no delirium whatever. The man died, I believe, on the second day after the commencement of the symptoms, and a short time after I saw him. He was not my patient, but I saw him in the wards of the hospital. He had been bitten six weeks before by a strange mad cat, but had forgotten it, the friends alone remembering the circumstance. This is not universally the case; for you will find a case published by Dr. A. T. Thomson, in the Medico-Chirurgical Transactions, where hydrophobia, well formed in every respect, arose from the bite of a cat; so that the circumstance may be occasional, but it is not universal.

Children as liable to the Disease as Adults.—This is a disease which affects children as well as adults. One seldom hears of women labouring under it; but children of both sexes, and men more frequently than either, become its victims. I have already cited two cases from the American Philosophical Transactions, where the disease occurred in patients, one of whom was a child four years of age, and the other a man who had attained his 73d year, so that we have here the extremes of life. Infants may not be exposed to a rabid animal, and the reason that it attacks men more than females is because the former are so much more out of doors than the latter. Dr. Parry mentions a child only three years and a half old having the disease.

Denial and Proof of Contagiousness.—When speaking of contagion in general, I mentioned that the contagiousness of this disease had been denied. There was a surgeon, I think at Brighton, but I have not the pleasure of knowing his name, who lately denied that this was a contagious disease, and from his conviction that his opinion was correct, he inoculated himself with some of the saliva from a rabid animal, and did so with perfect impunity. So perhaps he might have gone astray and not have contracted syphilis or gonorrhœa; but that would be no proof that there was no such contagion. However, unfortunately there is no novelty in this denial of contagion. Gerard also denied it; and there could be no other reason for denying it than a desire to be peculiar. De Foe denied the contagion of plague, but he was soon convinced of his error. I mentioned that two students at Paris denied the contagion of syphilis, and inoculated themselves with the virus, both of whom became affected with the disease, and one of whom committed suicide. If the disease were an imaginary one, why should children have it who have never heard of it? Two little children whom I attended in this disease, one a year after the other, could have had no idea of it, and they died perfectly unconscious of what was the matter with them. Adults have died of the affection without recollecting that they had been bitten. The thought of the disease has not preyed on their spirits in the least; but they have been suddenly surprised by it, and it has never occurred to them what the disease was, or that they had formerly been bitten. An instance is mentioned in the *Medical Gazette*, Dec. 27, 1828, by Mr. Goderich, at Fulham, of an old man, 60 years of age, who had been bitten and died of the disease, but was unconscious of its nature to the last. Two cases are mentioned by Dr. Parry in which the bite was forgotten, and another case in which the bite was spoken of with the greatest indifference. In the last case I had, the boy knew that he was bitten; but he thought nothing of it, and never seemed to attach the least importance to it. That there is such a disease, that its character is so peculiar, and that it unquestionably arises from a morbid poison, cannot admit of a moment's doubt. It is also to be remembered, that many persons who are bitten, and fancy they will have the disease, never have it at all. I have seen many persons bitten by dogs wash the parts, take physic, have the parts cut out, and do all they could to torment themselves into the disease, and yet they have never had it. The character of the disease is too plain to allow of any doubt as to its existence.

Spurious Hydrophobia.—Spurious cases of nervous fever or nervous irritability are very different from these. If the case be spurious, the difficulty in swallowing generally occurs far too early after the bite. A certain period, usually some weeks, elapses between the bite and the appearance of the disease; but where persons have a difficulty in swallowing, from mere nervous terror, it generally begins at an early period. There is much too early delirium and general convulsions; the agitation of the mind arising from fear brings on a degree of insanity. Then, again, in the spurious form, there is generally no catching of the respiratory organs. The great feature of this disease is the sudden inspiration, as though the patient were plunged into cold water, and this produced not only by an attempt at swallowing, not only by the sight of water, not only by speaking of water, but by a breath of cold air, or the crawling of an insect upon the surface, or any sudden impression. Patients who have only fancied hydrophobia have a difficulty of swallowing, but they forget to have a catching of the breath. They are not aware that that is a symptom; they only think of the difficulty of swallowing liquids, and therefore that symp-

tom only arises: they are not conversant enough with the disease to know another remarkable symptom, and therefore that never takes place, or if it do, it is only a simple local affection producing irritation of the organs of respiration. So characteristic of the true disease is this sudden but deep inspiration, that when a paroxysm takes place during sleep, it always begins with it—so peculiar is it to the disease, so pathognomonic is it, that when a patient is seized with a paroxysm asleep, he always awakes with a sudden deep inspiration. In the true disease, too, patients, in order to please you, will make every attempt they can to swallow. They will say they cannot, but then they will try; they will make every possible effort, and succeed to a certain length, and very frequently succeed entirely; whereas, if a person have the fancied disease, he concludes it is quite impossible; he will not hear of such a thing, and considers it almost an insult to him for you to suppose that he can swallow. In the fancied disease the patient has not sufficient firmness of mind to make the attempt, and shudders at the very sight or name of liquid; whereas, in the true disease, patients will not only do this, but put their hands continually into cold water, and, as I have already said, agitate and stir it about. These people are not surprised by the disease; it does not take them suddenly, but they anticipate it; they look forward to it with a low melancholy, and then at last they begin to find they cannot swallow; whereas, in the true disease, the symptoms come on suddenly. In the spurious affection, also, there are generally a variety of nervous symptoms, such as globus hystericus, and other symptoms common to nervous derangement. There are not the usual effects in the spurious disease from cold air, the sudden impression of cold air, and the sprinkling of cold water; certainly the former do not produce the agitation which they occasion in the true disease. It is to be remembered that the disease may be spurious when a person has actually been bitten by a mad dog; he may have been bitten, and the poison may not have taken effect, and yet the person has agitation of mind sufficient to produce difficulty of swallowing. It is probable that it is in such cases that persons have been said to recover from hydrophobia; but they have done no such thing. The persons have been bitten by a mad dog, and for want of the practitioner being fully acquainted with the disease he has not made a sufficiently accurate diagnosis, and supposed that recovery has taken place from the disease.

Morbid Appearances.—After death there is sometimes found a fulness of the vessels of the head, and sometimes marks of decided inflammation, and not only in the head, but within the spine. Sometimes there is an effusion of serum, either pale or bloody; sometimes lymph has actually been found effused, particularly about the base of the brain. In the case of the old man to whom I have already alluded, as having died without suspecting the nature of his affection, and the particulars of which are contained in the *Medical Gazette*, there was inflammation of the whole of the base of the brain, of the spinal cord, the cerebellum, the cruri cerebri, and the two thalami nervorum opticorum, and the corpora striata were redder than natural. This was an inflammatory case of hydrophobia; but in other cases no such thing has been discovered. I have seen patients opened where there was no effusion, no redness, nothing that would lead the best anatomist to say that the brain and spinal marrow were not perfectly healthy, just as is the case in tetanus. Sometimes there are red spots found in the fauces, larynx, trachea, and in the bronchi, and likewise in the stomach. In a great number of cases there is considerable redness of the glottis and epiglottis, and great congestion of the lungs. The latter circumstance you would *à priori* expect, in consequence of the difficulty of breathing, and the spasm which takes place and disturbs their functions. Sometimes, however, nothing has been found from head to foot, and Magendie says that sometimes he has opened dogs and found nothing. I mentioned that in the stomach sometimes red spots are found to a great amount; but sometimes there are none at all. It appears, therefore, that the disease, like tetanus, is not necessarily of an inflammatory nature. Now and then signs of inflammation may be found; it may be in some cases an inflammatory complaint, but in many cases it is not; and it is clear that the nature of the disease is not essentially inflammatory.

Pathology.—Some gentlemen, from observing redness and congestion about the air-passages, and others from observing similar appearances in the alimentary canal, have ascribed hydrophobia to a morbid state of these parts; but I think the extreme sensibility of the surface of the body, the extreme agitation on attempting any muscular effort, the convulsive movements that take place in swallowing, the spasmodic catching of the breath, even on touching the lips with liquid, or the application of cold air to the surface, the anguish and irratibility of the mind (anguish not arising from pain), the great suspicion, and at last delirium, all shew something more than an affection of the lungs or stomach. Such symptoms as these indicate an affection of the nervous system. In tetanus there is no morbid irritability either

of body or of mind; there is only a spasm of the voluntary muscles, and this in all probability arises from the origin or termination of the nerves in the head or the spinal marrow; and such a state is not necessarily, I said, inflammatory, though occasionally inflammatory signs are found. But in hydrophobia there is no irritation of the voluntary muscles, in general, but a morbid sensibility of the nerves of sense, particularly those of touch and of those running to the muscles of deglutition and respiration; and, in addition to this, the mind is altogether in a state of suspicion and irritability, shewing that it is the centre of the nervous system which is particularly affected. What it exactly is it is impossible for me to say; but so far we may trace it. One cannot attribute it to the nerves, or to that part of the brain connected with the nerves of deglutition and respiration, because we see extreme suspicion of mind, extreme mental anguish; so that there is something more than that; and we see that many parts of the nervous system are affected. We may venture to say that the state is not necessarily inflammatory, because bodies are continually opened in which no signs of inflammation are found.

The blood in this disease is not buffed, neither is the urine high coloured; on the contrary, it is pale. The tongue is perfectly clean; the mouth is clammy, and is filled with a viscid mucus. The pulse is not full; it is not at all an inflammatory pulse, but it is nevertheless very rapid and irregular—frequently very much so. I may mention that many persons have not found any inflammation whatever; but there have been cases where local inflammation has existed, particularly at the base of the brain. The thirst in the disease does not arise from an inflammatory state, or from feverishness; but is either a part of the disease, arising from the disturbance of the nerves, or from the clammy secretion of the mouth. You know that when all the parts of the mouth are dry, or are covered with only a viscid secretion, and not moistened by a thin fluid, thirst is the necessary consequence. There is in general only morbid heat from time to time when the patient is particularly excited. I will not pretend to say what the state of the nervous system is any more than in tetanus. We may limit the disease to the nervous system, and particularly to the nerves of external sense—the sense of touch and the nerves running to the muscles of deglutition and respiration, together with a general excitement of the brain itself—but what the particular state is, it is impossible to say.

Exciting Cause.—The exciting cause, however, of the disease is well known: it is a secretion from the mouth of a rabid animal; but I do not know that we have any proof as to whether it is the saliva or the mucus. It is said to be the saliva which is poisonous, and it may be that fluid; but I do not know that it is proved to be the saliva rather than the mucus.

Communicable from Man to Brutes.—The saliva of the human subject is equally poisonous with that of the brute, or at least also poisonous; for Magendie says that he inserted the secretion from the mouth of a rabid human being, that is to say, from a person labouring under hydrophobia, into dogs, and they became the subjects of the disease.

Period of Incubation.—After the poison has been applied, there is usually an interval before the appearance of the disease of from one or two weeks to three months. I believe the average interval is from one to two months. The disease is said sometimes to have appeared in five or six days, and a case was mentioned a short time ago in which the affection appeared to come on the next day; at least it was so said. In other cases the disease has not appeared for nine or twelve months. There is a case mentioned in the Philosophical Transactions where the affection did not come on for nineteen months. Dr. Bardsley, in the Literary and Philosophical Transactions of Manchester, has furnished an account of a case where the disease did not occur till twelve years after the bite. The case has given rise to a great deal of doubt. In the first place, we may almost doubt whether the disease was genuine; but allowing that it was, then there is a doubt whether it arose from morbific poison, or sprung up *de novo*. We are told that it was a genuine case; but there is great difficulty on both sides. If we suppose it to have been owing to the bite of a rabid animal, and the wound had been inflicted twelve years before, there is great difficulty in supposing that the poison had existed so long; and again, if it were not owing to this bite, it must have sprung up *de novo*. Dr. Parry, who has written on Cases of Tetanus and Rabies Contagiosa, thinks the case was not genuine, and he also considers that the shortest well-authenticated interval is two or three days, but I think he is wrong; for I have reason to believe that it has occurred at a shorter interval. I also think that Dr. Parry is wrong on another point; for he states that he can find but 38 well-authenticated cases of hydrophobia on record. Now in my limited period of practice, in my short life, I have seen six or eight cases in London, and at the same time that I have seen these, there have been others which I did not see. Two of these cases occurred in private practice, and four or five in the hospital, and hav-

ing seen these myself, I must think the disease is far more frequent than for Dr. Parry only to find 38 cases on record. The fact was, Dr. Parry saw a great number of cases called hydrophobia that were not instances of the disease, and he was too scrupulous in allowing cases of hydrophobia entered in books to be genuine, and therefore put too many in the spurious list. The interval, however, is various. It is said to be about the same in the dog as in the human subject. Among Lord Fitzwilliam's hounds, in Yorkshire, the interval varied from six weeks to six months. His pack were bitten by a rabid animal, and the disease appeared at various intervals from six weeks to six months.

Poison must be inserted into a Wound.—Persons usually escape, if the poison be not inserted into a wound. Cælius Aurelianus mentions the case of a woman who was seized with the disease three days after having eaten some game which had been sent to her, and which was supposed to contain hydrophobic poison, in consequence of having been killed by a mad dog. If the case were true, there was probably a crack in her lips. Dr. Bardsley mentions a case which occurred at the common interval in a shepherd, who had only been licked by a dog. His dog was rabid; but then shepherds continually have cracks in their hands, and nothing is more likely than that there was a crack in some part of his hand.

May be communicated by an Animal not known to be mad.—It is possible for the brute to give the disease to the human subject, when the animal is not known to be mad. Many cases have occurred of persons being bitten by dogs and becoming mad, the dog not being supposed to have been mad till afterwards. The disease must have existed at the time, or the dog could not have communicated it, that is, speaking logically; but it exhibited no signs of madness, so as to be considered in that state. It has been imagined that all bites of animals have something venomous in them; and we are told that many bites of brutes have caused signs of hydrophobia, epilepsy, and even death; but in all probability these were nervous symptoms, induced by fear.

Persons bitten by Rabid Animals most frequently escape.—However, on the other hand, most persons bitten by rabid animals do not suffer hydrophobia. Dr. J. Hunter mentions that 21 persons were bitten by a dog, among whom only one became affected with the disease; and yet not one of them took any steps to prevent it. Dr. Vaughan mentions that between twenty and thirty persons were bitten by a mad dog; some did nothing, others took the Ormskirk medicine, and had a dip in the sea, and yet of this number only one had the disease. Dr. Parry mentions that several sheep and dogs were bitten, and that among these not one sheep had the disease, and only two dogs, and I may remark that one of these dogs was bitten before the sheep, and the other just afterwards. I had a case of this disease in a little girl who was standing at her father's door, when a dog snapped at her face, and did the same at another sister, and then passed on. At the expiration of six weeks or two months the sister who was bitten second had hydrophobia, and died, but the other sister never had the disease, or the premonitory symptoms went off, and she may be alive now. I mentioned before that I will not say she had the disease, but if she had, it went off; and yet the little girl bitten second had the disease. We might imagine that the girl bitten first would be most likely to suffer the disease, because the teeth must have been covered with secretion; however, it was the second that died from the disease. Nothing, I understand, was done in this case, except that nitrate of silver was applied.

Much depends upon whether the part is bare or not; hence you find that, by far the most frequently, persons who have hydrophobia through a bite have had the wound inflicted on the hands or face. In three cases that I had under my care in private practice, one patient was bitten on the face and two on the hands. If the part be not bare, the tooth is wiped as it passes through the clothes, and therefore no fluid is conveyed with the bite. It is a bite on a bare surface that is generally productive of the disease.

Some persons have so little disposition to the affection, that notwithstanding they are bitten on bare parts, and no precaution is taken, they do not suffer the disease, and sometimes persons will not experience it till they are thrown out of health, till they are frightened, till they catch cold, or something happens to disturb the constitution, and then it appears. This is precisely what happens in the plague, in ague, and in other affections.

Wound usually healed before the Appearance of the Disease.—The wound is generally healed when the disease appears, and, as I stated formerly, it is sometimes entirely forgotten. Some say that if there be a wound it becomes livid when the disease appears, or it looks yellowish, and sometimes it re-opens. Sometimes, when it appears, there is pain and numbness in the bitten part, extending along the course of the nerves. This was the case in an instance I had under my care this winter. The boy had been bitten in the hand, and the part had been cut out entirely; but pain was felt along the nerves, and ex-

tended to the neck, at the time that the disease begun. It was curious that there was no pain in the wound, no pain in the hand, no pain in the upper arm, but it extended inwards along the nerve to the neck. More frequently than not it is along the course of the nerves, and not along the course of the blood-vessels, that the pain has been observed.

Brutes may originate it.—The most common brute which gives the disease is the dog, but other brutes will have it, and probably all of them will imbibe it, and also communicate it. The wolf, the fox, and the dog, are all of the canine species, and they are well known to give and receive it, and they appear to originate it likewise; that is, there is every reason, I fancy, to believe it will originate in them, unless the poison may remain dormant as long as some people imagine. Unless it can exist in a dormant state for a long time, there is every probability that hydrophobia is produced *de novo*.

Cause when produced de novo.—The cause of it, if it can arise *de novo*, is not well known. It is not putrid meat, for the Caffres in Africa feed all their dogs on putrid flesh, neither is it salt meat, neither is it a want of drink. The disease is unknown in Syria and the interior of the Cape of Good Hope, according to Dr. Parry, where there is plenty of heat, and in some instances plenty of putrid meat. It is said it is never known in South America, but then two-thirds of the pups there die of the *distemper*, and some persons contend that the distemper prevents the spontaneous occurrence of hydrophobia; but I do not know whether that is correct.

Diagnosis between Distemper and Hydrophobia.—Dr. Jenner, in the first vol. of the Medico-Chirurgical Transactions, lays down the diagnosis between hydrophobia and the distemper. He says, that in the latter the eye is dull, the dog looks stupid, and has an insatiable desire for water. The distemper is a violent kind of catarrh, and we may therefore imagine that the eye will look heavy, and he will become thirsty. The dog wanders from home, and at length he is disposed to be sluggish. But in hydrophobia, Dr. Jenner says, the eye of the dog is bright, that he looks furious, and generally declines water. When a hydrophobic dog bites, it sneaks off directly, and is not found again, or if found, it is dead; it goes away from the place, and is frequently afterwards found dead. It only gives a sneaking bite, and does not continue its attack like another dog, and after it has bitten an individual it skulks into a corner, and then runs off. Hence it is that many persons who have been exposed to hydrophobia will tell you that they have been bitten by a strange dog that perhaps was passing by; that it attacked them without any provocation, and then made off.

The voice of a Dog pathognomonic in Hydrophobia.—A German physician, Dr. Hertwick, says, that the voice of the dog in hydrophobia is peculiar and pathognomonic. He says that the bark of a dog labouring under the disease ends in a howl, and the mouth at the time of barking is lifted up. He says that he has made experiments; that he inoculated fifty-nine dogs with diseased secretion from hydrophobic dogs, and fourteen only took the disease. He states that he made experiments with the blood, and found that equally poisonous with the secretion of the mouth. He says the saliva will act in producing the disease at all periods of the affection, and in twenty-four hours after death, if it be taken from the body, it will still give rise to it; but he says if the poison be swallowed it is perfectly inert. You perhaps are aware that the poison of serpents may, we are told, be swallowed with impunity.

Treatment.

Prophylactica.—In regard to the prevention of the disease, it is certainly our duty to cut out the part as soon as possible, and perhaps at any time between the bite and the appearance of the disease; and if the part cannot be cut out, I should think it proper to remove the whole limb. I am not sure that this prevents the disease, because I know there are many cases in which this has been done, and yet the disease has occurred. A perfectly authenticated case was mentioned to me lately in which not a moment was lost, but the person the instant he was bitten walked across the way to a surgeon, and had the part freely cut out, but notwithstanding this, at the usual time he had the disease. I am not sure that it prevents the disease; it is, however, but common sense to do every thing we possibly can to prevent it, and excision is the most proper plan.

Some have applied cupping-glasses, and this is a most ancient practice. You will find it mentioned by Celsus; Dr. Parry also recommends it, and still more recently it has been recommended by Dr. Barry, who says that its use has been shown by experiments with various mineral and vegetable poisons. If these poisons be applied to a wound, and the poisonous effects begin, and the cupping-glasses be applied, in proportion as they act the influence of the poison disappears. It is therefore recommended to us to immediately apply cupping glasses to the wound, and excite the part tho-

roughly, so as to draw out, if possible, every particle of the diseased fluid. The stream of course will be towards the glass, and as it will be washed away, the circulation and absorption will be prevented at the moment. Then you may cut the part out, and cup again. Whether it would be useful to adopt this plan I cannot tell: if you could have a fair opportunity to cut the part out at once, I should think that would answer every purpose.

Caustics are by no means to be depended upon; but if they be used they should be very strong, such as caustic potash, or strong mineral acids, or, what perhaps is better than all, the actual cautery should be employed. I do not know that excision is to be depended upon; but, after excision, in order to make what is considered certain, doubly certain, caustic might be employed, or the actual cautery.

Some have recommended the chlorides, and it is very possible that they may destroy the poison; but, supposing they will, yet one cannot be sure that every particle of the poison has been in contact with a part of the solution of the chlorides; we are not sure that every particle has been decomposed; and therefore if the chlorides be applied, still I should cut the part out in the first instance, and apply them afterwards. The use of these other things, in addition to excision, may be very great. If the part be one that cannot be cut out—if the wound be so deep that it is impossible to cut it freely out, and the removal of the part by amputation be not possible—then use the actual cautery, or caustics.

When the part is cut out, we are advised not to allow it to heal, but to keep it open, so as to produce a discharge for a length of time. However, I know of plenty of cases where this has been done, and yet the disease appeared, though certainly one would fancy that it was better than mere excision; so that, after we have cut out the part, we might apply caustic, or the actual cautery, and then keep up a discharge.

In the way of prevention we are strongly recommended to give mercury to ptyalism. You will find a great many cases where the disease never appeared after this was had recourse to; and among these cases you will find it stated that, in some instances in which mercury had not been employed, the disease appeared; but there are cases enough on record of the disease occurring after mercury had been exhibited to the greatest extent. Not knowing what to do in the way of prevention, in the case of the sister of the little girl who died of hydrophobia, two months having elapsed since the bite, I exhibited mercury freely. I was not content with its exhibition by the mouth, but a strong solution of oxymuriate of mercury was made, with which she was washed till a rash was brought out, and then it was discontinued, lest inflammation should come on. In this way her mouth was got tender, and she had nothing more than the premonitory symptoms. Whether the mercury had any effect I do not know; but I should think not, because I believe the symptoms went off before the mouth was affected. I should think there is no reliance to be placed on mercury.

Dr. Good thinks that the belladonna, united with the oxymuriate of mercury in a large quantity, has acted as a prophylactic in his hands. Dr. Spalding tells us that the exhibition of scutellaria laterifolia is successful; nay, that it prevented the disease in thousands of cases of men, dogs, oxen, and swine. The Ormskirk medicine was once held in very high estimation: it is said to consist of powder of chalk, Armenian bole, alum, powder of elecampane root, and oil of anise. In London, sea-dipping was formerly thought very good; so that when a person was bit he took a trip to Gravesend, which is the nearest point where the water contains a large portion of saline ingredients. Any thing may do good which will fortify the mind, and the disease may by that means be more or less opposed. Dr. Marochetti published a pamphlet a few years ago in which he asserts that if the disease will appear, pustules form under the tongue after the bite; and if these pustules be abraded by a needle, and the mouth be washed with a decoction of genista tinctoria, or butcher's broom, and it be taken internally, the disease is prevented. Others have, subsequently to the appearance of this publication, made a point of attending to this circumstance, but they have found no pustules even in cases where the disease came on, and though the genista tinctoria was fairly tried, the disease nevertheless made its appearance.

Venesection has been strongly recommended, on account of its supposed efficacy in some Indian cases, but it is doubtful whether it is serviceable. It was fairly tried by Dr. Rutherford, many years ago, and also by Dr. Parry. I employed it in one case, and I fancy I sent the patient out of the world some hours sooner than she would otherwise have gone. As the blood flowed, the pulse became weaker, the disease much more intense, and the patient died in a very short time. In the *Medical Gazette* of December 1828, you will find a case mentioned by Mr. Goderich, and to which I have before alluded, where the patient was an old man, and was bled to the amount of 150 or 160 ounces. No relief was afforded, but he became worse

and worse, and died in twenty-seven hours from the period of the attack. Magendie and Dupuytren have employed venesection, and failed. M. Breschet also says, that the more he bled his patients the more quickly they seemed to die. I am speaking of a rational degree of bleeding, and it certainly does harm.

In some cases published by Dr. Satterley it is said that an emetic proved useful; all things, however, have been found useful in the hands of some. All narcotics, opium, belladonna, nux vomica, and prussic acid, have failed. Opium injected into the veins has seemed to give no sort of relief; and musk also has been given without any real benefit. I was told of a case where prussic acid was given to a very considerable amount, and yet no benefit whatever arose from it. The chlorides and muriatic acid have also failed. I should tire you if I enumerated all the drugs that have been recommended in this disease, and have failed. Every article that ever was swallowed in the way of physic has been given without any benefit. I made a fair trial the other day of a vegetable matter—guaco—which was said to a certainty to cure the disease;—there could be no doubt of it whatever; and Dr. Roots also made a fair trial with it, and the patient was better. Now and then, however, there are irregularities in the course of the disease, and whether the improvement was ascribable to the medicine or not, I cannot tell; but I should think not, for the patient died at the usual time. Some have recommended a whirling machine. Van Helmont used to recommend putting the patient under water, and keeping him there till he was nearly drowned; but I believe nothing will do good when the disease is formed, and I doubt whether much good can be done even in the way of prevention.

LECTURES

ON

DISEASES OF THE EYE,

Delivered at the Birmingham Eye Infirmary,

By Richard Middlemore, Esq.

PURULENT OPHTHALMIA OF INFANTS.

The disease which I designate by the title of the purulent ophthalmia of infants generally occurs a few days (about three) after birth: there is a slight degree of redness of the conjunctiva, particularly of its palpebral portion, and also of the tarsal margins, more especially towards the inner and outer canthus; there is also a trifling amount of discharge, which causes the lids to adhere very firmly, if they have been closed for any considerable length of time, and shreds of which may be seen lying upon their mucous surface, when they are everted; and there is in addition some little aversion to light. These symptoms, however, are very slight, and unless the nurse's attention be directed to their importance, from having witnessed similar cases, she will bathe the eyes with some mild fluid, believing this affection of the eyes to be a mere cold, until the disease has really become severe.

When our advice is first requested, the following symptoms, which may be said to constitute the second stage of the disease, are usually present:—there is a good deal of yellow and rather consistent discharge; the conjunctiva is red and tumid, the eyelids are slightly swollen and increased in vasenlarity, and the infant is greatly annoyed by light. If this state of things be not interfered with, there is quickly produced an extremely red and swollen state of the conjunctiva; it is changed into a soft, red, convex body, which, on any attempt to open the lids, or any unusual effort on the part of the child, becomes everted, producing a painful state of ectropium. This appearance of the conjunctiva has been aptly compared to the villous coat of a fœtal stomach when finely and successfully injected; the discharge is extremely profuse, covering the eye and unpleasantly distending the lids; it is generally of a yellow colour, and a somewhat thick consistence: if the child be jaundiced, it will assume an intensely yellow, or a dingy green appearance; there will be also a considerable degree of chemosis, so that when you attempt to inspect the cornea you find it almost obscured by the elevated conjunctiva, and probably, if you do obtain a sight of it, it presents a very dull appearance, is more or less opaque, and generally so from deposition between its lamellæ: there will be also great intolerance of light; the child will scream and turn away its head whenever the eyes are exposed to the light; the eye-lids will be enlarged, and in some instances will acquire a purple hue, from the accumulation of venous blood throughout their texture. If the disease be allowed to proceed, the discharge becomes thinner and less profuse, and is occasionally mixed with blood; the cornea assumes a dirty ashy appearance; the tense florid condition of the conjunctiva is exchanged for a slightly red, loose, flabby surface, and the light is less offensive than formerly. We will now for a moment refer to the actual state of the several parts of the eye at this juncture: the loose, flabby, pale red state of the con-

junctiva, with diminished vividity and change in the colour of the discharge, points out the subsidence of external inflammation; the sanious, thin, and bloody state of the secretion, shews that the period of active, healthy inflammation, has gone by, and that there is a gangrenous condition of some part of the external tunics; and the dirty, ashy appearance of the cornea, assures us that the vitality of its external laminæ at least is destroyed.

But it may happen that the inflammation may extend to the internal tunics, and ophthalmitis, followed by suppuration of the eye-ball, may take place. You know the symptoms by which this unfortunate occurrence is distinguished—an aggravation of pain, a sense of tension of the eye-ball, an excessive intolerance of light, great orbital agony, and severe hemicrania. But your patient cannot describe his feelings, and you must judge whether or not this occurrence has taken place by the infantile indications of suffering, the dull state of the cornea, by the severity of the inflammation, and its progress in reference to treatment; for it may happen that the disease may have been too far advanced before it be witnessed by the medical attendant to be successfully treated, or it may not yield to the means employed for its subduction; and, should this be the case, suppuration of the globe and extensive ulceration, or sloughing of the cornea, may be expected to occur.

Both eyes are generally affected, sometimes simultaneously, but more commonly the disease commences in one eye first, and in a few days the other becomes inflamed: you will imagine that a cause exerting an equal influence upon two structures similarly circumstanced in every particular would produce an equal effect upon each, and you will accordingly find that the conjunctiva of each eye is inflamed at the same time and in the same degree, when the mucous membrane of each organ is permitted to be equally exposed to the influence of the same morbid vaginal secretions; but you will easily suppose that a great variety of circumstances may exist which will cause the conjunctiva of one or other eye to be particularly exposed to the more complete and prolonged influence of the essential morbific agent.

I shall now point out the modes of termination of this complaint. If it be mild in its character, or if it receive early and judicious attention, it will be generally removed without leaving behind any injurious effects; but if the contrary occur, it is very apt to produce a thickened, vascular, and granular state of the conjunctiva, which, in some severe cases, causes *ectropium*; or there may remain a lax condition of that membrane, its attachment to the sclerotica may be less intimate than it ought to be, from the previous distention of its connecting cellular membrane, in consequence of which it falls into loose folds; or it may be raised by serous effusion, so as to project slightly around the margin of the cornea, where the œdema is generally most distinctly visible: the conjunctival vessels sometimes continue enlarged, their tonic power is diminished by the distention to which they have been subject during the period of acute inflammatory action; or there may remain a state of chronic ophthalmia, from the friction of the rough and thickened conjunctiva upon its opposing surface and upon the cornea.

The membrane covering the outer lamina of the cornea is sometimes thickened and rendered opaque; or, what is more frequent, there is lymphatic deposition between the lamellæ of the cornea; and this deposition may be superficial in its situation, or otherwise; it may or may not become organized, and it may either be more or less considerable in quantity. If it be small in quantity, superficial in situation, and be not quickly organized, it will be generally removed even without the aid of any local applications; but if, on the contrary, it be considerable in quantity, if it be more deeply situated, and if it becomes organized, it is rarely entirely removed. However, it may appear to be large in quantity, because it occupies a great extent of surface, but if it be limited to the space between two lamellæ, and consist of a thin layer of deposition, it may eventually be removed, although at first it seem to present an irremediable obstacle to vision. Indeed these opacities are generally absorbed in whatever part of the cornea they may be situated; they are not removed with a speed proportioned to the extent of surface they occupy, but in a ratio to their thickness and density. If the inflammatory deposit be large in quantity, and unorganized, its pressure may cause the absorption of the neighbouring lamellæ, and thus produce an ulcerated cavity containing such deposition, which may burst externally or internally, when it will be distinguished by the circumstances which characterize each of these forms of disease. *Ulceration of the cornea* is another consequence of infantile purulent ophthalmia to which I must beg your attention, and this may happen in a great variety of ways. An ulcer may occur from the direct ulcerative absorption to which the morbid state of the eye, and particularly of the conjunctiva, has given rise; and if this process commence within its layers it may be followed by secretion from the ulcerated surface, forming a pustule, or an abscess, within the cornea; or it may take place from the pressure of the deposition between its

lamellæ. You will distinguish the primitive from the consecutive ulcer of the cornea, and you will be aware that it (the ulcer) may either be situated externally, as a minute cup or depression—within its substance, giving rise either to onyx, the formation of a pustule, or an abscess—or internally, having previously discharged the fluids secreted from its surface into the anterior chamber, when the serous lining of the cornea gave way, or, if otherwise, commencing on the neural surface of the cornea, and extending through its more external lamellæ. The ulceration may also exist throughout the whole of its layers, and there may be an external aperture communicating with the anterior chamber. *Gangrene, or mortification of the cornea,* is also another consequence of purulent ophthalmia. This process may occupy the whole or merely a part of its circle, its superficial lamellæ, or its whole series of laminæ. It is caused either by its participation in the inflammatory action of neighbouring parts, or by direct interruption to its circulation. Its low grade of organization prevents it from successfully resisting much excitement. We shall speak of these things more particularly when considering the diseases of the cornea.—*Suppuration of the globe* is also another occasional consequence of purulent ophthalmia, although it has been denied by Mr. Saunders on what I consider to be very insufficient grounds.—*Staphyloma:* When from any cause the outer tunics of the eye have become so far weakened that they can no longer oppose that resistance to the pressure of the contents of the globe which is required to prevent their increase, they yield, and form an external tumor of a certain figure, colour, and size, and occasion not merely great deformity, but in some cases, where the tumor is very partial and prominent, they cause so much irritation and uneasiness as to justify the performance of an operation for its removal. This yielding, which constitutes staphyloma, generally occurs in the cornea, after its texture has been weakened and attenuated by ulceration and superficial gangrene. I have once or twice seen *hydrophthalmia* follow this purulent inflammation of the eye; that is, an enlargement of the globe of the eye, from an increase of its fluid contents: but this is by no means a frequent occurrence.

There are a number of other changes, the ordinary effects of infantile purulent ophthalmia, which shall be more particularly investigated when considering them as distinct diseases at a subsequent part of this course.

Causes.—You will generally find that although the mothers of children who are afflicted with purulent ophthalmia soon after birth have some morbid vaginal discharge, yet there are some defects in the children themselves, or in the management of them, which appears to have no trifling share in predisposing them to become so affected, or in aggravating the symptoms when the disease takes place. The appearance of the disease a few days after birth would in itself lead you to suspect that the infant became exposed to the influence of contagion during its passage through the vagina, productive of the malady; and the nature of the disease, combined with the profuseness and the quality of the discharge with which it is attended, would augment your conviction of the accuracy of that opinion. There is no other agent connected with the peculiar circumstances of that period of infantile existence which would exert so partial (I speak in reference to the numbers attacked) an influence. For instance, all infants are subject to the same change of residence, exposure to light, and to cold, and so on, although only a small portion, it is presumed, are destined to pass, in their exit from the uterus, through a canal moistened with morbid secretions. However, this is a subject you will carefully examine for yourselves; but let me advise you, until you have satisfied your minds upon the question, to guard the infant as much as possible from the hazard of contagion, in those cases in which you have reason to suspect the parent is affected with morbid vaginal discharge, not only by defending the eyes of the infant during the birth, but by directing that they be most carefully cleansed with warm milk and water immediately afterwards, and also by requesting the nurse, or some female attendant, to give you the earliest notice of any evidence of redness or inflammation of those parts. By these means you will, I am persuaded, in the majority of instances, prevent its occurrence; and in those cases in which you are not so fortunate as entirely to prevent its occurrence, you will render it comparatively mild, by preventing the contagious matter from exerting so complete and prolonged an influence as it otherwise would do; and, by obtaining an opportunity of seeing the disease at its onset, you will meet it with success, by meeting it with promptitude.

In stating to you my conviction that this disease is produced by the contact of morbid vaginal secretions, I ought to apprise you that the accuracy of this opinion is not universally admitted. Mr. Saunders, for instance, considered the inflammation to be of an erysipelatous character, and has not at all alluded to the agency of contagion in any part of his remarks.

Now, morbid vaginal secretions vary in their nature; some, as you know, are gonorrhœal, some are gleety, and very many

others are rather indefinitely called leucorrhœal: in short, they are very various, and you would perhaps expect that if the opinion I have been endeavouring to maintain were correct, there would be a particular condition of the eye, leading to a particular quality of discharge, and distinctly referrible to each particular kind of vaginal secretion. If, indeed, this could be in all cases accurately accomplished, it would constitute a perfection of knowledge with regard to this disease which does not exist in other departments of pathology. Although there is some slight variation in the colour, consistence, and quantity of the discharge in these cases, there does not exist any variation in these particulars which the constitutional condition of the infant, the severity of the inflammation, and other similar circumstances, will not, in most instances, satisfactorily explain; besides, it must be remembered that the mucous membrane of the eye does not produce a great variety of secretions, although it readily gives rise to puriform secretion from many causes of a dissimilar nature: the application of cold, of the discharge from an eye affected with common purulent or gonorrhœal ophthalmia, and sometimes even local injury, when exciting acute conjunctivitis, will each of them occasionally produce an inflammation of the conjunctiva, attended with purulent secretion. If, then, causes of so dissimilar a nature may give rise to effects so identical in their characters that they cannot be discriminated from each other, it would be absurd to expect that every slight variety of vaginal secretion, which may be merely distinguished from each other by some trivial shade of difference, should, when applied to the mucous surface of the eye of an infant, produce an inflammation attended with a secretion possessing characters which accurately correspond with those of the discharge whence they originated.

Infantile purulent ophthalmia more frequently attacks the progeny of the poor than the offspring of those in better circumstances; it is more common in premature children and twins, and is most obnoxious to those who are weak and delicate in constitution; it is also observed to be very prevalent in Foundling institutions —those, I mean, that receive infants deserted by their parents immediately after birth; whence I infer, that delicacy of constitution, want of cleanliness, defective nursing, and a vitiated and unwholesome atmosphere, are powerfully predisposing causes.

Prognosis.—This will depend on the state of the eye at the time you are first requested to see it. If the disease be in its incipient stage, your treatment will be almost invariably successful, so that you may generally pronounce, with more than ordinary confidence, a most favourable opinion: no disease to which the eye is subject, which assumes in the first instance so formidable an aspect, is in my opinion so readily controlled by treatment; but if it has been going on for some time—if the discharge be very abundant, and of a deep yellow colour—and if, at the same time, the swelling of the lids and chemosis be considerable, your prognosis would be doubtful, from a knowledge of the unfortunate termination of the disease generally in such cases, and you would deem it the more necessary to be guarded, inasmuch as you cannot obtain, in many instances, a satisfactory view of the cornea. Should the disease have been allowed to continue without any treatment, or, what is perhaps worse, without the employment of judicious treatment—should the discharge have become thin and sanious, the swelling have subsided, and the pain declined, and should the cornea have assumed a dull ashy appearance, or be extensively ulcerated, or the seat of much interlamellar deposition—your opinion of the termination of the case would be still more unfavourable: you would not, however, say positively that no sight would be saved; for, even when ulceration and gangrene have commenced, their progress has been arrested by well-directed treatment, and, in some instances, very large opacities have been gradually removed, so that the patient, who was originally quite blind from this cause, has been in the course of time able to see tolerably well. Having in mind these facts, and knowing that your reputation might suffer in the estimation of your patient, if the event should belie your positively expressed opinion, it would be adviseable to be guardedly cautious in your mode of communicating your apprehensions of the result. A collapsed state of the eye-ball, decided staphyloma, or a disorganized condition of the cornea, would justify you in asserting the inevitability of permanent blindness, by which I mean, in the present instance, the destruction of all useful vision. You will rarely, if ever, suffer in the estimation of your patients by expressing yourself cautiously, whilst, by being unnecessarily positive, you will, when mistaken, frequently forfeit their confidence. There are some conditions of the eye resulting from the disease in question, which, although they ensure temporary blindness, may, in the course of time, be either partially or wholly removed; among these obstacles to vision the closed pupil and opaque cornea are the most frequent.

Sometimes an infant affected with purulent ophthalmia is jaundiced. In such case, the skin, and the secretion from the eye, will be of a yellow or a greenish tint. These cases are generally more unfavour-

able than others in which this malady is absent. Certainly such cases are less manageable, more tedious in duration, and more unfavourable in their termination, *cæteris paribus*, than those in which no such mischief exists.

Mr. Ware has supposed that the purulent ophthalmia of infants might arise from cold, and has observed it to be connected with a scrofulous constitution. But neither of these observations have been verified by the experience of succeeding writers.

Treatment.—There are some cases so slight that the application of an astringent lotion, and the administration of a small quantity of magnesia, will be quite sufficient for their cure; but, generally speaking, treatment of a more active nature will be required: much, however, will depend on the stage of the disease at the time it first becomes an object of medical treatment. If you are called to a case of this kind at an early period, you will find the employment of a solution of alum, with a little magnesia, so as to relax the bowels slightly, sufficient for the cure. You will direct the nurse to procure a well made ivory or pewter syringe, (the point must not be very sharp) and to inject every half hour, or more frequently if necessary, a little warm milk and water beneath the lids, taking care to place the extremity of the syringe at the outer angle of the eye, and to pass it for a short distance almost parallel with the surface of that organ; not very obliquely, as though it were intended to pierce the eye-ball, for in that case either the eye will be bruised or the point of the syringe closed by the conjunctiva. Having thus cleared away the abundant secretion, and as a necessary consequence relieved the lids from that tension, and the eye-ball from that pressure they would otherwise experience, you will proceed to inject a weak solution of the sulphate of zinc, or, what is perhaps better, a little alum lotion (about three grains of alum dissolved in an ounce of distilled water) every second hour, always premising the ablution of the eye, as just directed, in order to ensure the efficient action of the more important application; and it would materially contribute to the infant's comfort if you would direct the nurse to apply a little fresh-butter or sweet-oil, or a little of the ung. plumbi, or the spermaceti ointment, along the tarsal margins, whenever the child is about to sleep, to prevent the agglutination of the lids, which is apt to take place whenever the discharge is permitted to be undisturbed for a longer time than usual. The adoption of this precaution will render unnecessary that tedious bathing of the palpebræ, or that forcible separation of the lids, which will otherwise be required, as well as prevent the occurrence of those evil consequences to the eye and to the lids so generally resulting from an accumulation of purulent secretion beneath them. You will further direct the administration of a dose of magnesia, or, if the child be jaundiced, a few grains of the hydrargyrus cum creta, to preserve the intestinal canal in a slightly relaxed and healthy state.

The disease may be so severe, the swelling of the lids and chemosis so considerable, and the discharge so profuse, and indicative of so acute a degree of inflammation, that you would not rest content with this simple treatment, but at once direct the application of a leech, either to the root of the nose, or according to the degree of existing symptoms, and the kind of patient you have to treat, one upon the upper lid of each eye; and knowing the extremely vascular state of the lids under such circumstances, you would be careful to direct the closure of the bleeding orifice immediately on the falling off of the leech or leeches; and if necessary, from a pallid state of the infant, or any decided symptoms of feebleness from loss of blood, you would not omit to charge the nurse to remove it or them before they voluntarily quit their hold.

If the eyelids are much swollen, and of a dark colour, from an obstructed circulation, if any vessel be particularly large, distinct, and prominent, you may open it with a lancet, and encourage the bleeding by applying warm water; and you may sometimes in this way obtain all the blood it may be desirable to remove without producing that swelling and ecchymosis which so frequently follow the application of leeches.

However, you may not see the case until the last set of symptoms has commenced, when the cornea has become extensively ulcerated or gangrened, the chemosis diminished, and the conjunctiva loose, flabby, and comparatively pale; for such a state of things it would be right to employ a solution of the nitrate of silver. Let two or more grains of the nitrate of silver be dissolved in an ounce of distilled water, and let a small quantity of this solution be dropped into each eye two or three times a-day, and let the eyes be frequently bathed with the zinc lotion. In this way you may arrest the progress of ulceration, or limit the extent of gangrene; and if you cannot restore unimpaired vision, you may materially lessen the amount of mischief which would otherwise occur, and most probably prevent altogether, and certainly limit, the magnitude of staphyloma. Should suppuration of the eye-ball take place, its treatment would be conducted according to the rules

previously mentioned for the management of that severe form of disease. Do not permit the little patient to become exhausted with suffering, from a neglect to puncture the cornea and discharge the contents of the eye-ball.

I cannot dismiss this subject without alluding to the harsh applications so strongly recommended by Dr. Veteh;—I particularly refer to the local employment of the undiluted liquor plumbi acetatis; because I am anxious to prevent those of you who, from reading his book, might be disposed to place an undue dependence on that remedy, from employing it until at least more certain and tried measures have been adopted; and this caution I believe to be more especially necessary, because there is at the present time an extraordinary partiality for the early employment of stimulants in acute inflammation of the eye. We will not undervalue stimulants, but we would wish them to be used at a proper time. Let the acute stage pass by, let the secretion become diminished, and the tense florid state of the conjunctiva be exchanged for a comparatively pale, flabby appearance of that membrane, and then either the undiluted liquor plumbi acetatis, or the strong nitrate of silver ointment, may be advantageously employed. The ung. argenti nitratis, advised by Mr. Guthrie, is an excellent means of quickening the cure after the acute symptoms have been diminished by bleeding, the administration of laxatives, and the application of cooling and astringent lotions. But notwithstanding the strong recommendation this remedy has received from so excellent an authority, I cannot coincide with him in admitting the propriety of its use at the *earliest* stage of the purulent ophthalmia of infants.

ON THE EMPLOYMENT OF THE LANCETTED STILETTE IN STRICTURE.

To the Editor of the Medical Gazette.

SIR,

HAVING read, in the Medical Gazette for December 29, a clinical lecture, by Sir Charles Bell, on Diseases of the Urethra and Neck of the Bladder, wherein he mentions two cases of piercing the stricture which occurred in my practice about three years ago, and from which, as he states, evil consequences resulted; I beg, through the medium of your valuable journal, to make a few observations on them myself, whereby I hope to prove no such consequences ensued from any operation I performed; that in the one the mischief which took place arose from a stricture which was *not* perforated, and in the other from the patient's own neglect.

On referring to your Gazette it will be seen, that the first case related by Sir Charles Bell is reported in the following manner:

"As far back as 22 years ago, he was seized with retention of urine, for which an instrument had to be introduced. Three years after this he underwent a course of treatment by the bougie for a very narrow stricture, and was cured. He remained free from any complaint till three years ago, when he was attacked with a difficulty in voiding his urine. This progressively got worse; he was obliged to leave his situation as a groom in a family, and he applied for relief at a neighbouring dispensary. At this time, he states, he could scarcely pass a drop of water. Upon his being admitted into the dispensary, the surgeon introduced an instrument into the urethra, which had an apparatus within it for cutting through the stricture; and, to use the patient's expression, upon "shooting this," *the instrument was admitted into the bladder, and the urine drawn off.* A bougie was subsequently introduced regularly into the urethra, and he was completely relieved, passing his water with perfect freedom. Three weeks from the time of the operation, he observed a small swelling commencing in the perineum, at the place where the stricture had been situated. This gave him great pain; and in process of time it burst. He soon found that the urine, when discharging it, came partly by this abscess, and partly by the natural passage. From this time various other abscesses formed in the perineum, from all which the urine dribbled. Upon examining the urethra, he is found to have a stricture situated *near the bulb*, through which it is impossible to pass the smallest sized catheter or bougie. The perineum is knotted, irregular, and undermined with fistulous openings, fungous growths, and sinuses; these extend even as far back as the tuberosity of the ischium."

The second case is thus reported:—

"For several weeks a patient, J. Hinckley, lay in the bed opposite to Shannon, having suffered the same operation of piercing the stricture of the urethra. He stated, that he had been

subject to stricture for four years. Two years ago he applied at the same dispensary in which Shannon had been admitted, and an instrument which cut the urethra from the inside was employed to divide the stricture. Two months after this operation, his difficulty of making water was as great as before. Since that time he had applied to various surgeons for relief, and has had a succession of bougies, of different sizes, passed before his admission in this hospital. At present he is suffering from a large prolapsus of the rectum, for which an operation has been performed. He makes water in a very fine stream; and, while straining to pass it, he has excruciating pain from the descent of the gut."

Both of these cases are published by myself, in a work entitled "A Series of Observations on Strictures of the Urethra," &c.*; and by the account I give of the first it will be seen that Shannon had two strictures—one situated four inches from the orifice, the other in the membranous portion of the urethra immediately behind the bulb. At the time he came under my care he laboured under retention of urine, which had resisted all the usual remedies employed in such cases, until, twenty-six hours having elapsed, he was relieved by the tube of a syringe being passed down to the stricture while he forced the urine to that part, and in this manner it was drawn off. The stricture which I divided was the one *four inches* from the orifice, not the one in the *membranous portion*. My words are,—"On the following day I introduced the single lancetted stilette, and perforated the obstruction. I could not, however, pass a bougie completely into the bladder, as *another stricture* was present in the *membranous portion of the urethra*." I then go on to state,—"In four or five days he began to make water in a tolerably sized stream. Bougies were now passed for him twice in the week; but as he suffered greatly from their introduction, and as the stream of urine improved in size so much as to be nearly as large as natural, I discontinued their use." At this time he ceased to be under my care.

On reading the two statements, that of Sir Charles Bell now, and mine of three years ago, it will be seen how widely they differ, and what little reliance we ought to place upon any account given of disease by an ignorant patient. The courtesy of a communication with me would have insured accuracy. In the first place, when Shannon was under my care there were two strictures; the anterior I divided, leaving the posterior one undivided: in the second, a catheter never was passed into the bladder, for it was impracticable, on account of the obstruction in the membranous portion: and in the third, the stricture which has given rise to the present mischief, even according to Sir Charles Bell's own showing, "is situated near to the bulb," which is about *six inches* from the orifice where *I did not* divide, and not *four* where the *perforation took place*.

With all due respect for Sir Charles Bell's opinion, the fact is, that the origin of the abscesses and fistulous passages now existing is owing to inflammation and ulceration having taken place behind the *undivided stricture*, and thus the urine, having made its escape, has produced the injury. Even their situation leads to such a conclusion; for had the extravasation taken place where the incision was made in the urethra, they would have most probably formed in or immediately behind the scrotum: as it is, they have made their appearance exactly at that point which is usual when the obstruction occurs at or about the bulb. I am strengthened in this opinion, because I have myself frequently examined Shannon since I operated upon him, and have invariably found the passage to be completely free down to the second stricture. It is true that about three months after I operated upon him he informed me that an abscess had formed in the perineum; but at that time it was perfectly healed up, so that I could not determine from whence it arose. He has occasionally applied to me since that period down almost to the present time, and no stricture, abscesses, or fistulous passages, have been present where I divided. I have also met him now and then in the street, but he never, to my recollection, complained. The last time I saw him, only a few months back, he was driving a carriage, which renders it highly improbable he could have had much the matter with him at that time.

With regard to the second case, that of Hinckley, the same errors occur in reporting it. Instead of having had a stricture only "four years," according to

* In the Appendix, p. 11 and 21.

my account, which was written three years ago, he had had the disease "ten years," (making now thirteen,) "and at that period he underwent a course of bougies with partial relief. "About two years from the present time (in 1829) the obstruction returned, and he applied to a surgeon, who found it was impermeable by a bougie." These are my words. I operated upon this man for an impermeable stricture, situated in the membranous portion of the urethra, which had resisted all other means. When I could introduce a No. 13 catheter into the bladder, I allowed him to go about his business, on condition that he would attend upon me twice a-week, to have a bougie passed, to complete the cure. This he did not do; and therefore it cannot be expected that I should be answerable for the result of his case. The symptoms, however, which he is now suffering from, cannot, I think, reasonably be attributed to the operation, but to those commonly attendant on neglected disease. I abstain from noticing other inaccuracies; and independently of what I have said, it may be observed, with respect to both cases, that the time which has elapsed since the operations were performed, the habits of life amongst the lower classes, carelessness, inattention, excess, or improper treatment, will each afford sufficient reason for whatever disease may now exist.

Having so far explained and vindicated the treatment, I now have to remark, that I perfectly coincide with Sir Charles Bell in opinion as to the non-employment of these instruments by the profession generally. In inexperienced hands, and where the individual is not in the constant habit of passing instruments into the urethra, much mischief might ensue. On the other hand, I do not scruple saying, from the experience I have had of them, that when employed by those who are thoroughly acquainted with the anatomy of the urethra, and who would proceed with the greatest caution and care, they are invaluable, and, by their use, would prevent more serious and dangerous operations. I have now had no less than forty or fifty cases, some of which were of the most aggravated description, and in not one instance to my knowledge, (excepting in Shannon's, if I have not, however, shewn to the contrary,) has the operation ever failed of complete success. In no case has there been extravasation of urine, abscesses, or false passages made; and in most, where the stricture has been impermeable, the patients have felt so little, that they have preferred the cutting to any attempt by the common bougie.

In proof of what I have just stated, I intend shortly to publish a series of cases, known to some of the highest members of the profession, which, should they fail to convince a gentleman of Sir Charles Bell's scientific attainments, will, I think, satisfy the profession at large of the necessity and utility of my instrument.

I have the honour to be, SIR,
Your obedient servant,
R. A. STAFFORD.

28, Old Burlington Street,
Jan. 8, 1833.

ADDITIONAL REMARKS

TENDING TO CONFIRM THE IDENTITY OF

CHOLERA WITH THE GRIPES OF HORSES.

BY BRACY CLARK, F.L.S.

And Member of the French Institute.

To the Editor of the Medical Gazette.

SIR,

IN my former communication I have shewn, from observations made more than thirty years ago, that the atmospheric influence was alone sufficient for the production of this fatal disorder in the horse, and that a loaded stomach, especially of food not readily digestible, or from its having been ill chewed or too hastily eaten, or even without these attentions, would, if a chilling atmosphere prevailed, and especially if accompanied with draughts of air, or of dampness or rain, become fully adequate to the production of it.

And we now learn, from the accurate observations of certain French writers, that such causes or agents were actively present on the occasion of the cholera first breaking out in Paris. These relate, that for many days previous to its appearance, the heat or temperature of the atmosphere about the middle of the day was considerably greater than what usually attended that season of the year; but that during the evenings, the nights, and mornings, there prevailed a strong

chilling wind, blowing *from the north-east*, which, after continuing some time, shifted suddenly to the north-west (which, in all probability, brought relaxing vapours and dampness in abundance); and immediately upon this change did the cholera commence its ravages in the most formidable way in the metropolis, carrying off many thousands in the course of a week. (See Gendrin, *Monographie du Cholera Morbus*; also Bouillaud, *Traité Pratique du Cholera Morbus.*

So that, perhaps, here is exposed all the machinery necessary for the perfect production of so terrible a visitation; but whether any other cause were superadded that our analytical knowledge and means do not extend to, is only known to him who can say—

"———— Necessity or chance
Approach not me, and what I will is fate."—
Milton, lib. vii.

We shall now again advert to the proposition recommended in the former communication, as to the administration of salts in the diarrhœa or purging which at times precedes the access of this disorder. It would perhaps appear to some a strange anomaly of prescription to give salts to one already labouring under a diarrhœa. Their efficacy, however, I can from much experience speak of, in respect to horses, in arresting a super-purgation, *(see Pharmacopœia Equina, 2d Edit. p. 29)* and there are practitioners who have confirmed the fact of their utility in this way in the human.

It may appear unnecessary or presumptuous in me to attempt an explanation of their operation, or I should be induced to observe that they can operate in three ways in producing so favourable a result: 1st, by inducing a new and different action to the one already going on in the stomach and intestines; 2dly, by the alkaline properties of the salts themselves, in correcting any acescent or acrimonious quality in the fluid contents of these organs; and, finally, and perhaps most efficiently of all, by causing a flow of healthy bile into the intestines, where there had previously been a deficient quantity, or a total suppression of that very necessary stimulant to due intestinal performance.

And now in respect to the case of cholera which we have before related, we may just advert to it again, to state that had it not yielded to the combined effects of the hot water, hot ginger-tea, hot bed, hot gin and water, we should without much remission have pursued our course by still stronger measures—by the use of brandy and water, and by the *gripe tincture*, which is made of brandy, or proof spirit, and aromatics or spices for its actual composition, (see the above treatise on Gripes of Horses, Ed. 1816, p. 10.)

I may just state, also, that some of the readers of my former communication have demanded farther proof of food not digested assuming poisonous qualities. In reply to this demand, I have noticed to them the effects which shell-fish sometimes produce. The most notorious of these is the muscle, which, eaten hastily, or without the priming of some stimulating agent, as pepper, salt, or vinegar, or eaten in too great quantity, will refuse digestion, and all the phenomena of poisoning be exhibited; so much so, that those called in to the case have often declared that it was a true case of poisoning, and by copper, and that these animals must have lain upon or eaten copper, and as coming from some copper vessel that had been stranded! So that to fulfil this theory of poisoning by copper these innocent animals must have committed suicide; and perhaps it might here be added, in order to be revenged on those who should so unmercifully devour them; for there is no doubt they possess too delicate a discrimination in taking food to take copper, and not know it; and therefore must have had some strong motive for so extraordinary an act. The case will serve to illustrate our position, and strongly to confirm it.

This fact, also, of food becoming poisonous, as we stated formerly in the preceding part of this memoir, explains also the reason of the outcry in Paris, at the first appearance of the epidemic, that the doctors had poisoned their patients; and the public venders of wines were also accused of putting poison into their liquors, which accusation had nearly been fatal to several of them; indeed, the outcry against them was at that time most furious, and it was a considerable time also before it subsided, for I happened at that time to be upon the continent, and saw these terrific accounts in the Paris papers. It is not, however, every kind of food that does this.

In respect to the whitish or grey fæcula, compared to rice-water, observable often floating in the liquids of the intestines in this disease, should we not conjecture that such was perhaps the effect of an imperfect attempt at forming chyle in degree decomposed and coagulated by the morbid arterial distillations or effusions into the intestines, and which the constricted and paralyzed condition of the alimentary canal did not admit of being absorbed in the usual manner by the lacteals? or it may be a curdling or decomposition of these very arterial effusions. And does not the general colour of these fluids in the intestines sufficiently exhibit the non-presence of bile, and demonstrate the deficiency of this secretion? But after which, in supposing a redundance, the complaint has been falsely named. Sometimes, however, regurgitations of pent-up bile in the gall-bladder, thrown by compression, spasm, or otherwise, into the intestines, might vary or disturb this general and usual appearance, but should not be allowed to deceive us, as the contrary appearance was found to be the most usual on dissection after death.

Taunton-Place, Regent's-Park,
January 7th, 1832.

CHRONIC BUBO.

To the Editor of the Medical Gazette.

Sir,

In answer to your correspondent, signed Medico-Chirurgicus, in the Gazette of January 5th, I beg to offer him the following observations. I have met with numberless cases of those chronic tumors during my practice in the West Indies; indeed, it is a common complaint among the negro population. They do not necessarily accompany an attack of gonorrhœa; I have seen them occurring weeks after all discharge has subsided; I have also observed tumors, some of years standing, where the patient could not have been subjected to gonorrhœa, and which had all the outward appearances of a sympathetic bubo. With regard to the treatment, mercury I found to do harm; the tumors have become painful, and increased in size under its use. From setons and issues I have met with no better result; with regard to iodine, whether internally given, or used in the form of ointment, it was found equally unsuccessful. I then resorted to pressure, and the most beneficial effects accrued from its use. Many of the tumors, in a week after its application, were reduced one half of their former size. I applied it in the following simple mode, which does not prevent the patient from moving about. Let the tumor be smeared over with pitch; a piece of sheet lead, covered with soft leather, of sufficient size to embrace the tumor, is then applied; the whole of which is covered by a strip or two of emp. adhes. A few turns of a bandage over it, which is brought up and fastened round the body, is all that is required; and I think your correspondent will be satisfied with the result. Those tumors which are situated in the groin require some nicety in the adaptation of the bandage, to ensure a uniform pressure, which need be but slight to produce the result.

I remain, sir,
Your most obedient servant,
A Constant Reader.

January 9th, 1833.

P.S.—Has your correspondent observed these chronic tumors in the most dissolute, and in individuals who, from the nature of their occupation, are exposed to the vicissitudes of the weather?

To the Editor of the Medical Gazette.

Sir,

I beg leave to inform your correspondent Medico-Chirurgicus that I have for years used pressure to the chronic bubo with great success.

If the surface of the skin, over the swelling, be inflamed or irritable, I generally apply a compress of fine linen rag upon the tumor, and desire it to be kept constantly moistened with spirit of wine and water, and then I confine it with a common roller, regulating the pressure by circumstances, but always observing that the greater the pressure is, the more speedy is the cure.

If the skin be healthy, a plain bit of soap plaister may be put on, to protect the part from friction, and above this a compress of any kind, without which it is difficult to apply pressure by a roller in any degree on these parts. I feel quite confident that your correspondent's

success will justify my recommendation.

My experience in all classes of glandular diseases induces me most strongly to condemn the employment of mercurial remedies. I do not, of course, include under this sweeping clause the diseases of the viscera.—I am, sir,

Your obedient servant,

I. M. Y.

To the Editor of the Medical Gazette.

H. M. Ship Excellent,
Portsmouth, Jan. 11th, 1832.

Sir,

In such cases as those mentioned by your correspondent, in No. 266 of your publication, and in all others dependent on effusion of fibrine into the cellular texture, whether accompanied by external openings or not, I have recourse to the following simple plan. As soon as the usual active measures have reduced acute inflammatory action, I apply a blister rather larger than the indurated part, remove the cuticle, and cover the denuded surface with strong blistering *ointment*; the dressing is repeated until smart inflammation result, when a bread and milk poultice, alternated with the same kind of dressing, rendered milder or stronger according to circumstances, is made use of until copious suppuration be produced. The whole process occupies from six to fourteen days, and the tumor will, in most cases, be found to have subsided by the time that the discharging surface has healed. I may remark that the effects of this mode will be in pretty close relation to the speediness and quantity of the discharge, which ought always to possess the external characters of pus. It has always occurred to me to find the inflammation produced by the irritant quite manageable by emollients; but perhaps in private practice the habits, &c. of some patients may demand more discrimination on the part of the surgeon than I have found it necessary to use among robust and healthy sailors.

I am, sir,

Your obedient humble servant,

G. E. F.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Illustrations of the Elementary Forms of Diseases, by Robert Carswell, M.D. London, 1833.

Fasciculus First:—Tubercle.

We begin to experience the "*embarras de richesse*." It is but a fortnight since we reviewed the first portion of a work, with plates, on morbid anatomy, and already another claims our notice. We have long heard of the labours of Dr. Carswell, and, if we mistake not, some of his drawings were exhibited, at least ten years ago, by Dr. John Thomson, of Edinburgh, in illustration of his lectures. However this may be, rumour has been busy; and, what is very unusual with that dame, she does not seem to have embellished in her whisperings.

It would appear from the "prospectus," that Dr. Carswell intends to publish "Elements of Pathological Anatomy," of which the present work only constitutes the "pictorial illustrations;" and while we shall therefore reserve our fuller and more deliberate examination of his views until they are presented to us in their complete and systematic development, we shall meantime observe, that the specimen before us gives favourable promise of that which is to follow. And, first, we would express our approbation of the plan. We have many, and some of them very valuable works, on morbid anatomy; but a system connected with well-executed plates is still a desideratum. It is not enough to appeal to the mind in description, however faithful. In a subject like this we must address the eye; and herein both the works now in progress are entitled to commendation. But it is quite apparent from the first fasciculus, that though Dr. Carswell's "Elements of Pathological Anatomy" may render the system more full, extended, and detailed, yet that the "Illustrations" will not be dependent upon any thing which is to come for their individual completeness and integrity. The method adopted is this. Instead of bringing either all the diseased changes of any given organ, (as the brain, for instance,) or of any tissue, (as the mucous,) successively under notice,—one or other of which plans, so far as our knowledge extends, has always been pursued,—Dr. Carswell takes one particular morbid formation, and, considering it as the

individual, displays it as such under all its different circumstances and modifications, as to origin, development, maturity, and decline, and as to the situation, organ, and tissue, in which it presents itself. This is intended to give definite and correct ideas of the elementary or primary forms of morbid structures, and the plan at once strikes the mind as philosophical. Now, as to its execution. On this point we shall endeavour, as far as possible, to enable the reader to form a correct opinion.

The only part which has yet appeared treats of "Tubercle," and consists of fourteen pages of letter-press, in royal quarto, and four coloured plates of the same size. Eight pages are devoted to a succinct account of Tubercle, and constitute a brief but comprehensive essay on the subject. We shall follow the author through it.

The term "Tubercle," we are informed, is employed to designate a peculiar morbid growth, presenting itself as a small, roundish, opaque, yellowish, cheesy body, and occurring in a variety of different organs. Laennec's opinions are mentioned; namely, that it is at first "a fine grey, somewhat transparent substance," which afterwards loses its primitive consistence, and becomes softened by some inherent process beginning in its centre. The dissent from this position of other eminent pathologists is then put in, and that of Andral especially detailed, who denies that the grey semitransparent corpuscule of Laennec and Louis does truly constitute the first stage of tubercle, or that the softening necessarily commences in the centre. He (Andral) holds the tubercle to be without any trace of organization, and that it becomes softened not by any process dependent upon itself, but by its admixture with pus formed by the surrounding textures which are irritated by its presence. We then have Dr. Carswell's definition of tubercle, thus: "Tubercular matter is a pale yellow, or yellowish grey, opaque, unorganized substance, the form, consistence, and composition of which vary with the nature of the part in which it is found, and the period at which it is examined." In order to illustrate the latter circumstances, he next proceeds to consider the seat of tuberculous matter, and maintains this to be chiefly the mucous, not the cellular tissue, as generally supposed. Next comes the serous, then the cellular tissues; after which follow the lacteals and lymphatics, and their glands: then follow the brain and cerebellum, accidental cellular, and "the blood."

Such is the order in which the illustrations are given; but except as regards the first, viz. the greater frequency of tubercle in mucous than in other textures, we do not know that the order of enumeration is intended strictly to depict the relative frequency of locality. The form of tubercle is generally rounded, but the configuration is stated to depend wholly on accidental circumstances unconnected with the mere growth itself. As to its consistence, this does not attain its maximum of density till an indefinite period after its formation. It may resemble "soft cheese and water, both in consistence and colour;" at other times it is as firm "as liver or parmesan," and these differences depend, at least in the first instance, upon the degree of resistance offered to its accumulation; afterwards, however, the consistence, especially when it becomes very firm, is partly attributable to the re-absorption of its pure fluid ingredients. It is only in particular structures that the grey semitransparent substance alluded to is found to precede the appearance of tubercle; it is chiefly met with in the air-cells and on the free surfaces of serous membranes, particularly the peritoneum.

The composition of tubercle differs at different periods of development, in different animals, and in different organs; but in man is chiefly composed of albumen, with various proportions of gelatine and fibrine: but these being destitute of organization are dependent on external agents for any change they may undergo, and such change usually commences at the circumference. It is to the membranous cysts which form around them, that Dr. Carswell attributes the theory of their hydatid origin—"a theory which, if not founded in error, must obviously be regarded as extremely limited in its application."

The farther progress of the tubercles is traced in their destructive changes; but we prefer, as more interesting, to refer to the terminations which lead to their removal or quiescence. Dr. Carswell regards scrofulous glandular swellings, not as modifications of inflammation, but of tuberculous action; and, therefore, when such enlargements disappear, he infers that we have witnessed the cure of a tubercular disease. The same thing occasionally takes place in tabes mesenterica and in phthi-

sis. Now, in these instances, he regards one principal mode of cure as dependent upon the removal of the fibrinous and albuminous constituents of the tubercle, and the concentration of the earthy salts; in corroboration of which, he refers to several cases of recovery from those diseases, in which the patient having afterwards died of some other illness, he found the remains of the tuberculous matter, in the form of masses resembling a mixture of chalk and putty. In particular instances, as when they communicate with the air-tubes, the tubercles, in one form or other, may be evacuated, and then the accidental tissue lining the cavity they have occupied plays an important part; being at first mucous, but becoming necessarily, and under different circumstances, converted into serous, fibrous, cartilaginous, and even bony textures: of these, the fibrous is the most common, and it contracts, carrying with it the pulmonary tissue with which it is in contact, and producing a puckering at the seat of the former tuberculation.

Such is an outline of the circumstances under which tubercle is considered by Dr. Carswell in the work before us. Its various relations, as to the causes which produce it, the symptoms to which, when produced, it gives rise, and all the other phenomena of theoretical or practical interest to the physician, our author purposes to consider in his future "Elements." But should these never come, a most important contribution to science will have been made so soon as the illustrations only are completed on such a plan, and executed in the same manner, as that before us. Of drawings, no satisfactory idea can be given by a reviewer; he may say they are good or bad—and that is nearly all. Those before us well illustrate the views above detailed, considered as pathological doctrines, and please the eye as specimens of art. They are coloured lithographs, and, we should think, as well executed as engravings on stone can be. They are, as we have said, on royal quarto paper.

A word as to the engravings. The style in which they are executed, considering the price, is wonderful; but as we are "nothing, if not critical," we must also point out what we disapprove, or at least the accuracy of which we question. Fig. 1. of Plate I. represents tubercular disease in the lungs, but in a form in which we confess we have never seen it. It is possible that a very elaborate dissection, so performed as, by the removal of the adjacent parts, to lay bare certain air-tubes, and to display them laterally instead of transversely—we say it is possible that the arborescent appearance here delineated may thus be exhibited; but we are quite sure that no ordinary manipulation will produce any thing like the appearance here represented. We certainly should have been better pleased had we seen a good delineation of the appearance which is so familiar to us, either on a simple section from without, of a tuberculated lung, or on following a large bronchus into the lung and ripping it up. We are not perfectly satisfied that the disease from the cow (fig. 4. in the same plate) is tubercle; in appearance, it is totally different. What are Dr. Carswell's grounds for likening it to phthisis in the human subject?

We had ventured on some criticisms of other individual plates, but on second thought we omit them, fearing to be deemed fastidious; for experience has shewn us, that one word expressive of an opinion that any thing might be improved, sometimes outweighs many sentences of unqualified commendation.

We shall follow the work carefully throughout its progress, and we confidently anticipate deriving much gratification and instruction from studying it.

DEATH OF MR. BROOKES.

This gentleman died on the 10th inst. Mr. Brookes was chiefly known as an anatomical teacher; his school in Blenheim-Street having been for many years extremely well attended. He devoted himself almost entirely to the business of a lecturer and to the formation of a museum, which, at the time it was sold (some years ago), had become a splendid and valuable collection.

ABSENCE OF THE PATELLÆ.

There is a patient at present in St. George's Hospital, in whom the patellæ are entirely wanting. The knee looks rather flatter than usual, but no apparent evil results from this anomalous formation, as the man says he can walk many miles a-day without difficulty. The peculiarity is hereditary—neither his grandfather nor father having had patellæ; and it also extends to other members of his family.

MEDICAL GAZETTE.

Saturday, January 19, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MISMANAGEMENT AND DEFECTS OF CERTAIN LIBRARIES.

We have from time to time received letters, some of which we published, regarding points connected with the management of the public libraries most resorted to by medical men residing in the metropolis. That of the College of Surgeons, as the most extensive professional collection, and liberally thrown open to a considerable class of readers, has of course received the largest share of attention. One of our correspondents, in a note now lying before us, complains, as some others have done, of the library being closed in the evenings, when its being open for a few hours would prove so useful, and contribute so much to the gratification of numerous practitioners who are unable to attend at the hours appointed under the present arrangement. He notices the very limited number who at present are to be seen at any time availing themselves of the advantages of the place—its being frequently altogether deserted—and even the librarian sometimes feeling that his presence is not required. The writer goes on to state, that upon first entering this ψυχης ἰατρειον—next to his surprise at the small number of readers, he was astonished at finding that there was no catalogue laid on the table—that he was obliged to apply to the librarian *viva voce* for what he wanted—that upon glancing at the contents of the locked-up cases, he was delighted with the evident value of the collection—and observing that the librarian had a printed catalogue set apart for his own use, he inquired whether there were not others printed? when he was informed that there were, but that they were sold at the charge of seven shillings a copy! This seems to be the burden of what is generally complained of relative to the library of the College of Surgeons. But before we come to proposed remedies, there is another establishment—that great national one, the British Museum—which will deserve to have a short space devoted to a notice of the advantages and deficiencies of its library department.

From the peculiar privileges enjoyed by this place, so favoured by large annual parliamentary grants, the accumulation of various collections, and particularly by the right to a copy "on the best paper" of every work that issues from the press of the United Kingdom, it might be thought that medical readers, frequenting such a library, would have powerful resources at their command. And our friends in the country no doubt think that in this they labour under great disadvantages compared with us Londoners; but whoever calculates upon such appliances and means, and hopes to find here all that is to be desired in the way of literary reference, will find himself often grievously disappointed.

How deficiencies in works published in this country should exist in the Museum library, is, we think, more than can be well accounted for; but that such do exist, is beyond a question: we shall presently give a few examples. No doubt there are here to be found many of the most valuable recent publications; but if the reader's researches lie in a particular line of study, which requires him to examine a complete series of the newest works relating to it, he must be prepared to bear with the absence of many books which in all fairness ought to be forthcoming. As to foreign books, they are most woefully wanting.

Great complaints have been raised against the directors of the Museum for this mismanagement, for by such a term, at the lightest, must their conduct, involving a neglect of duty, be characterized. Many have felt the inconveniences and disappointment resulting from this source, and not a few have grumbled very audibly. Not long ago a learned gentleman, an adept in the natural sciences, and practically conversant with the deficiencies in question, drew up a list, which we have seen, and a few particulars from which (verified also by ourselves) cannot but surprise the reader. In the departments of entomology, ornithology, botany, and zoology, there are it seems numerous lacunæ: for example, in the first, *instar omnium*, that valuable work Stephens's *Illustrations of British Entomology* is wanting; in the second, Jardine's *Illustrations*, Mayer's *Vögeln*, and other leading works; in the third, we need only mention Brogniart on the *Organization of Vegetables*, and Petiver's *Pterigraphia*, and *Concordance of the Grasses;* Goldfuss's work on *Petrifactions*, and Broigniart on *Fossil Vegetables*, with numerous other important productions, are absent in the class of geology. Nor in the department of general natural history do we find that there are to be found in the catalogues Thomson's *Zoological Researches*, nor De Blainville's *Principes d'Anatomie Comparée*. Many of the larger periodicals, containing the transactions of learned societies, are imperfect: volumes are wanting in the sets of the Academie des Sciences de Paris, and the Academies of Berlin, Petersburgh, Turin, &c. The list would be swelled to an enormous magnitude were we to proceed into minor particulars.

But it may be said that these hiatuses do not immediately affect the medical man: this we deny. However, come we to what confessedly does. We look in vain, then, into the catalogues of the British Museum for Cruikshank on the *Absorbents*. We do not find here Swan's *Demonstration of the Nerves of the Human Body;* nor, with the exception of the *Neurologia*, and the tract on club-foot, any work of Scarpa's, either in the original or the French translations. Of Sprengel's *History of Medicine*, we have only the first two volumes in German; and not even the French version to supply the defect. Foderé on legal medicine, and Orfila, and all German, French, and Italian works on the same branch, are not to be had. Jourdan's *Pharmacopèe Universelle*, nay, its English translation, is wanting; a whole host of modern French medical works, and of course a multitude of German ones, are desiderata which every professional reader who visits this great establishment must feel: where, also, there have been several editions published of a standard work, even in our own language, we are generally sure to find only the original—the first, of those editions. We will only add, what can scarcely surprise any one after the preceding enumeration, that the sets of several of the periodicals, as, for example, of the Medical and Physical Journal, and the Edinburgh Medical and Surgical, are grossly imperfect: of the latter, the first ten or twelve volumes are altogether missing.

Some, perhaps, may think that it is not quite reasonable to expect to find in the *British* Museum any of the expensive *foreign* books above-mentioned; that there are not funds for their purchase; and that deficiencies, such as we have pointed out in the branches of medicine and collateral science, do not exist in other departments of knowledge. But this is a mistake: in the first place, it is perfectly reasonable, as it is also consistent with the plan of the establishment, that there should be found there an adequate collection of the best foreign

works; nor are funds wanting for abundance of continental productions, though we do not find what we want among them; and, in short, if we did not fear to carry the present notice to a disproportionate length, we could point out similar examples of deficiency in almost every other branch of learning. Others, we know, would go farther than we do on this occasion, and accuse the conductors of the institution of wanton prodigality: they instance the hundreds of pounds which are spent on pretty shells, and other things which are pleasant to the eye of the fashionable loungers who visit the museum: but we are disposed to stop far short of such a charge, and to express an opinion that the finances of the establishment only seem to us to be dispensed by a penny-wise pound-foolish sort of people—with much more parsimony than wholesome discretion.

The possibility of the continuance of this system of imperfection will, we are happy to suppose, be in a great degree obviated, at least so far as the printed productions of France are concerned, by the projected exchange of the works published in that country for those brought out here; the university of Aberdeen, "for a consideration," giving up its right to an eleventh copy, and the British Museum profiting by the arrangement. But all this is merely prospective, and never can remedy the wants which already exist; that, we need scarcely add, can only be done by a proper committee of inquiry, and a direct allocation of suitable funds.

In closing these brief remarks on the partial misdirection of the management of so noble an institution, we feel bound to subjoin an expression of our unqualified approval of the admirable manner in which the entire of its external arrangements seem to be conducted. Nothing can be more satisfactory than the liberal and easy terms on which admission is granted to the public; nor can the attention which is paid in the reading-rooms to the wants and wishes of every visitor, be surpassed, either in promptitude or civility. The *mode* of attendance in these rooms is excellent, and, so far as we are aware, peculiar. We will describe it, as well for the benefit of distant readers, as because we would hold it up for the imitation of certain parties nearer home. With the exception of a number of works of constant reference, such as encyclopædias and dictionaries, there are none that the admitted reader can take from the shelves, or have any immediate access to. When he wishes for a book, which he has looked out in the catalogue, he writes its title, particularizing the edition, on a slip of paper, which he regularly dates and signs; this he hands to one of the attendants, and presently receives the work. The slip of paper is kept in lieu of the volume or volumes delivered, until they are restored to their place again.

This simple and satisfactory plan, we would humbly suggest as not improper for adoption in the library of the College of Surgeons. If the place become more frequented, as we hope it will with a few modifications of arrangement, and if the collection only continue to increase at its present rate, it will be absolutely necessary ere long that catalogues be deposited on the tables, and that the process of procuring any required volume be conducted noiselessly by the intervention of writing. We cannot see why this mode of service should not be adopted at once, for, earlier or later, it must be had recourse to; and the sooner the system of holding colloquies with the librarian is discontinued, the better. Our correspondents' complaint would thus be in great part remedied, and we are convinced that general satisfaction would be the result.

Whether, for the further accommodation of the members, this excellent library shall be opened for a few hours in

the evening or not—as there is no law nor reason, we apprehend, to the contrary—must, of course, rest entirely with the liberality of the Council; but we confess that the additional expense which would thus be incurred, in increase of salary to the librarian, and for lighting the apartment, does not seem to us to form any reasonable objection.

NOVEL MODE OF PRESERVING HUMAN REMAINS.

M. Barruel, an eminent French chemist, boasts of being able to extract iron enough from the blood of a deceased person to strike a medal the size of a 40 franc piece. "He that hath the *ashes* of his friend," says Sir Thomas Brown, "hath an everlasting treasure." What would the learned author of the Hydriotaphia have said had he known of the possibility of possessing *iron relics?*

CLOT-BEY OF ABOUZABEL.

M. Clot-Bey is about to visit England. The *Gazette des Hôpitaux*, in reviewing the wonderful things (and they are really wonderful) which this gentleman has effected during his residence in Egypt, takes care not to omit his successful persuasion of the priests in that country to countenance anatomy, and contrasts with this liberality of the Egyptians, the prejudices existing against the same science in England, "where civilization *seems* to be so far advanced."

CAUTERY IN POISONED WOUNDS.

The following anecdote illustrates the presence of mind and decision of the late Captain Dawson, commanding Royal Engineers in Ceylon, which may be useful, as pointing out a course which would probably be found equally efficacious on future occasions.

During the progress of the tracing of the road from Rambodde towards Gampola, a pioneer was bitten by a "tic polonga." The man was instantly brought to Captain Dawson, who immediately had him held down, and proceeded to scarify the wound very severely; he then requested an officer to discharge his gun, and covering the wound with gunpowder, he cauterized it by the explosion which was effected by the lock of the discharged gun. This process he repeated eight or ten times, regardless of the pain to which, of necessity, he subjected his patient. The result was most satisfactory: the wound healed, and the man was at work again in four or five days.

Three days afterwards, a precisely similar accident occurred to another pioneer, at work on the same road, who surrendered himself, with eagerness, to the treatment which had proved so successful in the case of his comrade. In the latter case, the recovery was not so rapid; and the second pioneer was not enabled to resume his duties for some weeks.

In both cases there was a disposition to glandular swelling all over the body, but no serious symptoms occurred.

It is unnecessary to add, that the impression in this island is, that the bite of a snake of this description is fatal, and not within the operation of any known remedy.—*Extract from the Colombo Journal of May* 9, 1832.

COLLEGE OF PHYSICIANS.

MAXILLA TO VESTIBULUS.

My dear Vestibulus,

Parliament is gathering, and Physic is polities. Let the Blood wait. It will remain as it now is for at least our time. We will look to our Charter; do you know any thing of it? Have you read it? A modest question from him who has appropriated your "Goodall!" Until I made that book my own, and illustrated its contents by all I could pick up of College lore, in my home keeping, I entertained a very misty idea of the College as a Corporate Body: we "perfect gentlemen" of Oxford and Cambridge, have, you know, such very "gentlemanly" notions in matters of law and other business. Statutes of the College, be pleased to remember, are the same as "Bye-laws," and are not to be confused with statutes of the realm. Pray note this in studying our Charter, which is a "statute of the realm," having been confirmed by act of parliament, 14, 15, of Henry VIII. It has not, to be

sure, "Le Roy le Veult" affixed to it; neither has "the cordwayners' act," or "the act for George Roll to hold his place," or "the act that the six clerks of Chancery" may marry, which are stitched on the same roll with it; but it is, notwithstanding, a GOOD act, and has been confirmed again and again by subsequent acts, all of which, with it, have been received as law by judges on the bench, from Coke down to Tenterden. The Charter (you will find a copy of "Goodall" in one or other of the great public libraries, which, of course, abound in the rich, easy, and, in these latter times, political settlement around you)—the Charter, as I read it in your volume, is a good charter, well conceived, clearly expressed, and, moreover, exceedingly liberal in its provisions. In the regard which it expresses for the "common wealth," and in its neglect of partial interests, it strangely accords with the PROFESSIONS, if not with the sincere opinions, of those who are loudest in declaiming against the College as an "exclusive corporation," "an oppressive monopoly," &c. &c. If the College be exclusive, illiberal, and a monopolist, it is not the fault of our original charter (I mean of Linacre's charter), for James gave us a charter, and Charles II. after him, but neither of them is worth a straw, as they never received the sanction of parliament. They are not the law of the land. We are not as yet, remember! occupied with the COLLEGE STATUTES, OR BYE-LAWS. The letters patent, granted by Henry VIII. through Wolsey, to the physicians of London, and confirmed by act of parliament five years afterwards, really afford nearly all that the College ought to hold of influence and power in the interest of the public health. Linacre, with five of his friends (what a romantic name, that Fernando di Victoria, for a doctor!) and "ALL OTHER MEN OF THE SAME FACULTY" within the city of London and seven miles about, were, by this first charter, incorporated and made into "ONE body and perpetual COMMONALTY or fellowship of the faculty of physic, for the due exercising and practising of the said faculty, and so on, and so on. They are further empowered to appoint a president, by annual election, from a body of eight Elects, chosen "from the said commonalty and fellowship," and four officers for the "oversight, scrutiny, correction, and government of all physicians and persons exercising the faculty of medicine in London and its district." These last officers, now called "Censors," have very extensive powers given to them, so that they may punish delinquents in the faculty by fine and imprisonment. The act confirming the charter likewise empowers the president, college, or commonalty, to make "ordinances" (*i. e.* bye-laws) in lawful, honest assemblies of their body, for the wholesome government, oversight, and correction of the College, or commonalty, and of all men exercising the faculty of physic in the London district, according to the exigency of the case. Again: no one is allowed to exercise the faculty of physic in the London district unless he have been "*admissus ad hoc*" by the president and commonalty, or their successors, under letters signed by the common seal of the president and College. This is the PITH of our College charter; and do you not agree with me that it is a liberal and efficient one, framed (as all charters should be) on the principles of *good* to the *public*?

Had the College adhered to the principles of this their ORIGINAL act of incorporation—had they asserted the real power which it confers on them with due caution and firmness on all proper occasions—had they not fettered and thwarted their "charter," by "ordinances" inconsistent with its spirit—they would now have stood even higher than where Wolsey first placed them. Our disease is in our Bye-laws; in the Charter is our cure. We have preferred our own statutes to those of the realm. Read, I pray you, the act confirming our charter, with careful attention to all which it expresses, to all which it leaves unexpressed. Its great principle, its LEADING IDEA, you will find, is the *health* of *London*, the good of its inhabitants, as influenced by the practice of its physicians. The charter does not incorporate Oxford and Cambridge graduates exclusively (there is no mention, not a hint breathed, of these to Universities, in the letters patent or in the BODY of the act confirming it): it incorporates six LONDON physicians, and whom besides?—why, "ALL OTHER MEN OF THE SAME FACULTY in London." Not only is there no mention of an "ENGLISH university degree," but there is no mention of any degree of any kind as necessary for accession to the fellowship. By the CHARTER, then, all phy-

sicians practising in London were considered ELIGIBLE to the corporation, commonalty, or fellowship; for all such men were ACTUALLY INCORPORATED, as Fellows or Commons, on the 23d day of September, in the tenth year of Henry VIII. The condition, the ONLY condition, required from them, was, that they should be "men of the faculty in London." But how, it may be asked, was this corporation of London physicians to be kept up? How was its "perpetual succession," so repeatedly contemplated by the act, to be secured? How, but through the means by which it was created, from the source in which it originated—from the faculty of London? There is not a word said in the charter, or in the act confirming it five years afterwards, or in the act 32 Henry VIII. releasing the commons "of the Fellows of the corporation of the commonalty and fellowship" from watch and ward; or in bloody Queen Mary's act; or in Queen Elizabeth's "charter for anatomies;" not an expression to be found as to the way in which the succession of the College is to be secured, though the "successores" are as often mentioned as the collegium or communitas, then existing. Was this an oversight? Impossible! The perpetuity and succession of the College are every where supposed. What is the plain, fair, honest inference?—that the successors of the corporation were to be sought for in the same body which supplied its original members—IN THE FACULTY OF PHYSIC OF LONDON AND ITS DISTRICT. Thus, in the license which they conceded, to exercise the faculty of physic in London, Linacre and his London friends held the means and exercised the power of providing for their own succession; and thus, in fact, was the succession kept up for very many years after the first act of incorporation—by a race, that is, of licensed London physicians, eligible at once, by tenure of their license, to the honours of the fellowship. Indeed I am strongly inclined to believe, that, for a long series of years, the London physician, on receiving the license of the College, became instanter, and without further election, a Fellow of the Corporation, eligible, of course, as such, to the office of Censor Elect and President. I infer this, from observing that in no one of the early acts are the Fellows of the London College distinguished from the great body of the London physicians. Thus, in the margin of the act 32 Henry VIII. as printed in your "Goodall," I find "Physicians in London discharged to bear certain offices,—Privileges granted to physicians in London,—any of the physicians in London may practise surgery;" as if, by the "commons of the Fellows," described in the body of the act, were implied all the physicians then practising.

No one could, in those days, become a London practising physician excepting by license of the College, but when he thus became a London physician, he (as I believe) became at the same moment a Fellow of the College. I wish it were so still. My wish is, that the President and four Censors, by whom the business of the College is conducted, should be annually chosen from and by the entire body of physicians licensed to practise in London, and that the business administered by them should be subjected to approval or revision by the same general body, lawfully and honestly assembled: and this my wish is father to my thought,—for such, even in our day, if we live out our days, will the London College be.

We are strong, VERY STRONG, (quite as strong as in the *public interest* we ought to be,) in our charter, if we only keep to it. Assailed as we already are, pursued as we shall be, could we fall back on better ground than on this which we first occupied? Is it not our true position? What evil influence has led us from it—from London, in itself a world, and from its faculty, connecting us with all the world besides? What system of tactics, offensive or defensive, was it that induced us to withdraw the BODY of our garrison from this our citadel of London to the comparatively insignificant outworks of Oxford and Cambridge, in which it is now stationed? Politics, my friend, and religion of a political kind.

Since our charter first became law, there has been more than one revolution in the religion and in the politics of England. All corporate bodies, our own included, were of necessity influenced by those social changes. Thence came all the worst of our College statutes; but we will reserve the "bye-laws." I am unwilling to withdraw your attention from the charter, which, the more I study it, the more I like. It was made for all men of the faculty in the London district, without any re-

ference to Oxford or Cambridge, to this place or the other, as exclusive schools of the physician's character; and it contemplates, be assured, if it does not SPECIFY, its own renovation from the SAME wide source which it is empowered and required at all times to supply. Politics, ever shifting in their nature, and the influences of exclusive religious opinions, have, for a long series of years, compelled us to their track. Under the shelter both of politics and religion, while we rest on our "charter," we may now find security, and through them we may regain our lost authority. The thirty-nine articles were promulgated as a canon of our church many years after the confirmation of our charter by parliament. The Test and Corporation acts, which followed them at a later date, are now repealed. The Pretender is physically, the Pope is morally, defunct; knowledge is found all over the world by those who are willing to seek for it; London is more of a world than it ever has been: it has its Universities—it will have its Degrees. Parliament, the Bench, the Horse Guards, the Admiralty, all the public and social trusts, may be claimed by men of talent and virtue, however widely they may differ in religious opinion. Should the fellowship of the London College of Physicians, now, in this year of 1833, be reserved, (with a few principles of exception, in themselves objectionable, exclusively for persons educated at Oxford and Cambridge? Is it right, is it fitting, that two of the upper classes in the College list—the two from which the great bulk of the Fellows are of necessity chosen—is it, I would ask, "expedient," that the classes of Candidate and of Inceptor-Candidate should still be exclusively reserved for those who, before they can approach the College, must have sworn their adherence to the entire thirty-nine articles of the Church of England? I mean (let me put it fairly), that by the College statutes, as they now stand, no one can claim to be there examined as Candidate or Inceptor-Candidate, unless he be a graduate of Oxford or Cambridge, and no one can be a graduate at Oxford or Cambridge unless he have previously vowed his adherence to all and each of the thirty-nine articles. Have you read the Articles (the Homilies included) since you first adhered to them by oath? Read them, I beg of you, all and each—I specify only one (the thirteenth)—before you answer my question!

Of certain of our "Bye-laws," which are not our "Charter," more anon. They were created by circumstances—they have changed with circumstances—should they not change again? Adieu! Believe me, that the College has no more sincere friend than yours,

MAXILLA.

London, Jan. 12, 1833.

CASE OF INVERSIO VESICÆ.

[The following is from a new contemporary—we hope, from the name, a kindred spirit. We shall be glad to find that the journal succeeds.—E. G.]

Jane R——y, æt. 4, admitted into the county of Meath Infirmary, July 9, 1829. Her mother stated that she had been seen by a medical gentleman six hours previously, who had represented the disease under which she was suffering to be prolapsus ani, but failed in reducing it, after a tedious trial. On learning that mortification would most probably be the consequence of its non-reduction, she became alarmed, and brought the child to Mr. Nicolls, of Kavan, who, having satisfied himself that it was some unusual disease, immediately brought her to the Infirmary, where she was seen by Dr. Byron, the present surgeon to the Infirmary. For examination, she stood on a table, with her face towards the examiners, and our first impression certainly was that of it being a case of prolapsus recti. We prepared to reduce it in the usual manner, by placing her on the back, elevating the head, and fixing the thighs on the abdomen. Catheters were also in readiness to empty the bladder. Immediately after having thus arranged the patient, the anus and perineum were plainly discernible. A closer examination now became necessary, and the following appearances were noted down. A pyriform tumor, the size of a small hen-egg, depends from between the upper portion of the labia-pudendi, colour of a dark mahogany, the base below, the apex above; the little finger oiled and introduced per anum, communicates no motion of the tumor, nor can any thing unnatural be detected. On raising the tumor towards the pubis, the vagina was seen, but the meatus urinarius could not be traced. Some congenital deformity was now suspected, but the mother's answers, which were very clear, satisfied us on that point. We now sought to ascertain if the bladder were inverted. The orifices of the ureters were looked for, but not discovered until a very slight traction of the tumor downwards rendered the inversion complete. A small silver probe

was passed up each orifice, which, on being withdrawn, was followed by urine almost devoid of either smell or colour.

Replacement.—The neck of the bladder was steadied by the thumb and fore-finger of the left hand, and the fundus having been pushed upwards by the end of a gum elastic catheter, its re-inversion was easily effected. The catheter was retained there for a few hours by an assistant. Some tenderness of the pubic region following, attended with vomiting, leeches, warm bath, and castor-oil, were prescribed, to which those symptoms quickly yielded. On the 17th of July she was discharged cured.

Observations.—That the bladder could be completely inverted, I had, until then, deemed anatomically impossible: of course it can take place only in the female. I am not aware that there is any case on record. I certainly have not been able to consult the "Cas Rares." It is true, that Mason Good says something about prolapsus vesicæ into the urinary passages under two forms. He quotes from Sauvages.

First form, a protrusion of the inner membrane, in consequence of its separating from the general substance of the bladder, visible in the meatus urinarius, of the size of a hen's egg, subdiaphanous, and *filled with urine*. Sauvages' case is quoted from Noel, who met with it in a virgin, who was, from the *first*, peculiarly troubled with retention of urine, accompanied with frequent convulsive movements. The state of the tunic was proved by dissection. But this case is no ways analogous to the one I have just related. I am inclined to consider it a case of congenital malformation from the word *first*, which signifies, in the above case, from birth, or perhaps it was anasarca of the submucous tissue, from inflammation. It is stated to have been filled with urine, but, if separated from the general substance of the bladder, how could it be filled with urine unless from some opening by ulcer, or otherwise? Mortification must have been the consequence of such effusion.

The second form, he tells us, is chiefly found among women who have borne many children. The protruding cyst drops down into the urinary passage to about the length of the little finger, and is sufficiently conspicuous between the labia *. He gives a case from Solingen. Where the anterior wall of the vagina has been destroyed, and a communication formed with the bladder, an inverted bladder is by no means uncommon. I do not remember any cases of inversion where the destruction was confined to the urethra alone. Anatomically considered, inversion is more likely to take place in the young than in the aged. In the child, the shape of the bladder, both in its distended and contracted state, is pyriform, the base above, the apex below; while its axis is almost perpendicular: in the adult, its form, when distended, is oval; when contracted, a flattened triangle, its long axis oblique, anteriorly pointing to the linea alba midway between the pubes and umbilicalis, posteriorly if produced will touch the extremity of the coccyx. In consequence of the non-development of the pelvis of the child, the bladder is almost entirely in the hypogastric region, subject to the action of all the abdominal muscles, particularly that of the pyramidales and the lower divisions of the recti, from which it is separated only by a thin fascia. In the adult it lies altogether in the pelvic region, unless when distended; and as it is only in the contracted state that inversion can take place, it is almost entirely withdrawn from the influence of the above mentioned muscles. Moreover, in the child the ligaments of the bladder are weak and yielding, the urethra absolutely shorter, and there is scarcely any angle formed between the bladder and urethra, which must favour inversion as much at this period of life, as the contrary form tends to prevent it at a more advanced time. Inversio vesicæ is not analogous to the inversion of any other part of the human body. It resembles that of the uterus more than that of any other organ. But the cause of the latter being inverted is easily understood—namely, a forcible separation of the placenta, polypus, &c.; and did the same cause exist in the bladder, no doubt we should have inversion very common: but in the case I have just related, the surface was minutely examined for either polypus or an adhering calculus, but its healthy appearance was a sufficient testimony that none of those causes existed. The inversio uteri, in the unimpregnated state, has been denied by some, and, no doubt, if in this state it had not been subject to polypus, the opinion would have been correct; but I have seen a polypus completely invert the uterus, although unimpregnated, and Dr. Byron mentioned to me another which occurred in his private practice. Could the inversion have taken place in the following manner? In its contracted state, the internal surface of the fundus might have easily fallen down on the opening of the urethra, so as to form something like a partial inversion. In this case its serous surface would have formed a funnel, the concavity looking upwards; if a portion of intestine filled this cavity, a sudden exertion of the abdominal muscles might have completed the inversion.—*Dr. Murphy, in Liverpool Medical Gazette.*

* Dr. Good seems rather to describe prolapsus vesicæ than inversio, but as he places both inversio and prolapsus uteri under the genus "Œdoptosis," there is some difficulty in understanding exactly what disease he intended to describe.

EXTRACTS FROM THE CASE-BOOK OF THOMAS WELLS, M.D. of Columbia, S. C.*

CASE I.—*Dislocation of the Astragalus, and subsequent Extraction of that Bone—Foot preserved.*

Dr. G. W. S. aged 30 years, of an active constitution and sanguineo-nervous temperament, was attacked with fever while travelling in Georgia, in 1819, and confined to his chamber for several weeks. In the early part of his convalescence, he was taking a short ride in an open carriage, when his horses became frightened and run. In attempting imprudently to extricate himself by leaping from the vehicle, he struck upon his left foot, and dislocated the os astragalus from its junction with the scaphoides, upwards and slightly outwards.

Several medical gentlemen of the vicinity were called to his assistance, who made violent efforts to reduce the bone, but without effect. This was followed by violent fever, swelling, inflammation in the joint, and ulceration of the soft part, so as to expose the head of the astragalus, which soon after became carious. This accident confined him to his room several months longer. He came to Columbia, a distance of one hundred and fifty miles, in July, six months after the injury of his ankle. He had but imperfectly recovered his general health; the ankle was considerably swollen, occasionally painful, and admitted of little or no motion; the foot turned inward, and was partially extended; a circular ulcer about three-fourths of an inch in diameter exposed the head of the astragalus in a carious state. He walked on crutches, and could bear very little weight on the lame foot. Towards the close of July, after having one day taken much more exercise in walking than usual, he was attacked with violent inflammation throughout the tarsus, accompanied with great swelling, excruciating pain in the part, and high fever.

Bleeding, general and local, and the most rigid antiphlogistic course, was followed up for several days, notwithstanding an extensive suppuration took place, and the matter was discharged by punctures with the lancet, on both sides of the joint.

The violence of the inflammatory symptoms now subsided, but was followed by hectic paroxysms in the evening, and night sweats. The stomach and bowels became much disordered; copious bilious discharges, both by stool and vomiting; a very free discharge of matter from the parts; from four to six ounces every twenty-four hours; and rapid emaciation.

On examination with the probe, it was ascertained that the astragalus had become carious at different points.

It was now a question whether the leg should be amputated, or the diseased bone be removed—one or the other was believed to be necessary to save life; and as there did not appear to be any other bone besides the astragalus affected, the latter was determined on, and done on the 18th of August, in the presence of several medical gentlemen.

An incision was made, commencing at the edge of the original ulcer, near the tendon of the common extensor of the toes, carried obliquely backward and downwards a little past the lower head of the fibula, and the bone was carefully detached from its connexions.

There was very little difficulty in the operation, no vessel divided requiring the ligature, consequently very little blood was lost. The astragalus extracted, left a frightful wound, the foot seeming to be nearly separated from the leg.

A hollow splint was adjusted to the inside of the foot and leg, so as to preserve the limb perfectly steady and in a proper position, the foot being kept at a right angle with the leg; simple dressings were applied to the wound, and an anodyne administered.

At the end of September, the wound was healed, and the swelling of the parts had subsided. Twelve months after the operation, this gentleman passed through this city; he walked without the least difficulty; the ankle perfectly sound. The leg was shortened about an inch, and the deficiency supplied by a thick heel upon the shoe.

CASE V.—*Tracheotomy for the Removal of a Foreign Body from the Trachea.*

John B. Passmore, aged 4 years, Sept. 16th, 1827, was eating a piece of watermellon while playing and laughing with other children; one of the seeds passed into the trachea; he was threatened with immediate suffocation, and fell upon the floor. The difficulty of breathing gradually subsided, leaving him very much exhausted; he soon after fell asleep, and rested pretty well during the following night, with the exception of two or three short paroxysms of suffocative breathing, and was brought to Columbia the next day.

When I first saw him there was a slight febrile excitement; the features a little disturbed and dark, indicative of imperfect respiration; otherwise he was quite easy. While I was sitting beside him, however, he made a slight effort to cough; his breathing became instantly difficult and convulsive, attended with frequent efforts to cough. This paroxysm conti-

* American Journal of the Medical Sciences.

nued for about half an hour, when his breathing became gradually free, leaving him in a state of languor, from which he recovered in the course of an hour, and the little fellow was again at play about the room. An operation was at once proposed, as each returning paroxysm seemed to threaten a fatal termination, but was rejected by the friends, who insisted upon something else being tried.

The child was carried back into the country, six miles from town; took several emetics, and made use of errhines, to excite violent sneezing, in hopes that the offending substance might be ejected, but without effect. The paroxysms became more and more frequent, each leaving him in a state of greater prostration, until it became evident to the friends that he could not survive much longer. They brought him to Columbia again on the 22d Sept. and begged that whatever should be thought proper might be done for him. His breathing had now become permanently difficult and croupy, and the intervals between the convulsive paroxysms short; his face was livid, his pulse too frequent to be numbered, and small. There was evidently considerable inflammation and thickening of the lining membrane of the larynx and glottis.

He was laid upon a common table, his shoulders a little elevated by a pillow, and his head inclining backwards, supported by an assistant. An assistant on each side steadied the extremities.

An incision was made along the median line from a little below the cricoid cartilage to the upper part of the sternum, exposing the trachea, which in this instance lay deeper than was anticipated, the adipose substance being thick and the neck somewhat swollen.

A vein of considerable size was divided and bled profusely, which, after waiting a few moments, (and to have waited longer would have been at the risk of complete suffocation) was secured by a ligature.

The tracheal rings were then divided from below upwards, in the course of the first incision, to the extent of about three-fourths of an inch, and the parts held asunder by two slender instruments. The rush of bloody spray and air through this opening was tremendous; the seed was instantly ejected; it passed over the shoulder of one of the attendants, and fell upon the floor three yards from the table. After a few minutes the respiration became tolerably free; the bleeding having subsided, the wound was closed by two stitches and adhesive straps. The dressings did not prevent the passage of air through the wound. The plaisters were very soon loosened by a copious mucous discharge from the trachea. Small doses of an anodyne solution of tart. antimonii were given every two hours for the first three days, by which the pulmonary irritation was allayed, and the bowels kept open. He was kept perfectly quiet, and confined to mucilaginous drinks. On the fourth day the air ceased to pass by the wound, and the little fellow was inclined to play in his chamber. There was no further difficulty except a considerable degree of hoarseness, which did not disappear for several weeks. From that time to the present there has been no irregularity in his respiration.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 15, 1833.

Abscess	1	Hooping-Cough	15
Age and Debility	25	Inflammation	29
Apoplexy	5	Bowels & Stomach	2
Asthma	28	Brain	1
Childbirth	1	Lungs and Pleura	3
Consumption	60	Insanity	2
Constipation of the Bowels	1	Jaundice	1
Convulsions	29	Liver, Diseases of the	6
Dentition or Teething	5	Measles	9
Dropsy	14	Mortification	3
Dropsy on the Brain	8	Paralysis	3
Dropsy on the Chest	2	Small-Pox	11
Fever	8	Spasms	1
Fever, Scarlet	10	Thrush	6
Gout	1	Stillborn	13
Heart, diseased	3		

Decrease of Burials, as compared with the preceding week . . . 145

METEOROLOGICAL JOURNAL.

January 1833.	THERMOMETER.		BAROMETER.	
Thursday . 10	from 22	to 31	30·30	to 30·05
Friday. . . 11	20	37	29·90	29·80
Saturday . 12	23	37	29·78	29·82
Sunday . . 13	30	42	29·83	29·90
Monday. . 14	35	43	30·13	30·15
Tuesday . 15	30	41	30·13	30·10
Wednesday 16	33	43	30·12	30·13

Wind N.E. and S.E. the former prevailing.

Since the 12th, generally cloudy; a little rain on the afternoon of the 13th.

CHARLES HENRY ADAMS.

NOTICES.

We are requested to state, that in consequence of the serious indisposition of the Editor of the "DUBLIN *Journal of Medical Science, &c.*" many errors of the press, observable in Dr. Law's valuable paper, "On Cases of Erythema," escaped correction. Another copy of this will consequently be given in the forthcoming number, which subscribers are particularly requested to substitute as a cancel for the present.

We shall publish the letter of a "Licentiate" next week, if, after a repernsal of the article commented on, he does not see the propriety of recalling it. It is but too evident that the Licentiate has totally misunderstood the argument.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 26, 1833

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

NEURALGIA.

The disease of which I last spoke is characterized by morbid sensibility, and the disease of which I shall now speak I have selected because it also is characterized by morbid sensibility. The disease is called *tic douloureux* or *neuralgia*—violent pain of the nerves.

Etymology.—It is said to be called *tic douloureux*, which is a very odd word, from the pain resembling the bite of an insect—the sudden sharp pain arising from the bite of an insect, or from the horse biting the manger when he is supposed to labour under it. The word neuralgia is very appropriate, but the word *tic* is one that I do not approve.

Symptoms.—The disease is marked by a violent, stabbing, plunging pain, which is increased, or even brought on, when it does not exist, by the slightest touch of the skin. When it is present, it is increased by the least touch; but very firm pressure I know will relieve it. It is increased too, when present, by blowing on the skin, or by the shaking of the room, and is then exactly like an electric shock. There is generally no swelling, no redness; there may be, but it is not essential to the complaint. Tic douloureux generally takes place in the course of some well known nerve, and hence the disease is now more appropiately called *neuralgia*—nerve ache. Sometimes the pain does not follow the course of a nerve, but still we must consider it according to general rules. Sometimes it is not an aching of a nerve, but the whole of a part is affected together, so that the disease will exist in the breast, in the heart, or the pericardium, and once I saw it in the loins, not following the course apparently of any nerve, but affecting various nerves in the mass. If the nerve affected have small muscles in the neighbourhood, they are generally twitched; so that, when a patient has the disease in the face, you see the side of the face catching every moment. If the disease be dreadfully severe, as sometimes it is, then you have convulsions of the large muscles.

When it is a distinct nerve that is affected, it is more frequently than not the supra orbital, the infra orbital, or pes anserina, and next to these the inferior maxillary.

When it is situated in these parts you will have a twitching, because the muscles of the face are so small; and from the disease occurring in the neighbourhood of glands, you commonly have in these cases a great flow of tears or of saliva. The disease is sometimes seen in the fingers, sometimes in the thumbs, in the feet and in the tongue. I had a case where it clearly occurred in the peroneal nerve, and another where it clearly occurred in the tibial. The disease comes on in paroxysms, and the pain is dreadful, so that occasionally it brings on delirium. After a time it will in some instances cease spontaneously without our knowing why, and in other cases it will produce great emaciation and end in insanity, or some other disease of the nervous system.

History.—This disease is said to have been well described first of all in 1756 by a surgeon named Andry, who lived in London, and who wrote on diseases of the urethra. It is a strange place in which to look for an account of neuralgia. Dr.

Fothergill wrote upon it in the 5th vol. of the Medical Observations and Enquiries, published in 1776. It is a disease which I suppose has always existed, but, like true hydrophobia, it has not been well described till modern times.

Morbid Appearances.—After death nothing has been found. Sir Charles Bell and Dr. Magendie both say that they have examined neuralgic nerves and found nothing; but, by the long continuance of the pain, the neurilema, the covering of the nerve, becomes thicker, and the irritation has occasionally produced a tumor during life. From the great thickening of the surrounding parts, the veins around the nerves have sometimes been found varicose. Andral, the most recent writer on this subject, says that in acute and chronic sciatica, which is a kind of neuralgia, he never but once found any alteration of the nerve, and that in that one case the nerve was merely a little redder than usual, it having been injected. He says that in a woman who had constant pain at the back of the neck on the left side he found nothing either in the trunks or branches of the brachial plexus. In the nerves in a case where rheumatic pain existed at the moment of death, he found nothing. The true nature of the disease, therefore, is very often a mystery.

Causes.—Neuralgia certainly arises in many cases from cold, and in some it certainly arises from a mechanical irritation of the nerve, such as is occasioned by the stumps of old teeth or an exostosis. Many cases have occurred in which the bones of the cranium have been found in a state of exostosis or carious, when the disease appeared; but this is not by any means necessary. The disease frequently occurs when you cannot explain it at all, and after death nothing has been found. Dr. Macculloch thinks that it arises from malaria; but then he ascribes almost every thing to malaria. I have no doubt but that he is quite right in a great deal of what he says, but still he ascribes too much to malaria. He considers that almost all tooth-ache arises from that source; but errors have been committed on the other hand, and teeth have been pulled out where the pain did not arise from the teeth. I have seen cases where a person has lost almost every tooth, and has then been cured by quinine. Dr. Macculloch appears to all but himself to ride his hobby a little too much. However, it is possible that the nerve or the neurilema, one or both of them, may be inflamed; and, if that be the case, you must expect violent pain.

Rheumatic Neuralgia.—Neuralgia, which exists in a certain well-known nerve, or is attended by heat, or any sign of inflammation, is generally called tic douloureux, and I believe that term was applied by old writers to the pain running in the course of a particular nerve. But there is a kind of neuralgia which is decidedly a rheumatic pain in the nerves, which arises clearly from cold, and is nothing more than rheumatism affecting the nerves. Rheumatism for the most part affects the fibrous membranes, ligaments, aponeuroses, and sometimes muscles; but now and then it affects nerves, and then of course the nerves will ache. There is a kind of rheumatism which affects the nerves; therefore there is a kind of neuralgia which is rheumatic, and you find this sometimes inflammatory and sometimes not, just as is the case with rheumatism.

In such a case as this the disease arises from cold, and in the first instance there is a great deal of heat, pain, and tenderness—not producing an electric shock, but tenderness of the part, and you generally find at the same time rheumatism in some other parts. There is frequently periodical rheumatism in the nerves, and it comes on in the evening; about six o'clock the patient has a regular paroxysm. You find in it all the characters of rheumatism, with this only difference, it affects well-known nerves. Besides the aggravation of the pain at intervals in these cases, there is generally a constant dead pain.

This kind of neuralgia is for the most part very easily cured; the remedies for rheumatism in other parts are equally successful in the cure of this. Rheumatic neuralgia affecting particularly the sciatic nerve, or all the nerves on one side of the head, the supra orbital, the infra orbital, the mastoid muscle, and the scalp, is continually seen; but the old neuralgia, described as tic douloureux, is a very obstinate disease, and is far less frequently cured than not. It affects particular nerves, and is seen chiefly in the face.

Treatment of pure Neuralgia.—True chronic neuralgia, not arising from cold, and coming on in a violent, stabbing, plunging form, aggravated by the least shake of the patient and by touching the surface, is certainly best treated by the subcarbonate of iron. Sulphate of quinine is an excellent remedy and so is arsenic, but upon the whole subcarbonate of iron is the best: whether sulphate of iron will cure it I do not know. For our knowledge of the power of this remedy over the disease we are indebted to Mr. Hutchinson. He tried various medicines, and this among the rest, and it succeeded. It is a remedy, but not a specific. I do not recollect that I ever cured the disease, but I have in almost every case made the disease better, and caused it to disappear for a time, but it has after a while re appeared. You should not think you have failed till you

have given a sufficient dose; if you have not succeeded with small doses, you should not give up the remedy till you have exhibited large ones. The disease is by no means common: I am sure I have not seen a dozen cases of it. I see cases of common neuralgia every day; but of the old tic douloureux I am sure I have not seen altogether a dozen cases, and not one of them was cured; but iron is an excellent remedy, and it is a great thing to make the disease disappear, and it is no great trouble to the patient to take the remedy again. But if you consider that it sometimes arises from a diseased bone, or an exostosis, or some mechanichal irritation of a nerve, and that it may arise from a change of structure, you must see that there is no specific for it. The mere pain may be relieved by iron, but the disease is of such a nature that iron cannot remove it, and therefore the disease may be said inevitably to return. The sulphate of quinine has appeared to cure the affection, but this has chiefly been when there was a distinct intermission, when the disease was periodical, and perhaps in cases where it arose from malaria. Arsenic too undoubtedly has an excellent effect.

Belladonna, both internally and in a plaister, will relieve the pain, and some persons have said that they have seen it cured by it. Stramonium and opium have a similar effect; but in general you may give these things till you induce vertigo and apoplexy, and yet the pain will be no better. Belladonna, and perhaps stramonium, are better than opium, and they appear to have done occasional good.

If all these means fail, certainly the nerve may be divided; but, if it be divided, of course a part should be cut out, that the ends may not find each other—may not unite together: but even that is a very uncertain remedy. Complete division of the nerve and excision of the part have been practised over and over again without any beneficial effect. In some cases the nerve has united, and in other cases the two separated parts have been as painful after the operation as before. You will find a case mentioned by Mr. Wardrop in the 8th vol. of the Medico-Chirurgical Transactions, where the pain occurred in the nerve of one of the fingers, and where nothing short of amputation succeeded; but that succeeded perfectly. There is a case mentioned in the 4th vol. of the same Transactions, in which amputation also proved successful. But where amputation has been resorted to, the disease has reappeared in other parts.

Of course, if there be an obvious exciting cause, it should be removed. If old rotten stumps be producing it in the gums, it would be right to take them away; but when we consider how large a number of people have this cause of irritation without any such disease being produced, one is more inclined to trust to the general remedies than even the removal of the stumps: for I know that after they have once excited the disease, or have existed with it, the disease will continue after they are removed; and though it would be but common sense to get rid of an obvious cause, yet I know that the sulphate of quinine will cure many cases notwithstanding the old stumps are allowed to remain.

It is said that, for the purpose of alleviating the pain, the steam of water, conveyed over the affected part by means of a tube, soothes it very considerably. Mr. Pearson, a surgeon, formerly residing in Golden Square, states, that in painful affections of the nerves of the arm, he produced great benefit by employing strong stimulants;—stimulants made with strong acids, so as to produce extreme irritation.

Treatment of Rheumatic Neuralgia.—It is the other form of neuralgia—rheumatic neuralgia—which is for the most part so easily cured, and the cure of which has been published over and over again in hundreds of cases. Some give the general name neuralgia to this particular form of the disease; and others, conceiving the word neuralgia is applied to tic douloureux, are astonished to find that some practitioners have had scores of cases, and that nearly the whole are cured. I believe the truth is, there are two different forms of the disease; the one more or less permanent, not dependent on rheumatism, and the other connected with it,—the one obstinate, the other very curable. In rheumatic neuralgia if there be any heat—if it appear like active rheumatism—if heat make it worse—then you find blood-letting, general and local, colchicum, the exhibition of mercury, and even an application of it to the parts, does great good. If, on the other hand, it be of a passive, torpid kind, you find stimulants of great use, and you will find narcotics, stramonium, and belladonna, answer here a good purpose. I have cured many cases by stramonium. Arsenic here is of great use, and so likewise is quinine and iron. It is in this form of the disease that you may do so much good. Stimulating liniments here, too, are very serviceable. When the disease assumes a periodical form, it is most likely that quinine or arsenic will cure the disease much better than iron.

This is a very curable affection. If it assume the character of acute rheumatism, you must apply the remedies for that complaint; but if not, by the exhibition of various stimulants internally, and their application externally, with treatment of that description, you will cure many cases.

Acupuncturation, which I will speak of when treating of rheumatism, is also very serviceable in this kind of neuralgia, but in the other form it is of very little use, and for the most part of none.

Having treated of diseases of sensation, I shall class together all those that are diseases of motion.

PARALYSIS AGITANS.

The first disease of this description of which I will speak consists in a very slight tremulous motion, and is called *paralysis agitans*, or, in common language, *shaking palsy*.

Definition.—It is defined to be an involuntary, chronic, tremulous motion of more or less of those parts of the body which are subject to volition,—(tetanus affects the voluntary muscles; but this affects them not, like tetanus, with spasms, but with minute convulsions called *tremors*, alternating perhaps with relaxation, and quite involuntary,)—together with lessened muscular power,—(not only are the motions involuntary, but the patient has not the same power in producing voluntary motion that he has in tetanus,)—occurring in parts when they are not in action, and even when supported:—(This is an important part of the definition. It is not the tremor that occurs in a person who has been intoxicated the night before, or has taken a cup of strong coffee or tea; the tremor which he shews when going to put the glass to his head, and shakes it till he spills the contents; but there is a tremor when the parts are still, and even supported:)—together with a propensity to bend the trunk forwards, and to pass from a walking to a running pace:—(Of course, when we run, we make a much greater voluntary effort than we do when we walk. The faster we run, certainly the greater is the effort we make, and the more powerful and steady is the motion; therefore we can conceive, that, by a strong effort, the patient is more likely to overcome involuntary motion than if he be only exerting half the volition; so that, you observe, persons in this disease are not to be interrupted, and are constantly on the trot, like a twopenny postman:)—the senses and the intellect being uninjured.

Symptoms.—The muscular weakness and tremors begin generally in some one part of the body only, for instance in the head; but most frequently they begin in the hand or in the arm, and perhaps it is not till after some months, or even some years, that another part is affected. But the disease frequently increases both in degree and in extent; more parts become affected, and parts affected before become more affected, till at last the whole body shakes. Like St. Vitus's dance,—the next disease of which I will speak,—it may be checked for a moment, or a few moments, or even to the extent of a minute by a violent strong voluntary effort, but it soon returns. The patient becomes less upright, bends forward, walks upon his toes, and steps quick and short, till at last he comes, as I stated in the definition, almost to a running pace.

If the disease remit in one part it generally increases in another, so that if both arms tremble, and you see one improved, the other will immediately do double work—shake in a two-fold degree. This, we shall see, is also the case in St. Vitus's dance. A change of posture will sometimes disturb the action that is going on. This tremulous motion ceases during sleep, the same as in St. Vitus's dance, unless the case be very severe, and has continued for a long time; then the tremors will continue even during sleep. At length the muscles of articulation, mastication, and deglutition, become affected; and, finally, the urine and fæces are discharged involuntarily. Such is the loss of muscular power; and in the midst of all this misery the patient becomes emaciated, and death generally supervenes.

However, sometimes the disease does not extend at all. This you must have observed. Many persons have shaking palsy of the head for several years, without any other part shaking, and without the head shaking more and more. You will see many elderly persons who have been so affected. This is a disease which frequently attacks persons in the decline of life. There is a curious instance mentioned by Mr. Parkinson, whose work on paralysis agitans is the best that has been written on the subject, in which hemiplegia occurred, and the paralysed parts ceased to shake; but when the hemiplegia ceased, then the shaking returned again.

Diagnosis.—Now, you have to make a diagnosis between this disease and the tremor induced by drunkenness, or violent passion, or that which occurs in delirium tremens. The tremor in these cases occurs particularly when an effort is made, and it is not lessened by an effort; it is not lessened by support, and generally the cause is obvious. Many old writers have made this distinction—Galen, Sauvages, and others; yet I believe paralysis agitans was not well characterized until Mr. Parkinson wrote his pamphlet on it in 1817.

Morbid Appearances.—Mr. Parkinson gives only one post mortem examination, and that was a very severe case, where the disease was universal; where there was great muscular debility, impediment of speech, and, at last, impairment of intellect. He found in that case the lingual and brachial nerves tendinous, that is to say, greatly indurated; the medulla oblongata and pons

varolii were very compact and large; the medulla cervicalis, the cervical part of the spinal marrow, was also hardened.

Pathology.—This is a very obstinate disease, and I have no doubt its obstinacy arises generally from there being an organic affection. Mr. Parkinson imagines the disease to exist in the superior part of the cervical medulla spinalis, extending upwards to the medulla oblongata, and he suggests antiphlogistic measures, directed particularly to this part.

Treatment.—I have not been, by any means, successful in the treatment of this disease. I believe, as it occurs in old people, where one hand shakes, or the head, you can do no good, at least I have never known good done; and, where it has occurred pretty universally, I have never been able to cure but one case, and in that instance the patient was not old—he was not above five-and-thirty years of age, and I am satisfied there was no organic disease; whereas in old persons, I should think, there is organic disease, probably induration, or at least a process going on which leads to it. This man, who was in the middle period of life, was not likely to suffer from structural change, unless it were induced by inflammation. There was pain of the head, heat of the head, and giddiness, and, therefore, I treated him antiphlogistically. I bled him well, bli tered, mercurialised, and starved him, and he had setons introduced, but without any benefit. Finding, after a long trial, that the plan did no good, I gave him zinc, which is a very useful remedy in St. Vitus's dance, and he took a considerable quantity three times a day, but without any benefit; and I then exhibited subcarbonate of iron, under the employment of which he became perfectly well, and remained so for some time afterwards. I have since had four or five cases of the disease under my care, and have exhibited the same medicine, but it has not produced the least benefit. Most of the cases remained unaffected by the remedy; one or two were certainly a little improved for a time, but nothing farther.

You will now and then see the disease occurring in a transient slight form in young persons, not connected with any organic affection, but appearing to be in females an hysterical affection, and in males to depend on congestion of the head. I have seen several young adults who have had a shaking of one arm or hand, which has been cured by purging them continually, and using antiphlogistic remedies directed particularly to the head. You may cure that form of the disease very well; but when it occurs in the decline of life I believe you will find it an obstinate affection,—at least, I have hitherto found it perfectly incurable.

CHOREA.

The next disease of which I shall speak is very much allied to paralysis agitans, so far as it consists of irregular, slight, convulsive motions, and is unattended by any serious disturbance of the intellect, unless it continues for a very great length of time; but it is one which occurs, on the contrary, in young persons. It is called *St. Vitus's Dance*, and has received that name, I believe, from there being a chapel, dedicated to St. Vitus, where persons went and danced when they had this disease, or something like it, till they dropped down exhausted, and so, it is said, became cured.

Etymology.—I need not say that the Latin word *chorea* comes from the Greek word χορεια. There is the best authority for calling it *chorea*, and not *corea*. You find Virgil using the word; but it is only a poetical license, and the proper one is chorea.

Symptoms.—This disease is characterised by a catching of the fingers, and other joints—a twitching of the hea l—corrugations and contortions of the face—very extensive flexions, extensions, and rotations of the extremities—in sho t, perpetual motion—with a rolling of the eyes. The patient is observed, therefore, in the first instance, to drag one foot; and, frequently, there are such catches of the tongue, and muscles of the neck and throat, that articulation, deglutition, and mastication, are difficult; and so likewise is walking, standing, sitting, or lying. I have seen the skin of the chin and breast rubbed off by the perpetual scraping of the one on the other. I have sometimes seen the patient unable to lie on the bed, rolling off it, so that it was necessary to strap him down. These, however, were very severe cases. As to feeding patients, that is often very difficult; and it will sometimes require the aid of two or three people to give them their meals—two to hold them still, and one to catch the favourable opportunity of putting the spoon in their mouths. You will find the motion increased temporarily by fear, or any gentle motion. Nothing is more common than for the motion to increase when a medical man appears. Any mental agitation will have the same effect. If a child be made cross, the motions will double almost directly. These motions are a litle under the power of the will; persons can restrain them temporarily, but their best effort in the disease is little more than a sudden catch.

You will find that persons walk quickly better than slow, and Dr. Heberden mentions the case of one individual who could not walk, though he co ld run. Exactly

as in paralysis agitans, the movements are suspended during sleep, unless in extreme cases. If you hold one part, then another is agitated the more; and generally one side is more affected than the other. You find this very common in all convulsive diseases; and, indeed, in diseases of sense as well as of motion. In many of these diseases, it is common to see only one side affected; but where both are attacked, it is usual to see one more affected than the other. This circumstance occurs in St. Vitus's dance; and the side most affected will, in the progress of the disease, frequently change, so that the right at one time shall be most affected, and at another the left.

One leg and one foot generally first shew the disease. The first symptom usually observed, is that of one foot being dragged after the patient. The arms are generally more affected than the legs. The face has very frequently a fatuitous appearance; the countenance is fatuitous: the mind is apparently a little affected, and certainly persons are a little childish in this disease. The pulse is sometimes very quick, when the motions are very rapid; and sometimes you will observe headache, heat of the head, vertigo, drowsiness. Sometimes patients will scream, and even epilepsy will come on; and sometimes there is hardness of the abdomen: but in a large number of cases you find no one symptom present—you find nothing the matter with the patient except this extraordinary movement. You may meet with additional symptoms, but in a great number of instances that I have seen such has not been the case.

Duration.—It is a disease that may last some weeks, or some months, and then go off by art, or spontaneously. It now and then continues during life; but the majority of patients recover, and recover even their looks. The fatuitous aspect of countenance and the imbecility of mind disappear.

In a local form, this disease will continue for life. You will observe many persons who always have a catching of one leg or one arm, or a catching of some of the muscles of the face. Some are always winking; some have an extraordinary motion, they run their head upon you like a goat; and some throw their head down, so that they have been a great inconvenience to auctioneers, who imagined they were bidding. You must have seen many persons with these unfortunate local instances of the disease. When it is so local, it almost almost always continues for life; and you will see it run in families. I have observed, that where one part of a family has these catches, another has something else peculiar in the nervous system: that is very common. When the disease occurs in adults I believe it is seldom cured, at least I have seldom seen it cease. It is where it occurs universally, and in very young adults, that it is cured.

It is hardly a proper mode of speaking to say that the disease may terminate fatally; but that state of the nervous system which produces it may end in death. I recollect a case in a strapping girl about nineteen which ended fatally. She did not die of St. Vitus's dance, but of apoplexy. The congestion of the head which in one degree produced chorea, in another gave rise to apoplexy, and pathologically it could not be said she died *of* the disease, but *in* the disease. It was an affecting circumstance, and I have no doubt might have been prevented, had she been well bled and purged.

Usual Period of its Occurrence.—It is a disease which occurs chiefly between three and four years of age and fourteen. Dr. Heberden says it is most frequent between the ages of ten and fourteen; but my experience leads me to say from three or four years to fourteen.

More frequent in Girls than in Boys.—It occurs too more frequently in girls than boys. Dr. Heberden says that one-fourth only of the patients under his care were males, and that has been about the proportion I have met with; at least in 1826 I looked over my cases of this disease, and found that in the hospital altogether I had had seventeen patients, twelve of whom were girls, three boys, and the rest adults. I may mention that at the same time I looked over my cases of epilepsy, and found they were just the reverse—that out of twenty-five cases of epilepsy, nineteen of the patients were males. Dr. Heberden made the same observation. I found in 1829 that I had had altogether thirty patients labouring under St. Vitus's dance, twenty-two of whom were females, and eight males—about the same proportion as in 1826. With respect to epilepsy in 1829, out of thirty-seven patients twenty-seven were males.

Causes.—The tendency of this disease is constitutional, if not hereditary. I do not know that it is hereditary, because adults frequently cannot tell whether they had St. Vitus's dance when they were young or not; but it is very common to see two or three children in a family have it, not at the same time, but at different periods. You will observe that it affects all sorts of children, those who are pale and sickly and those who are ruddy. It affects those frequently who are otherwise in perfect health, and generally there is no obvious cause; generally one sees no cause of predisposition, and generally one can discover no cause that excited it. All I can make of it is that it is a morbid excitabi-

lity of a certain portion of the centre of the nervous system, the medulla oblongata or spinal marrow, with which the nerves of voluntary motion are connected; but not a sufficient irritation to produce that violent action which characterizes tetanus. As to its being inflammatory, almost every case may be cured, not by antiphlogistic measures at all, but those which are just the reverse. It has been said to arise from an irritation of the alimentary canal; but I am quite sure that in nine cases out of ten, I might almost say nineteen out of twenty, that is healthy. If the cure arose from purging, the faeces would be unhealthy. Now and then a distant existing cause may of course be found; but I have never been able to discover any, except in one instanee, where it came on after a discharge from the thigh had been suppressed. A scrofulous sore had continued in the thigh for some time, and when this healed up St. Vitus's dance began. Whether it was accidental or not I cannot tell; but it was not cured by re-exciting the discharge, but by iron, and that with the greatest rapidity.

Proximate Cause.—The proximate cause, I have no doubt, is seated in the head, as well as the spinal marrow, and for this reason—the very highest nerves are affected. The eyes roll; the very highest muscle of the body, the corrugator supercilii, is affected; the countenance is fatuitous, and the mind is frequently a little impaired. Now and then it is unquestionably true that you have constipation, and now and then it is unquestionably true that you have headache and throbbing; but these form only a very small proportion of the cases.

Treatment.—With regard to treatment, if you find drowsiness, headache, or heat of the head, you ought to purge the patient well, and take away blood either by the arm or by leeches—to treat it as a case of congestion, or an inflammatory state of the head. It is a much shorter mode to apply leeches to the head and take away blood from the arm than to go on with purging. Purging is good, but it is a roundabout way of affecting the head, and if there be much congestion of that organ, it is the best way to take blood from it directly. Sydenham's practice was to take away blood from the arm and purge, but what his success was I do not know. It was rather a violent practice in many cases, and I am quite sure that neither bleeding nor purging are required in a great number of instances; yet if bleeding and purging had been practised in the case where apoplexy supervened, there is a probability that the patient would have lost her St. Vitus's dance and not have become apoplectic. If there be costiveness, it is our duty to remove it; if there be pain of the abdomen on pressure, besides emptying the bowels we ought to try the common remedies of inflammation. There can be no doubt that purgatives will sometimes cure the disease, sometimes by relieving a loaded state of the alimentary canal, and in other cases by circuitously emptying the head. But purgatives very often fail; I have failed with them again and again. Children are continually brought to one who have been well purged, and yet they are none the better for it. An inflammatory or congested state of the head is by no means more necessary to this disease than it is to hydrophobia or tetanus; but it is always right to look out for congestion and an inflammatory state, and to remedy it if it be found.

My reason for maintaining that the disease is not essentially inflammatory, and that more frequently than otherwise it is a mere morbid irritability, is this, that tonics are the best remedies. Sulphate of zinc will cure a very large number of cases; and it may be given to a very considerable quantity. You may begin with a grain in the form of a pill, but you must not exhibit it on an empty stomach, but after meals, and in many cases you may increase it to six, seven, or eight grains. I have given from twenty to twenty-five grains to adults three or four times a day; but children will bear six, seven, or eight grains, three or four times a day, without nausea. This is not a newly discovered fact; you will find it mentioned long ago that these doses may be given in epilepsy without nauseating. The circumstance is ascribed by Dr. Good to the insensibility of the stomach in epilepsy; but there is no reason for supposing that to be the cause, for it is now proved that persons in health, with no insensibility of stomach, will take it in these quantities, if you begin with a grain first and gradually increase it every day. I cannot doubt the fact, because I have given it in this quantity, and seen others exhibit it over and over again.

The sulphate, and other preparations of copper, will cure the disease, and so also will the nitrate of silver; but the latter is an objectionable remedy, on account of its producing a discolouration of the skin.

The subcarbonate of iron has undoubtedly very great power over the disease: I have had I should suppose forty cases in succession all cured by this remedy. Perseverance is sometimes required; but I never had a case occurring in a child where it was fully given that the patient was not cured, though I have never cured a case in adults where the disease was quite local, situated in the head or arm. When cases occur in children, they generally become

better, and the disease gradually ceases. I have not yet met with a single failure. I have had five cases this year, and all of them have been cured. In one, after it had been cured, the child had fever, and during the excitement of fever it returned: the child was brought to me last week, and the disease has not yet disappeared. In general the affection disappears when the remedy has been given about six weeks or two months; but I have had some obstinate cases where it was necessary to continue it twelve weeks. I believe that a large dose will sometimes cure it where a small one fails; but I should not give a large dose where a small one would do; but if that would not answer, rather than give it up I would double the quantity. Children generally like it, and after a time they ask for it, because I exhibit it in double its weight of treacle. Generally there is no necessity to give purgatives. I have seen headache, drowsiness, and giddiness disappear under this remedy—an occurrence which you would not *à priori* expect; but if there be much heaviness of the head, I should employ leeches instead of giving this remedy, at least at first. Some have an idea that if you purge the patient well first and then give the remedy, it answers better; but I have not seen that to be the case.

The oil of turpentine has sometimes been used with success, and some say colchicum. Electricity along the spine, the cold bath, the shower bath, the hot bath and cold in succession, and m sk, will undoubtedly do good in the di ease, and will now and then cure it; but I have tried most of them, and never found any thing so useful as the subcarbonate of iron. I never tried the sulphate of iron but once, and in that child the disease gave way. I may mention that the child was plethoric, and yet the disease gave way. It is right to continue the iron some time after the disease is cured; for, if you do not, the disease is very likely to return.

Leaping Ague.

The above is the common form of the disease; but now and then persons have it in another form, so that they dance or leap, and then it is called *leaping ague*. Perhaps it is called *ague* from not being constant, but coming on in paroxysms. This form of the disease has been very frequent in the northern parts of Scotland, and also in Germany, and some other places.

In this form of the affection persons will sometimes run with extraordinary facility over dangerous places. If they have a place fixed in their imagination they will dart forward towards it, and on arriving at it they will drop down exhausted. Horstius states that certain women in Germany were affected with restlessness of body and disorder of mind, and went annually to the chapel of St. Vitus near Ulm, where they danced night and day till they dropped down exhausted, but were cured till the following May, when the affection returned, and they went through the same ceremony. It is from this circumstance that the common form of the disease is called *St. Vitus's dance*. The French call it the dance of St. Guy; but, not being a Catholic, I do not know who he was. Sometimes the beat of a roll on the drum is said to give persons this tendency to dance, and that they are assuaged by music, just like fits of dancing in chorea. Some do not believe that the beating of the roll has much power, but that the effect results from the motions of the body arising from the excited state of the feelings, just like the other form of the disease which I have mentioned.

In this extraordinary form of the disease some will climb in a very singular manner; others will have fits of rolling; others fits of leaping; others will whirl round; others will tumble regularly, and others will spring and dart forwards, in any direction, to a given spot. Paroxysms of this kind will sometimes come on daily, or even oftener, and sometimes not so often. Occasionally they have been observed to be periodical to the minute, and, as in common chorea, this affection is somewhat under the will. It is a strong desire for motion, and a pleasure in yielding to it; but a strong effort will produce a little diminution of the motion. You will find a curious case of this kind which occurred in a woman, given by Dr. Watts, of Glasgow, in the 5th vol. of the Medico-Chirurgical Transactions. In this woman there were various movements at different times, and he states that he witnessed them himself. He says that she would roll over fifty or sixty times in a minute, and would be sometimes seized with tetanic rigidity, but that she was conscious of her own existence during these fits. In the 7th vol. of the same Transactions you will find a case mentioned by a very eminent surgeon lately dead, Mr. Kinderwood, and which likewise occurred in a female. She had violent fits of dancing, and it was observed by some one, that when dancing she struck the table and every thing that came in her way in regular time, and it was likewise observed that she danced in very good time. A drum was procured, and a man beat it to the time in which she danced, and she immediately turned towards it, and danced up to it; but when the drum was beat in a roll or out of time, instantly her dancing was stopped. It was not known that she had ever danced before; but she now danced in regular time and very gracefully, shewing an infinite variety of steps.

Beating the drum suddenly in a roll or a little out of time always stopped her, and by perseverance in this plan, whenever she began to dance, getting the drum and then interrupting her, she was cured. This repeated interruption at last broke the chain. She was sensible during the paroxysm, and between the paroxysms she nursed her child and attended to her household affairs, and had a great wish for her recovery. All the account she could give of it was, that she had a tune in her mind which compelled her irresistibly to dance. Occasionally there are these motions without any musical ideas whatever, and occasionally patients have involuntary musical ideas, causing them to hum a tune without any motion taking place in accordance with it.

When these cases occurred formerly they were ascribed to witchcraft. A case of this description occurred in Renfrewshire in Scotland, in 1696, and the ministers watched the patient in turn. A commission was appointed by government to examine into the business, and was signed by eleven privy councillors, and it was declared that she was bewitched. A warrant was granted and several persons were apprehended and afterwards brought to trial for having bewitched her. After six hours deliberation of the jury, three men and four women were found guilty and condemned to be burned for having caused the disease, and the sentence was actually executed at Paisley, on the 10th of June, 1697. You will find a case exactly like this, but not ascribed to witchcraft, in the Edinburgh Medical Journal for 1829.

All these singular nervous affections were formerly ascribed to witchcraft, and you find Bishop Jewel, in a sermon preached before Queen Elizabeth, saying,

"It may please your Grace to understand that this kind of people, I meane witches and sorcerers, within these last few years, are marvellously increased within this your Grace's realme. These cies have scene most evident and manifest marks of their wickednesse. Your Grace's subjects pine away even unto the death, their collour fadeth, their flesh rotteth, their speech is benummed, their senses are bereft.

"Wherefore your poore subjects' most humble petition unto your Highnesse is, that the lawes touching such malefactours may be put in due execution. For the whole of them is great, their doings horrible, their malice intollerable, the examples most miserable. And I pray God they never practise further than upon the subject."

In the next session a bill was brought into parliament for making witchcraft felony, and those who know any thing of history must be aware that thousands of victims were sacrificed. A number of diseases and other calamities were ascribed especially to witchcraft.

There is an account in the Ephemerides of a girl who sprang up horizontally and came down again. The mother consulted a medical man, and he told her he could do nothing for her; he attributed it to the devil, and directed her to go to a clergyman. Voltaire says, that the greatest enemies the devil has are the doctors; that it is the doctors who do away with one-half of his dominion—so much was formerly ascribed to him and to those connected with him.

Now one has some clue, I think, to these motions in the experiments of Magendie. He says that if the white matter of both corpora striata be cut, the animal darts forward, or if this be prevented, it still retains a progressive attitude. He says that if the crura cerebelli or the pons varolii be cut from before backwards, an animal rolls over sixty times in a minute. That I have witnessed myself. He likewise states that if you cut vertically from the crura cerebelli through the arch of the fourth ventricle, it has the same effect, and the motion is more rapid, as the section is nearer that point. He says that an animal continued rolling after it was cut. If incisions have this effect, one may easily conceive that a certain local affection may have a similar effect in being the cause of this disease.

In some persons there has been seen a mere propensity to rush forward or backward; such cases are on record.

Some of these affections are clearly the result of mere excitement of mind, some violent passion; sometimes they arise from witnessing other people under the disease; but occasionally they do appear to arise from certain causes within the nervous system itself, independent of all external circumstances. When, however, they arise merely from external circumstances, you see a large number of cases together, and in Germany they have been epidemic—that is to say, have affected a large number of people at a time.

Treatment.—When these cases are sporadic, one would treat them like St. Vitus's dance, and I have no doubt but that they would be cured in the same way. When they are epidemic, one ought to have recourse to mental measures—separate them, and not allow one to be excited by seeing another. Strong corporeal measures can be of little use—medicine must be out of the question; but when these cases do occur without any external excitement, from simple irritation, although I never had such a case, I have no doubt that the cold bath, oil of turpentine, and those things which cure common St. Vitus's dance, will also cure this affection.

CLINICAL LECTURE

ON

ŒSOPHAGOTOMY,

Delivered at the Middlesex Hospital, Jan. 12, 1833.

By Sir Charles Bell.

Gentlemen,—Coming from the operation that has just been performed, you are naturally anxious to understand the necessity for it, and you are entitled to know what is passing in the surgeon's mind.

Here is a practical question, and you must approach it by bringing to your recollection the structure and function of the parts; for believe me that there is no studying even that which you may call a practical subject without laying a foundation in the knowledge of the proper functions of the organs concerned.

When speaking of laryngotomy in a former lecture, I alluded to a point to which I must now recur. There are certain sensibilities situated in different parts of the body, unlike the common sensibility of the surface, and unlike the sensibility of the different organs of sense: these are given for the purpose of drawing into combination or sympathy a variety of muscles, some of which may, perhaps, be placed in distant parts of the body, but the combination of which is necessary to the performance of a certain act. The act of swallowing is one of these; and if there were not a sensibility situated in the pharynx, controuling the respiratory muscles, and bringing on a succession of involuntary actions in the pharynx, œsophagus, and diaphragm, you certainly could not swallow without suffocation. Observe, then, what takes place in the act of deglutition. By an act of volition you move the morsel in the month, by volition you thrust it back into the pharynx, and the moment that it passes the arches of the pharynx, the constrictor isthmi faucium and the palato-pharyngeus act together, and seize upon the morsel. This, you will observe, is the first act of an involuntary operation: the muscles urge the morsel into the superior constrictor of the pharynx; then, in succession, into the middle and inferior; which places it under the grasp of the tunica vaginalis gulæ: and even now the morsel cannot descend unless a relaxation takes place in the fibres of the diaphragm, through which the œsophagus passes. The moment that the morsel comes under the action of the constrictors of the palate, it is no longer an act of volition. The beautiful thing here is, that there is a sensibility drawing all these muscles into co-operation, which volition could not do: it is one of the instances in which a sensibility is placed in a part that certain muscles may be controlled, and act without the interposition of the will.

But there is another curious part of this function, which is the sudden and absolute stopping of all action in the muscles of inspiration. If the breathing went on at this time, of course the morsel would be drawn into the larynx, and suffocation would be the result. The curious thing, worthy of admiration as proving design and benevolence is, that while one set of actions is excited by this sensibility, another is totally stopped. Then here is the very point for your consideration; you perceive that if the morsel be stopped in its descent, inspiration must be suspended, and suffocation follow, as certainly as if the morsel plugged up the opening of the glottis.

Now taking this as the principle upon which we are to examine the facts before us, give me your attention to the following circumstance. In passing the waiting-room, some time ago, I heard a great noise, a very voluble tongue, an Irishwoman scolding; not drunk, but worse than drunk; in that state of violence, almost madness, which long-continued indulgence in tippling produces. This woman had a piece of meat sticking in her throat, and my observation was a natural one, that she could not be very ill if she could speak so loud and so long, but that it was right to take her into the hospital, and not to lose sight of her until she was relieved. She would not remain in the house. She went out, but was brought in again in the evening much worse, and she died in the middle of the night. Upon examining the body, a large piece of meat was found, not in the pharynx, but thrust out of the pharynx, and lodged betwixt it and the spine.

[The case was here read. It appeared that this woman was nearly choked whilst sitting at dinner; that to relieve herself, she pushed the handle of her knife down her throat with great violence, and that the knife was wrested from her by force. After this she got the assistance of a surgeon, who passed a probang into her throat; and then, not feeling relief, she came to the hospital. The probang, with the sponge, was passed repeatedly, with great ease into her stomach. When brought a second time into the hospital she had difficulty of breathing, which she had not at first. This oppression and difficulty of her breathing increased during the night, attended with emphysema of the neck, and towards the morning she died. On dissection, a rent was found in the pharynx at its lowest part, and a tough piece of meat was lodged out of the pha-

rynx, and anterior to the spine. Effusion extended down the tract of cellular membrane along the œsophagus into the chest, and both cavities of the chest contained a large quantity of serum.]

The first observation that I will make to you, gentlemen, is to think of what you ought to do on common occurrences, and not always to contemplate such horrible consequences as you have seen to-day, or as you have heard narrated in this case. When a person has a piece of gristle or beef sticking in the pharynx, and choking him, you know that it is situated high in the pharynx, because it does not choke the person unless it be nearly in contact with the glottis, or epiglottis. Now observe the consequence of this, that when a person is actually choking from a piece of meat in the pharynx, you can reach it with the finger. You can with the point of the finger, which is the best probang, unfix it, and then the natural action of the parts brings it all up. That is a common occurrence, and it is best to avoid instruments; and let me here remind those gentlemen who are leaving town, that they should not incur much expense in surgical instruments, except in the department of forceps. Pick up what curious instruments of this kind you can, and carry them into the country; you will always find a use for them. I mean such forceps as are applicable to the natural passages.

Here is a case which strikingly illustrates the propriety of the rule to endeavour first to bring the body up that is impacted in the œsophagus. There is a danger in thrusting the body downwards, because you may fix it so firmly that it cannot be got out. In this case it does really appear that there was a degree of violence done which no surgeon could be capable of; and accordingly the narrative states that the friends by force took the knife out of the hands of the woman, with which she was thrusting the morsel down her own throat. I told you that she was crazy with drink. The morsel then was thrust through the loose fibres of the pharynx, out of the funnel-like part, and through the fleshy columns, and it was lodged in the cellular membrane, between the pharynx and the spine. It appears that a passage was made nearly as far as to the subclavian; but it does not follow that this was by the introduction of the probang: the probang passed down freely —there is no proof that it was forced at all; on the contrary, that which produced the obstruction was out of the gullet, and the instrument passed freely down. What then was the cause of death? That is an important question.

When once you make a breach upon the pharynx or the œsophagus, every time that the patient attempts to swallow, a portion of food or fluid gets into the opening and breaks its way into the cellular membrane. You remember perfectly well that there is a loose texture of cellular membrane extending all the way by the side of the œsophagus into the mediastinum, so that, without presuming any error on the part of the medical attendants, the fluid which the patient drank might escape from the rent in the pharynx, and so work its way down the cellular membrane, even to the loose texture of the mediastinum, and within the chest itself. I am not speculating; I have known such a circumstance happen; I have found fluid that was swallowed, in the cellular membrane of the mediastinum. I fancy then that this is the key to the whole case; that it was not the first violence that killed the woman; that it was not the obstruction in the œsophagus that directly caused suffocation, because the portion seemed to have been removed from the neighbourhood of the windpipe; but on dissection it appeared that there was inflammation enough of the neck, thorax, and lungs, to account for the effusion into the cavity of the thorax; and from these secondary effects she must have died. The emphysema in the neck confirms this, for the air did not come from the lungs; it must have been propelled from the pharynx into the loose cellular membrane during the act of swallowing.

The next circumstance in the history of the occurrences of this hospital, and it may be in the recollection of some of you, is that a man was brought in with a bone sticking in his œsophagus. In the last case it was a piece of gristle or a piece of beef; in this it was a bone of a sheep's tail. Observe the effect: the bone stuck in the œsophagus, and at last ulcerated into the trachea. Now you will see what was passing in our minds with regard to the child that has just been operated upon — that there is danger of a piece of bone which has become fixed in the gullet ulcerating into the air-tube. The patient to whom I have just alluded died in consequence of the bone having stuck in the œsophagus, and then made a hole by ulceration in the trachea.

The next instance on record (all these cases occurred within a short period) is that of a man who was brought in with a piece of meat sticking in the pharynx, and causing suffocation. In this case the house-surgeon performed laryngotomy; but it was too late—the man did not recover. When I enquired why efforts had not been made to extract the body through the mouth, I learned that the teeth were firmly clenched during the short interval that the patient lived.

Now these are circumstances that bring us to reflect on the condition of this child. In the present case, which has no doubt interested you in the highest degree, you find that the patient is only two years and three months old. The mother brings the child; she in great alarm, but the child not apparently suffering much. The mother says that she has been accustomed to give her child a bone to pick. "I gave him," she says, holding up her hands above her head with the utmost agony, "a mutton bone with some meat upon it, expecting him to pick it, and he swallowed the whole, since which time he has not been able to swallow any thing solid, only a little liquid." The child breathes freely; he can swallow soup or milk, but he cannot swallow any thing solid. Attempts have been made to extract this body, first by the house-surgeon, and in succession by the surgeons of the hospital. The body can be touched by the point of the finger: it appears to be lodged to the right of the glottis, and fixed in the membrane of the œsophagus. We can just touch a sharp point with the finger, and on any attempt being made to catch it, it escapes and descends lower. A variety of instruments have been tried—the hook of the probang, the crane-bill forceps, and twisted wire made into a hook; and instruments of various construction have been forged for the purpose of unfixing and hooking this piece of bone, but all without effect. Four weeks have elapsed since this unfortunate accident, and a consultation was with much propriety held upon it. The result of this consultation was, that the child could not be permitted to remain in this hazardous state, that he might in an instant be suffocated, and we should have to blame ourselves, not certainly for indifference, but for inactivity.

It appeared that this sharp, ragged, abrupt piece of bone, could be felt; and it further appeared, that, if it were permitted to remain, ulceration would take place. Now ulceration, I repeat, into the pharynx would have produced this effect: whenever the child was fed, a portion of whatever it swallowed would be received into the ulcerated hole, and, gradually, a bag would have been formed there. This would be the effect of the ulceration of the pharynx merely; but what would be the result of ulceration into the trachea or larynx?—suffocation; for when ulceration takes place in the larynx, there is such a degree of irritation produced that the person is suffocated. For example, when there is an abscess outside of the larynx, and the abscess works its way by ulceration into the larynx, the person is suffocated: not by the quantity of matter thrown into the windpipe—no, that is not the cause; but by the inflammation attending the ulceration, and the consequent irritation increasing till spasm of the glottis produces suffocation. I trust, then, that nothing more need be said to carry you with us in determining upon the propriety of this operation.

You have seen the nature of the operation, and it must have impressed the conviction on your minds that it is one not to be lightly undertaken. You have seen the parts in which the incision is made, and the depth to which it must be carried, and you are aware of the hazard of the operation, unless there be a very intelligent and active surgeon, and that surgeon well seconded. With regard to the operation itself, what I suggested was, to make an incision upon the margin of the sterno-cleido-mastoid muscle, then to pass the director under the platysma myoides, and slit it up; next, with the handle of the knife, to dissect between the larynx and under the sterno-cleido-mastoideus, and to cut very little there with the edge of the knife. When the margin of the sterno-cleido-mastoideus was turned aside, I recommended that Weiss's forceps for the urethra should be passed from the mouth into the pharynx, and that it should be brought round so as to push out the pharynx at the incision; which I had done formerly myself with great ease, owing to the yielding nature of the pharynx. By cutting deep without this direction you run a great hazard; while, by passing the instrument into the mouth, you can bring the part quite up above the margin of the wound. You will observe the advantage of using this kind of forceps; for when the surgeon has cut upon the end of it, and brought it out at the wound, he has only to open the forceps, when the wound of the pharynx dilates easily; and then, putting the finger betwixt the blades, it can easily be carried into the pharynx.

Though one cannot but feel a good deal during the delay of an operation, when it is over I reflect upon it as an advantage to you; for there is nothing of which I am more afraid than that you should consider such operations as slight matters, and easily performed. When you see an operation done speedily, and without hesitation or seeming difficulty, you are betrayed into the belief that it is easily done, and perhaps the difficulty occurs only in your own practice. You have seen the operation performed with every proper precaution; you have seen the necessity of taking up arteries, branches of the superior thyroid (you are anterior to the sheath of the carotid, and above the bend of the inferior thyroid); you have seen the operation, in short, performed in a manner that you may safely imitate. You must have noticed that the incision must go very deep, unless you use the precaution of

introducing an instrument that may serve as a directory from within. A catheter was used for this purpose, and you observed the manner in which the operator proceeded. When the point of it was cut upon and brought out, he took hold of the end with the blades of the forceps, and then drawing the point of the catheter back into the pharynx, the forceps were carried along with it. By expanding the blades of the forceps, he made room for the passage of his finger, and in this way, as you might have observed, there was no occasion for much cutting of the pharynx. The opening was made just at the termination of the pharynx and the beginning of the œsophagus. On introducing the finger here he felt the bone sticking firmly; and, using the polypus forceps, he grasped it, and brought it out — a sharp, quadrangular portion of bone, the spinous process of a vertebra. [It was of the size and shape sketched below. — Rep.]

Now I trust that the child will do well, and that it will shew us all the happy results of good surgery; but do let me impress this upon you, that the operation has not been done without great anxiety on the part of the surgeon, and an absolute conviction of its necessity.

There is one other point, connected with this operation on the pharynx — the formation of a bag. You must reflect upon this. There are two ways in which the cul de sac, or bag in the pharynx, is formed. One is, when a little ulceration takes place in the pharynx, and then a portion of each morsel that is swallowed is urged into it. In the course of time, from these minute deposits, the ulcerated spot becomes a bag—a bag which makes its way behind the fleshy columns of the constrictor pharangis; and unfortunately it happens, that from the portions of the morsel being deposited there in succession, a little and a little at a time, the bag at last acquires such a volume as to compress the œsophagus, and to prevent deglutition. This is one of the most difficult cases to treat, if ever it was well treated. But there is another way in which a bag may form. The pharynx and the œsophagus are subject to extraordinary attacks of spasm, and in hysterical women especially. You will have the voluntary act of deglutition opposed to the involuntary act; that is to say, the person will attempt to swallow, but the involuntary act will not follow the attempt, and, consequently, the pharynx becomes enormously distended, the morsel not being sent down. Dilatation of the pharynx is in this way frequently made, and a portion of the inner membrane is at last thrust between the columns of the surrounding muscles, precisely as it takes place in the urinary bladder; for when there is a sac in the urinary bladder, it is produced by the violent action of the bladder itself, thrusting the mucous membrane through the fibres of the detrusor urinæ, until a sac is formed. So it happens that a bag is formed of the inner membrane of the pharynx, which is thus thrust between the columns of the constrictor pharyngis: and then the unfortunate result takes place which I have described; portions of the food are deposited there, and more and more gradually accumulates, until at last there is a bag pressing between the spine and the œsophagus, and the person, if not relieved, dies of inanition. Relief in these cases is very difficult to be obtained; because if you attempt to introduce an instrument, it is, just as the food, more apt to pass into the sac than into the œsophagus. We would say, do not let the person eat any more by a voluntary act, but be fed by a tube, so that the sac may not be filled; but the difficulty of passing a tube through the right passage, and so as to avoid the false one, is so great, that if the patient continue to swallow liquids, it is still deposited in the sac, and there necessarily follows great ulceration, great mischief, and death attended with protracted suffering.

Now I touch upon this, gentlemen, because I wish you to observe what is the effect of any breach upon the surface of the pharynx, and why I am always unwilling to perform any operation upon the pharynx or œsophagus, either within or without. Of course, in the present case, attention will be paid that the food is not permitted to lodge in the wound.

OBSERVATIONS

ON THE

NATURE OF INFLAMMATION, AND OTHER MORBID PROCESSES;

Read at the Harveian Society, October 1, 1832,

By Marshall Hall, M.D. F.R.S. &c.

Before we can judge with accuracy of the phenomena of inflammation, it is necessary to make ourselves familiar

with the appearances of the circulation in the minute vessels and capillaries, in their healthy state. The members of this Society will be assisted in the accomplishment of this object by a perusal of a little work* on this subject, which I had the honour of presenting to the Society some time ago, and by an inspection of these appearances through the microscope now on the table. I may proceed, therefore, at once to the more immediate object of the present lecture—viz. to treat of the morbid phenomena of the circulation, presented by a part in a state of inflammation.

The organ in which we are best enabled to see the phenomena of the healthy and morbid circulation, is the web of the frog's foot. In regard to the morbid appearances, it is to be lamented that we cannot observe them in the warm-blooded animal. It is possible that this may be done hereafter in the wing of the bat, or in the web of the white duck, or other water-fowl. In the frog, the morbid changes are exceedingly slow in their progress, and probably less marked and defined than they would be in an animal of more active circulation.

Amongst the simplest means of exciting inflammation in the web of the frog, is the infliction of a small wound by a needle, or the application of alcohol. In the former case, we observe no immediate effect; the phenomena of the inflammation are gradually established. In the latter we observe, almost at the first, a stagnation of the globules of blood in their course through the capillaries and some of the minute vessels; and subsequently the more marked appearances of inflammation.

The first appearance of pure inflammation from a wound, is a gradual retardation of the course of the globules, with distention and augmented redness of the capillaries; very soon this stagnation of the globules becomes complete, and subsequently the globular character of the blood is lost. The capillaries appear wider, and flattened; the inflamed part is redder than natural.

After the application of alcohol, we soon observe scattered stagnant capillaries, which augment in number until the stagnation becomes general. With this appearance there are generally minute spots of ecchymosis. Frequently a globule of blood is observed to be arrested at the origin of two capillary branches, and carried partly into each of them, acquiring a crescent or kidney form. Still more frequently the globules are observed adhering to the sides of a minute vein, whilst other globules pursue their course in its central part. These phenomena serve to denote that some change has been induced in the internal lining of the minute vessels and capillary canals, by which the adhesion of the adjacent globules of blood is occasioned. At a subsequent period, the stagnation becomes complete and general, and ulteriorly the globules of blood lose their distinct globular form and character.

This state of things continues for a varied length of time. At length, one or more of several events occurs:—

1. The stagnant globules are seen to recover their motion; being observed first to oscillate, and then to move on. If we carefully watch the appearances of the inflamed part at this moment, we distinctly observe that the particles of blood have the form of membranous films instead of that of globules. These films oscillate for a time; they are then carried onwards into the circulating mass, and are replaced by actual globules.

This event appears to afford us the type of *resolution*.

2. In other cases, instead of the phenomena which I have described, we observe the globules to lose not only their distinct character, but their colour: the part, the vessels, become pale, and at length nearly colourless. Colourless globules are seen to exude from the edges of the wound (if this has been made), whilst those edges become smoother and more separated. If the inflammation has been excited by alcohol, the cuticle separates, the vessels disappear, and the textures of the part break up.

These phenomena appear to furnish the type of *suppuration* and *ulceration*.

Abscess is probably formed in solid, parenchymatous parts, by the globules becoming first stagnant in the capillaries; then accumulated by the yielding of the capillary parietes; and, lastly, broken down, and replaced by colourless globules. This process goes on whilst

* An Essay on the Circulation of the Blood.

the textures yield to the distention from the vis a tergo, or the destructive ulcerative process.

3. In other instances these restorative changes are not observed: the part becomes pale, irregular in surface—the vessels obscure, the membranes dusky and opaque.

In these phenomena we have the type of *gangrene*, as it arises from inflammation.

Such are the phenomena observed when the seat of inflammation is *solitary*. But frequently we have a *series* of inflammations, or of other forms of disease. Repeated abscesses form in phlebitis. Tubercles seldom, if ever, occur in one spot alone. The same thing may be said of melanosis, of the encephaloid tumor, &c. In *all* these cases it is probable that the *cause* exists *within* the vascular system, and floats along with the tide of blood; that it becomes arrested in the *capillaries*, especially of particular parts of the economy, forming the nucleus of accumulation of similar particles and of the *successive* forms of disease.

It is an interesting inquiry—can these particles of pus, of tubercle, of melanosis, of encephalosis, of scirrhus, &c. be detected by the microscope amongst those of the blood?

These views receive interesting confirmation from various facts. Mercury injected into the vessels by Cruveilhier, passed to their extremities, was arrested there, and became the cause of tubercles. Amongst the effects of the experiment of the saline injection for cholera, one of a very interesting character is briefly noticed by Dr. Carruthers, in the Medical Gazette for August 1832, page 607. The report for June 4th states, the "left eye, ever since the first injection, has been very much inflamed, and there is now" (the fourth day) "a small ulceration of the cornea, a little below the centre." It is remarkable that the cornea is very apt to become affected with ulceration and destructive inflammation in phlebitis; in which disease it is probable that pus is first secreted from the internal coat of the vein, carried along the circulation, and arrested in the capillaries of various parts, —as the cornea, the membranes of the joints, the cellular membrane, &c.; thus giving origin to stagnation, inflammation, suppuration, &c.

It is well known that tubercle, melanosis, encephalosis, scirrhus, &c. are *diffused* diseases — display themselves in *several* organs at once, or in succession. How is this peculiar character to be explained? It will be understood at once if distinct particles, of a heterogeneous character, be discovered in the circulating blood.

But, besides these formidable diseases, there are others far less so, which partake of the same diffused or general character: furunculi seldom occur in the solitary form; they are generally associated, too, with paronychia, and other similar affections. It is highly probable, that in those diseases which generally result from dyspepsia, unassimilated food is taken up by the lacteals, carried into the circulation, and made the cause of these various topical affections.

At the close of our last session, I briefly alluded to the investigation in which I am now engaged—into MINUTE *pathology*; and promised to lay the results before the Society. I regard the science of pathology, and of morbid anatomy, indeed, as very different from the description or representation of the more crude masses of disease; the effects—the last, and too often incurable, effects of morbid processes. We must trace the series or chain of causes and effects backwards, and endeavour to discover the *first* links of this chain; and then, probably, some mode of prevention, or early cure, may be discovered. On a future occasion I hope to lay before the Society some representations of the minute vessels and capillaries affected by inflammatory and other morbid processes, with their first results.

P.S.—This subject is briefly noticed in the Medical and Physical Journal for October 1832, pp. 315, 316.

Manchester Square, Jan. 15, 1833.

CASE OF

HEMIPLEGIA AND PHLEGMASIA DOLENS,

AFTER DELIVERY.

To the Editor of the Medical Gazette.

SIR,

MRS. MAUND, æt. 29, of a leucophlegmatic temperament and disposed to

phthisis, requested my attendance, September 30th, 1832, about five o'clock, A.M. On my arrival the child was born; she had been in labour all the night. On examination, the placenta was lying in the upper part of the vagina, which I extracted. She had had a good deal of hæmorrhage, which was also considerable after the extraction of the placenta; so much as to produce faintness: the uterus was contracted. A bandage applied round the abdomen. Twelve o'clock, M., very comfortable.

Oct. 1st.—Doing very well, but complains of acute pain over the left eye, and headache, which troubled her very much before her delivery.

Capt. Ol. Ricini, ℥ss. 2da. quaque hora donee alvus fuerit soluta.

3rd.—Castor oil has not operated freely, although she has taken several doses. She has suffered severely from her head since I last saw her; and this morning was attacked suddenly with total paralysis of the left side of her body.

V. sectio ad ℥xviij. Repeat the oil till the bowels have been well purged, and let her live low.

4th.—Rather better. Can use her leg very well, but the arm is completely paralysed. The arm to be well rubbed with the following liniment every night and morning, and eight leeches applied to the temples.

℞ Linament Camphor. Comp. ℥ii.; Spt. Lavend. Comp. ℥ss.; Liq. Ammon. Fort. ℥ss. M. ft. Liniment.

6th.—Much better. Finds her leg free from pain, and can use her arm freely. The bowels have been well purged, and she has plenty of milk. The baby is doing well. Perst.

12th.—Nearly recovered. Perst.

19th.—I was again requested to attend her. She said she had been down stairs, and thought she had taken cold, for she had been very feverish, and was in great pain over the hypogastric region, with tenderness; her left groin and leg very painful and swelled. In fact, she was labouring under a severe attack of phlegmasia dolens. Pulse small and quick; urine high coloured; tongue clean; milk nearly gone. Her lochia continued the usual time.

Applicat. Hirud. xij. and to be well fomented.

℞ Pilul. Hydrarg. gr. xij.; Pulv. Antimon. gr. iv. Syr. q. s. ft. Pilul. iv. capt. 1 omni nocte.

℞ Spt. Æther. Nit. ℥iss.; Liq. Ammon. Acet. ℥iss; Mist. Camphor. ℥ivss. M. capt. coch. iij. larg. 4tis. horis.

20th.—Pulse 110; face flushed; bowels open; less pain in groin and leg. Perst.

24th.—Swelling of the leg and thigh much diminished; less tenderness over the uterus. Perst.

25th.—She complains of great pain in the calf and groin of her right leg, and of great weakness. The child to be taken from her, and dry-nursed.

Applicat. Hirud. viij., and to be well fomented with Decoct. Papav. ter in die. Rept. Mistura.

Nov. 2d.—Much improved. A flannel bandage was applied to the legs and thighs.

17th.—Leeches to the right calf on 6th and 7th. Going on well. The vena saphena major can be felt distinctly from the knee to half way down the leg, resembling a quill. Perst.

Dec. 17th.—She is able to walk about her house; the swelling quite gone. To keep her bowels open with castor oil, and attend to her diet; and, when the weather will permit, to be taken out in a Bath chair.

30th.—Cured.

JOHN GREENING, M.R.C.S.L.
Surgeon to the Worcester Dispensary.

Bridge Street, Jan. 11, 1833.

CASE OF PHLEBITIS; WITH PATHOLOGICAL REMARKS.

BY CHARLES T. INGHAM, M.D.
Surgeon, 29th Regiment.

DAVID SHAW, aged 24 years, private in the 29th regiment, of healthy constitution and temperate habits, was attacked suddenly on the night of the 19th June with a disorder resembling epilepsy, which arose, as facts then shewed, from undigested matter in the stomach. After the abstraction of blood, and free vomiting which ensued, he fell asleep, and on the following day was quite well again.

He took a dose of salts, however, and on the third day he returned to his duty. His arm then became painful, but the bandage, though he felt it to be tight, he left on, and he neglected also to report the uneasiness to the medical gentleman who had bled and attended him. On the 23d inst. (the fourth day from the bleeding) he returned with the* detachment to head-quarters, and feeling unequal to duty, came to me, to shew his arm. The wound was found red and gaping; but, excepting pain, there was no constitutional disturbance. He was sent to the regimental hospital, a purgative of senna and salts was given, and cold applications were directed for the arm.

24th, (5th day).—The state of the arm seemed to be improved, it was less painful, and the constitution still appeared to be unaffected.

Cold applications were continued.

25th, 6 A.M.—He was found very unwell; the arm was swollen; and the swelling and tension extended upwards and downwards along the fore-arm; said that he was attacked about 2 o'clock with rigors, which were followed by febrile symptoms; the pulse was 136, rather small and unresisting; tongue white; thirst urgent; abdomen tumid and tense; no stool.

An oleaginous purgative was administered, and warm fomentations were ordered to be applied constantly to the arm. In the evening the arm was still painful, and the febrile state remained unaltered; the medicine had not operated.

A warm bath, a purgative injection, and linseed-meal cataplasms were ordered.

26th.—One copious feculent dejection after the enema, and a good deal of sleep during the night; the arm still painful and tense; he felt chilly, yet the skin was hot and dry; pulse 106, soft, and regular; thirst urgent; abdomen softer, and free from pain; the warm applications to the arm were found most comfortable.

Full doses of James's powder and submuriate of mercury were ordered thrice during the day; warm drinks, and a little sago; brandy, largely diluted, administered occasionally.

6 P.M.—Vomiting had ceased since the cordial draughts; arm less painful; pulse 132, regular.

A strong opiate was ordered at bed-time, and it was repeated at midnight.

27th.—Slept tolerably well; rigors came on early in the morning, followed by partial heat and sweating over the face, head, and neck; pulse 112, small; stomach irritable; thirst urgent; countenance anxious; stools feculent; abdomen softer; urine scanty, but of natural appearance.

The bath and injection repeated; wine every second hour; and cataplasms removed every fourth hour.

8 P.M.—Pulse 120, small; skin hot and dry; thirst urgent; abdomen tumid and tense.

The injection and bath were repeated; wine continued; and ten grains of submuriate of mercury ordered.

28th.—Was delirious, and slept little or none during the night. Pulse 112, small and irregular; made little or no complaint of the arm; countenance anxious; bowels slow; abdomen less swollen, and free from pain on pressure.

Dysuria, but in consequence of spasm in the urethra the catheter could not be passed.

Camphor and opium in two and one grain doses, every hour; opium was also exhibited per anum; and wine continued.

29th.—Had slept at short intervals during the night, but when awake had been delirious; the whole fore-arm hard and tense; arm less so; pulse 120, small; thirst very urgent; stomach irritable; tongue loaded; bowels not open; temperature in the right axilla 102, in the left 103°.

A purgative injection administered; camphor, opium, and other means, continued.

6 P.M.—Made no complaint of pain; had dozed much during the day, and he appeared then to be sleepy; pulse 120, stronger, and regular; had a copious feculent stool, and passed one pint of urine, of natural appearance; had taken one ounce of brandy, diluted with one ounce and a half of hot water, at intervals, since 2 P.M. and with apparent advantage.

The remedies continued.

* A weekly guard, stationed at Grand River, two miles and a half from Port Louis.

30th.—Arm about the wound scarcely painful, but the fore-arm tense, and two or three red lines were seen in the course of the cephalic vein; passed a sleepless night, with delirium, vomiting, thirst, and occasional distressing hiccough; abdomen swollen; dysuria; pulse 120, regular; jactitation, lassitude, and anxiety of countenance; temperature of right side 103°, left 104°; one feculent dejection.

A purgative injection was administered; laudanum and nitrous æther prescribed; brandy continued; and cataplasms.

2 P.M.—Respiration difficult; suffered from dysuria, but the catheter being introduced, one pint only of urine, of natural appearance, was drawn off; abdomen somewhat tense, but not painful.

July 1st.—Had passed a better night, though sleepless; made no complaint of pain in the arm, and he raised it, seemingly with ease; but the fore-arm was swollen and tense anteriorly, nearly in its whole extent; pulse 120, regular; tongue parched, red at the apex and sides; temperature 104°; in the right 102°; had voided urine, and passed one feculent stool; abdomen softer.

Remedies continued.

2d.—Had been delirious all night; pulse 124, throbbing; face of dark purple hue; respiration embarrassed; abdomen tumid, but not painful; frequent sighing and jactitation; tongue brown, and parched; thirst urgent; dysuria; no stool; a small quantity of urine drawn off.

A calomel bolus was given; a purgative injection and cordials continued.

Vespere.—Fæces and urine passed involuntarily; pulse 130, small and throbbing; delirium, and tendency to coma; face of a dark purple hue; respiration laborious.

Cordials continued.

3d.—Pulse 124, scarcely perceptible; extremities cold; respiration difficult; countenance livid.

Bottles of hot water to the extremities; cordials continued.

Vespere.—Moribund. His death took place at 4 A.M. the following morning.

The examination of the body was made nine hours after death. The countenance still bore traces of the purple hue, and of the anxiety which had characterized it during the illness, and which bore resemblance to that of one suffering under tetanic spasm; the body was little, if at all, emaciated; the limbs were very rigid; and the diseased arm was undergoing decomposition more rapidly than the other. The head was examined carefully, but no appearance presented itself, either in the brain, or its membranes, which could be held to be the result of the previous disorder; the quantity of fluid in the ventricles was minute. In the thorax, some firm adhesions existed between the pleura on both sides, but the heart and lungs were sound, and the abdominal viscera were all apparently uninjured. The limb was slightly enlarged and livid; the wound, whence all the mischief had arisen, was small, but its orifice was patent, and rather sloughy; the cephalic vein was thickened, hard, and impervious in parts, for a considerable distance above and below; the cellular substance in its course was condensed, and so intimate were the adhesions between it and the vein that it was not possible by careful dissection to remove it entire. The vein had, for an extent of about four inches from the wound, a ligamentous appearance; its cavity was but partially obliterated, for portions of it, when cut into, were pervious. The inner membrane was not particularly red; a small purulent depôt was found close to the vein near the wrist; and one or two similar ones, in the course of the vein, in the arm. The subcutaneous veins in the fore-arm were also thickened.

The postmortem examination bore out the decision of Dr. Baillie, that "some diseases consist only in morbid actions, but do not produce any change in the structure of parts: these do not admit of anatomical inquiry after death." The cause of such intense constitutional derangement ending in death had left no trace, for the alteration of structure in the arm was neither of a kind, nor to an extent, to account for the consequences which had resulted from its influence over the system: it may be added, too, that the limb was never so much affected, as apart from the sympathy of the whole, to cause uneasiness. The brain and ganglionic system were disturbed from the commencement: headache, rigors, purple hue of countenance, anxiety, and jactitation; vomiting, dysuria, swollen tense

abdomen; and, above all, hurried action of the heart and circulation. In saying that the brain was disturbed, we come far short of the knowledge which is desirable; for we know neither in what that disturbance consisted, nor how the disorder was communicated through the system; we witnessed the phenomena, but these left no appreciable signs. There was no one trace certainly of inflammation; it would not have been possible to have distinguished the brain, or the thoracic viscera of this subject, from one dead under other circumstances, and pathology seems to offer, therefore—save what may be gathered from the phenomena during life—but little solid information.

It has been conjectured, I am aware, that the pus which is found very universally in small depôts in the course of the vein, in these cases, is absorbed, and so, becoming a poison, acts deleteriously upon the brain. This opinion is probable, for we know the sudden and deadening influence which results from the introduction of air or other fluids into the vascular system. Pus was not found, however, in the course of the examination, in any vessel, not even in the portions of the diseased vein, which were still partially pervious. But may not the mucous* fluid which lubricates the inner tunic of the venous system (acting probably as a shelter from the contact of the blood) have been augmented or deteriorated, or altogether suppressed; or may it not have changed in quality?—may not some change or changes so produced have acted deleteriously upon the brain? Pathology here, as unhappily in many other affections, sheds no light upon the nature of the ailment; it shews only what it was not, and if there be good from narratives like this, it results from making apparent the value of precaution and the necessity for watching the first signs of danger. Had the man complained when uneasiness first was felt, or had due inquiry been made, the local injury might have been alleviated, which, once it had exerted its influence upon the constitution, became the source of suffering and death.

With respect to the treatment, it was directed according to the phenomena, according to the affection of the system: that is, which by these phenomena seemed to be suffering, and to the probable tendency of its operation.

When the patient was first seen at the Military Hospital, the disease was still apparently local and mild. Simple means, with confinement to bed, were used; but symptoms of specific disorder soon manifested themselves, and the indication seemed to require that the system should be supported and quieted—should be borne through, so to say, a given period, when, morbid influence having ceased, and its consequences having subsided, the body would have been left to the resources of its wonted agencies; thus soothing, opiate, cordial, and tonic remedies, were administered. This period of calm, or cessation of disease, unhappily, although suffering was mitigated, was not attained. Disease seemed to have (without relation to the local injury, the parent of all the ill) entire possession of the frame, and it continued, with partial vicissitudes and modifications, but little if at all influenced by the means employed, until the tenth day after admission, when life was exhausted. The features of the case were so forbidding all through, that the prognosis, from the moment that the constitution participated in the disorder, was unfavourable; yet still hope was not finally abandoned until the state of coma, livid countenance, and stertorous breathing, seemed to indicate a change of structure in the brain, which precluded all possibility of recovery.

Port Louis, Mauritius,
August 18, 1832.

* En dedans, la membrane interne du système vasculaire est sans cesse humectée d'un fluide muqueux, dont les sources sont encore ignorées, et qui la garantit de l'impression du sang avec lequel elle est en contact. On commit les valvules nombreuses dont est parsemée, dans les veines et dans lymphatiques cette membrane interne.—*Traite des membranes en général. Par Xav. Bichat.*

CHRONIC BUBO.

To the Editor of the Medical Gazette.

SIR,

I OBSERVED, whilst perusing your valuable Gazette of the 8th inst. a request that some of your readers would inform "Medico-Chirurgicus" of a method by which he might remove chronic enlargement of the inguinal glands, caused by gonorrhœa or syphilis. Having been extensively engaged in the treatment of such diseases, both in hospital and private practice, and my attention having

been particularly drawn to this subject whilst making experiments to establish some points in that valuable paper on the cure of Venereal Disease without Mercury, published by my much-lamented friend the late Mr. Rose, of the Guards, in the 8th volume of the "Medico-Chirurgical Transactions," I am induced to trouble you with this communication.

From the before-named period to the present time, indolent glandular swellings in the groins, thickenings of the integuments, and cellular membrane there, and in the upper part of the thighs, have engrossed a considerable portion of my consideration; for I, like Medico-Chirurgicus, formerly had to feel my way on this much-neglected subject, and used then to try leeches, discutient lotions, tartar-emetic ointment, blisters, &c. &c.; but in many instances, I must own, to little purpose.

I now pursue the following method for their cure, and I may say invariably with success.

If there exist redness of the surface, or tenderness on pressure over indurated inguinal glands, or thickened skin and cellular membrane, I prescribe, as a precautionary measure, leeches and cold lotion, the latter formed of the liquor plumbi acetatis dilutus; and I confine my patient to bed, and feed him on a slender diet. This confinement is absolutely requisite, inasmuch as after the gonorrhœa (or sore) is cured, the perpetual movement of the thighs is the cause which keeps up irritation of the absorbents, action of their arteries, and consequent enlargement. Three or four days after this treatment, I have the whole diseased surface thickly smeared over with the unguentum hydrargyri fortius, and the part thus smeared covered by a large tepid linseed poultice, and both applications renewed night and morning. This plan (with attention to the bowels) should be persevered in for one, two, three, or more weeks, unless the swelling should have sooner subsided.

The patient ought to be seen every two or three days by the surgeon during the treatment, as at times the stimulation of the mercury, when promoting absorption, is apt to cause the formation, in every tenth or twelfth case, of trifling, small, superficial abscesses: their commencement may generally be prevented by cold wash. If these abscesses come forward and suppurate, it is of little consequence, as their discharge always assists the local mercurial action in the reduction of the swelling; and they readily heal afterwards. By this course of treatment the patient's mouth will (probably) ultimately become sore, which will somewhat interrupt the progress of treatment. When this happens, I order the poultice alone, until I can, with comfort to the patient, again have recourse to the ointment also; or to save time, (and especially in scrofulous persons) I administer iodine, which in these cases does comparatively little good when applied externally. I may here observe that the internal exhibition of mercury is not so speedily followed by the absorption of the swellings as the external application is, and, therefore, it is bad practice to give it internally alone, or at the same time that it is applied externally; for it is the local stimulation to the absorbents of the part, and not to the whole system, that is required for the removal of the diseased mass; and more especially when it arises from gonorrhœa. In fact, the mouth becoming sore, is an unfortunate event, for it interrupts the progress of our treatment, as we are then obliged, for a time at least, to lay aside the mercurial ointment.

If the above plan be followed, and persevered in, seldom or never will it be found to fail. Those in extensive practice know well that at least a month or five weeks must elapse ere they can by any means yet devised remove extensive swellings of this sort.

Should the mercurial poultice fail, (which, from experience, I have so much just confidence in) or should scrofula be in the system of the patient, I then administer the tincture of iodine in eight minim doses, and gradually increase it to twelve, in a little mint-water, three times a-day, still continuing to use the leeches and mercurial poultice, and until the swelling be removed. Sometimes I add a little camphor, where the ointment fails to act upon the skin.

As an auxiliary, in the worst cases I have with advantage caused a drain from the surface of the tumor by forming a round eschar or two, by potassa fusa, at the same time continuing the mercurial poultice.

Amongst numerous other remedies for this troublesome thickening, I have destroyed the whole of it by strong caustic,

and then healed over the integuments, but found that (in addition to the pain occasioned) much mischief to the absorbents has been produced, and afterwards followed by swelling (for a time) of the leg, from the knee to the ankle. In some very obstinate cases, when the mercurial poultice has been applied, crimsoned integument points out spots likely to form abscesses. When they form I open them by an eschar of potassa fusa, and they heal by the time the absorption of the surrounding hardness is completed, and do not in any way procrastinate the cure. This method is far better than opening the abscesses with a lancet, as the spaces will remain longer unclosed, and afford a freer discharge to the pus, and also act as drains or issues.

If the health is poor, the decoctum cinchonæ will be found a valuable auxiliary during the treatment.

When it is an extreme object to save time, and the patient cannot longer be kept in doors, I am in the habit of getting him up a little earlier than I otherwise should, and then letting him go about his usual avocations with a mercurial or ammoniaco-mercurial plaister, and a short cotton roller over the remains of the swelling.

Hoping I have touched upon most of the principal points connected with this subject, I am, Mr. Editor,

Your most obedient servant,

W. H. Judd, Surgeon,

Scots Fusilier Guards.

7, Bruton-Street, Jan. 12th, 1833.

To the Editor of the Medical Gazette.

Sir,

As your correespondent, Medico-Chirurgicus, of last Saturday week's Gazette, does not, in his statement of the cases of chronic bubo, notice the exhibition of the iodine, I am led to suggest it to him in the first place, though I can scarcely believe it to have been altogether overlooked.

I am aware its remedial qualities, on its first introduction into the materia medica, were greatly over-rated, and that in consequence its estimation is now proportionably decreased; yet in hard glandular swellings, and tumors of the chronic kind, I have seen it exhibited with great success. The tincture internally, or if not, the iodine dissolved in distilled water; the dose gradually increased; the ung. hydriod. potassæ rubbed in externally.

Conjointly with mercury, under certain combinations, its effects applied externally are often beneficial, especially in one which I shall mention, viz. the iodurate of mercury. Its preparation is simple, and full directions are given as to the mode of it in Gray's Supplement, or other late chemical works.

Another useful preparation of the iodine and mercury is an ointment composed of equal parts of the ung. hydrarg. fort. and the ung. hydriod. potassæ.

In conclusion, I would mention the liniment hydrargyri to Medico-Chirurgicus, and also request him to inform me, through the medium of the Gazette, whether he has tried any plan here suggested, and with what success.

Your obedient servant,

G. H. S.

Jan. 15, 1833.

ANEURISMAL TUMORS.

To the Editor of the Medical Gazette.

Seamen's Hospital, Dreadnought, January 9th, 1833.

Sir,

Dr. Hope, in his late valuable work on Diseases of the Heart and Great Vessels, in speaking of the effect of aneurismal tumors in eroding bone with which they come in contact, makes this remark:—"Whether inflammation ever contribute to the effect is difficult positively to determine. Appearances, however, are adverse to this opinion, as pus has never been found on bone eroded by an aneurism; as exfoliation scarcely ever takes place, and as nothing is discovered on it analogous to cicatrization or irregular reproduction, observable in other bones affected with caries."—Page 411. This is also certainly the common opinion, and is doubtless the general rule, but that exceptions may occur to it, and that the erosion of bone by an aneurismal tumor is sometimes at least similar to caries or ulceration produced by other causes, as far as the presence of pus may be a proof of it, the following case I think will show. Perhaps, one reason why pus is

not more commonly found under these circumstances is, that the carious surface in most cases is exposed bare to the current of blood, by which the matter is washed away as soon as formed: in the present instance, that effect was prevented by a covering of coagulated fibrin on the diseased surface of bone. There are one or two other interesting circumstances in the case, and you consequently may be induced to consider it worth publication.

I am, sir,
Your obedient servant,
GEORGE BUSK, Ass.-Surg.

Thomas Wilson, æt. 68, admitted April 15th, 1832.

Of cachectic aspect, pale, and somewhat emaciated, who had never been subject to illness before his present attack.

Complains of cough, which is worse at night; sense of stuffing and constriction in the chest. Expectoration scanty; white mucus, occasionally streaked with blood. Respiratory sound and voice very loud in the right side of the thorax, with some, but very little, sibilation. The respiratory murmur is much duller, in fact almost absent, in the left side, especially posteriorly, where the sound on percussion is also very dull. Pulse 80, soft. Skin and tongue natural. Ill ten weeks.

He lived till June 14th, without presenting any remarkable symptoms, and was slightly delirious for a few days before his death, which occurred rather suddenly, after coughing up a large quantity of blood.

On examination after death, an enormous aneurism was discovered on the left side of the descending thoracic aorta, which extended almost from the termination of the arch as low as, or even between, the pillars of the diaphragm. The artery appeared as if it had been very much enlarged previous to the coats giving way, as the internal coat, rough with bony deposit, extended some way into the sac: the remainder of the walls was formed by the left lung (much compressed), the ribs, and left side of the dorsal vertebræ, from the fourth or fifth to the seventh or eighth. The layers of coagulated fibrin were very numerous, and the external ones remarkably firm: in one part of the circumference the coagulum was at least three inches thick. The opening into this sac from the aorta was very large. There was also immediately above the diaphragm, on the right side of the aorta, another small round opening, which led into another large aneurismal sac, extending below the right lung and above the diaphragm, its walls being principally formed by those parts, and blood seems to have made its way from this sac into the right lung, which was found gorged with it. The left side of the bodies of four vertebræ were deeply excavated, the intervertebral substance being left prominent. The whole of the head and neck of one rib, the fifth, was completely absorbed, as also was a portion of the neck of the sixth, and the fourth and seventh deprived of periosteum, and there was a considerable quantity of purulent matter on and about the ulcerated surface of bone; this surface, however, was covered almost entirely by fibrinous layers, and this protected from the immediate contact of the blood. The aorta above and below the aneurisms was of its proper calibre, the inner surface roughened by deposit of bone and cartilage beneath the lining membrane. The heart was small, flabby, and loaded with fat.

REMARKS ON THE MUSCLE OF THE LACHRYMAL SAC, OR TENSOR TARSI.

BY W. MACKENZIE,
Lecturer on the Eye in the University of Glasgow.

IN 1824 it was announced in several English medical journals that a new muscle of the eye had been discovered some time before (probably in or prior to 1821) by Dr. Horner, of Philadelphia, and described by him, in his "Lessons in Practical Anatomy," under the name of *tensor tarsi*. From the extracts given from Dr. Horner's description, it appeared that he considered this new muscle as belonging neither to the orbicularis palpebrarum nor to any of the other muscles of the eye, but as constituting a part which had never been observed nor described before. About three lines broad and six long, arising from the surface of the os unguis, near

its junction with the ethmoid, Dr. H. described this muscle as advancing along the posterior surface of the lachrymal canals, and as splitting into two portions, to run towards the puncta lachrymalia. To bring the muscle into view, Dr. H. directs the eyelids to be separated from the eye, and turned over the nose, leaving the tendon of the orbicularis untouched. The semilunar membrane is then to be dissected away, along with the fat and cellular substance underneath it. The muscle is now seen, and, by passing bristles through the lachrymal canals, its connexion with them is rendered evident. For use, Dr. H. attributes to this muscle the drawing of the puncta towards the ball of the eye, and keeping them in close contact with it; securing in this way the absorption of the tears. When the eyeball sinks in the orbit, in cases of emaciation, so that it tends to retire from the lids, he believes this muscle to counteract that tendency, and to keep them applied to the ball. When the upper lid is raised and drawn within the orbit by its levator, it is disposed to leave the ball; but this is prevented by Dr. Horner's tensor tarsi.

I shall not accuse Dr. Horner of plagiarism in all this; because it is quite possible that he may have made the above observations in total ignorance of the fact that this very muscle had been described by the Duverneys, at least a hundred years before his publication, and that, in 1805, Professor Rosenmüller, of Leipzick, had both described and figured the muscle, had proposed the same *methodus secundi* for it, and attributed to it the same uses.

Trasmondi*, of Rome, dissecting the tensor tarsi in 1822, discovered two branches of the nasal nerve going into it. But these two nerves, derived, in fact, from the infratrochlear, Rosenmüller had already detected, described and engraved.

Strange to tell, these appropriations of other men's discoveries by Horner and Trasmondi, have passed unnoticed by Jourdan and Breschet, the French translators of Meckel's Anatomy†, and by the minute and accurate Rosas‡, of Vienna. Flajani§, of Rome, however, was not so easily imposed upon, but at once pointed out the spuriousness of the announced discoveries, and transferred the muscle and its nerves to their proper owners—the Duverneys and Rosenmüller.

Schobinger appears to have been the first who *published* a description of the tensor tarsi. This he did at Basil, in 1730, in a thesis, "*De Fistula Lacrymali*;" and, as the following extract shews, he ascribed the discovery of this muscle of the lachrymal sac to the cousin of the celebrated author of the Treatise on the Ear.

"Saccus idem circa exteriorem ac anteriorem partem proprio exiguo musculo circa os planum orto fibris suis supra dictam sacci partem sese extendente gaudet, quem strenuus anatomicus ac chirurgus D. Duverney, horti regii Parisiensis anatomicæ et chirurgicæ operatoricæ demonstrator publicus, modo dicti viri celeberrimi patruelis, dilectissimus præceptor meus primum indevit, et mihi pluries in variis subjectis demonstravit*.'

The progressive motion of the tears into the nose, Schobinger attributes to eight several causes; the sixth of which is the action of the muscle of the lachrymal sac. The nerves of the excreting lachrymal organs he mentions to be derived from the ophthalmic and superior maxillary, but does not condescend on the nerves of this muscle in particular.

Guichard Joseph Duverney flourished from 1683 (when he published his Treatise on the Ear) till 1730, when he died at the age of 82. His anatomical works were published in 1761. He thus shortly notices the muscle of the lachrymal sac, and, from his mode of expression, we should conclude that he regarded the discovery of it as his own.

"Il y a un petit muscle au dedans du grand angle qui prend son origine de la partie antérieure de l'os planum, et s'insere à la partie interne du tendon mitoyen ou commun à l'opposé de l'orbiculaire; c'est un petit muscle que j'ai observé il y a long temps†."

Rosenmuller published the first part of his *Icones Chirurgico-Anatomicæ*, at Weimar, in 1805; and in the ninth plate of that part he has represented the lachrymal sac, its muscle, and its nerves

* Intorno la Scoperta di due Nervi dell' Occhio Umano. Roma, 1822.

† Manuel d'Anatomie. Tome iii. p. 219. Paris, 1825.

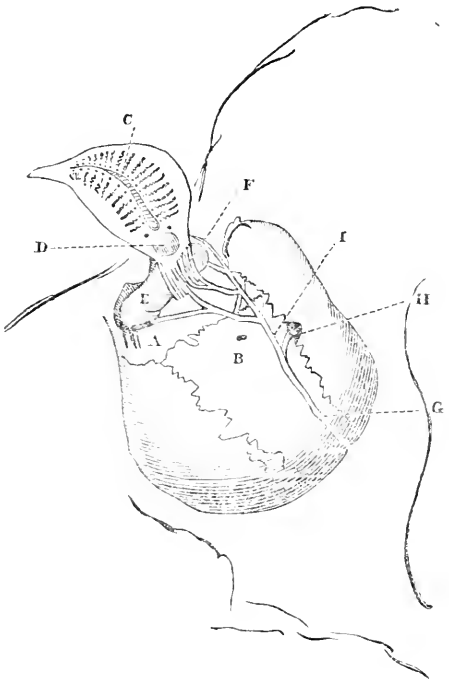
‡ Handbuch der Augenheilkunde. I. Band. page 73. Wein, 1830.

§ Osservazioni Storico-Anatomiche intorno alla pretesa Scoperta di un Musculo e di due Nervi nell' Occhio Umano. Roma, 1823.

* Halleri Disputationes Chirurgicæ. Tom. i. p. 234. Lausannæ, 1755.

† Œuvres Anatomiques de M. Duverney. Tom. i. page 130. Paris, 1761.

derived from the fifth pair. I subjoin an outline of Rosenmüller's figure, so far as the parts under consideration are represented.



A—Os lacrymale.
B—Os planum of the ethmoid.
C—The tarsi reflected over the nose, so as to shew their inner surface covered by the meibomian follicles.
D—Caruncula lacrymalis.
E—Lachrymal sac.
F—Tensor tarsi, or muscle of the lachrymal sac.
G—Nasal branch of ophthalmic nerve.
H—Anterior ethmoidal nerve.
I—Infra trochlear nerve, sending branches to the lachrymal sac, its muscle, and internal canthus.

It scarcely admits of doubt that the branches of the fifth pair, traced by Rosenmüller and others into the muscles of the lachrymal sac, are not the nerves which convey to it the stimulus for contraction. It is probable that its motions depend on the facial nerve, like those of the orbicularis palpebrarum; and that some hitherto undetected ramifications of this nerve penetrate the orbicularis from without, to reach the tensor tarsi. The superior branch of the nervi buccales, derived from the facial, reaches, it is well known, to the inner canthus of the eye, and is even said to anastomose with the infratrochlearis of the fifth.

That these remarks may not appear altogether without a practical use, I may observe that we not unfrequently meet with cases of *watery eye*, as it is termed, in which there is no detectable obstruction in the excreting lachrymal passages; water injected by the puncta flowing freely into the sides, and no sign of inflammation present in the lining membrane of these passages. There seems to be a want of action only in the lachrymal canals. May not this depend on atony of the muscle of the lachrymal sac; and may not such cases be cured by the employment of the electric influence, drawn by a wooden point through the parts in the neighbourhood of the inner canthus? Cures of *watery*

eye have in this way been effected *; and the question naturally occurs, how does the electricity operate?

Glasgow, Dec. 24, 1832.

HYDROSTATIC BEDS.

To the Editor of the Medical Gazette.

January 17th, 1833.

SIR,

ALLOW me for a moment to direct your attention to the subject of hydrostatic beds. I was struck with the case of the woman Ceely, narrated in page 431 of your present volume, which, though a very severe one, did well, till a slough formed on the lower part of the back, and though every thing was done to support the strength, and protect the affected part from pressure, she gradually sunk, and died twelve weeks after the accident. Now, surely, in such cases, what is called the hydrostatic bed might be used with great advantage. One objection, however, to its employment, which in many cases might be rather serious, is expense, in reference to which I beg to lay before your readers the following extract from a newspaper:—"A bed of most singular construction has just been introduced into the Northampton Infirmary. It is called the hydrostatic bed, and is the invention of Dr. Arnott..... The bed is thus constructed:—A large trough is filled with water, and is covered over tightly with a piece of Mackintosh's water-proof cloth, upon which is laid the mattress. On the slightest pressure the undulations of the water are perceptible, and every movement of the patient produces upon him a feeling as if he were lying upon an easy elastic substance. The poor fellow who is now using it, who had become quite sore from being bedridden, declares it to be a perfect luxury." The above appears a simple, efficient, and I should think not particularly expensive mode, of affording relief to suffering humanity; I would, therefore, beg to call the attention of the profession to the further consideration of the subject, and for this end respectfully request you will favour me with a place in your pages for these few remarks, and am, sir,

Your most obedient servant,

J. S. M.

* Cavallo on Electricity. Vol. ii. Lond. 1795.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Treatise on Diseases of the Liver, and on Bilious Complaints; with Observations on the Management of the Health of those who have returned from Tropical Climates, and on the Diseases of Infancy. By GEORGE HAMILTON BELL, Fellow of the Royal College of Surgeons, Edinburgh; late Residency Surgeon, Tanjore.

MR. BELL, who is already favourably known to the public by his work on Cholera, details, in the present volume, his experience of liver complaints, derived during twenty years spent in the active duties of his profession in India. The general division of his subject is into inflammatory diseases and functional derangements of the viscus; after which we have some remarks on the disorders of tropical valetudinarians, and on certain points connected with the diseases and management of children, particularly with reference to those born in India.

After some observations of a general nature on inflammation, we find ourselves introduced to sero-hepatitis, or acute inflammation of the peritoneal covering of the liver; the chief points of which are thus described:—"1. A sudden attack of excruciating pain in the region of the liver, often so severe that the weight of the clothes is insupportable. 2. High febrile symptoms, compelling the patient immediately to confine himself to bed. 3. The stomach is irritable, and the biliary secretion is generally increased. 4. The patient cannot lie on the left side." Severe exercise during the heat of the day—as snipe-shooting, in which the feet and legs are often covered with water, while the head is exposed to a vertical sun—is mentioned as an especial cause of the disease; to which we may add "any severe general injury which forces a man, in full health and strength, to confine himself to bed." It is, however, with a view to the treatment that we allude to this affection. Mr. Bell thinks, if not unfavourably of mercury, at least that it is not necessary: a very important fact, if correct.

and leading to a very serious omission in practice, if otherwise. His words are,

"And, so far as my own experience goes, I have not found it necessary, in sero-hepatitis, so long as the disease is acute, to put the system under the influence of mercury. I have reason, indeed, to believe that much harm may arise from '*pushing mercury*' in cases in which the acute inflammation is confined to the covering membrane of the liver; and of this the following case supplies an illustration.

"Several years ago, while in India, I was called to a station at some distance from my own, to see a civilian of high rank, who was considered by his medical attendant to have fallen into a state of great danger from an attack of hepatitis. This patient had been about twenty years in India. I found him in a state of low delirium, with an alarming tendency to dosing; his pulse was upwards of 120, thrilling and weak; his face swollen to double its natural size; and his mouth, throat, and tongue, in a terrible condition from ptyalism. I was told that he had been suddenly seized with excruciating pain in the right side, with fever, and all the other symptoms of acute hepatitis; that he had been very largely bled generally; that local depletion with leeches had been carried as far as possible; and that he had also been blistered: by those means it appeared that the pain had been completely removed from the side. Calomel had likewise been administered to a great extent; and the mouth had suddenly become affected, attended with great pain. The swelling of the mouth, tongue, and throat, had increased to the state in which it was when I first saw the patient; but the pain had suddenly ceased, and delirium and comatose symptoms had supervened.

"The hepatic affection having been thus to all appearance mastered, the dangers now were sphacelation of the mouth and throat, and cerebral effusion. We therefore turned our whole attention to the head and circulation. But every attempt to lower the pulse failed, and the delirium, though it intermitted, was not manageable. The patient sunk and died; and on examination after death *the liver was found perfectly sound.* The inflammation had been overcome by the decided antiphlogistic practice pursued; and although the exhibition of mercury was according to rule, the case was not, in my opinion, one which called for the exhibition of mercury as a sialogogue; and the patient had perhaps been too long exposed to an Indian climate to admit of even the necessary depletion with safety, far less the deleterious effects of 'pushing large doses of calomel.'"

The remedies to which our author trusts, are free venesection, a large (*i. e.* a scruple) dose of calomel, a sinapism to the pit of the stomach, saline effervescing draughts, purgatives, and after their free action, tartar emetic in solution, leeches, fomentations, blisters.

Puro-hepatitis is represented as very insidious—so much so as to be "one of the most difficult (lesions) of diagnosis in the whole catalogue of diseases." Indeed Mr. Bell describes such cases as often attaining a very advanced stage before the disease is manifested by any symptom indicative of the liver affection.

"The condition of the hepatic vessels which leads to suppuration in the substance of the liver, seems to be so little different from their usual state (at least so far as is indicated by symptoms), that very frequently the first intimation which a patient has of serious disorder of the system, is what is too often to be reckoned proof of the formation of an abscess. He is attacked with a shivering fit, which is followed by an irregular hot stage, ending in profuse clammy perspiration. Even after this there may be no symptom pointing out the destruction which is going on in his liver. The patient suffers from irregular feverish symptoms, and has the impression that something very wrong is taking place; but neither he nor probably his medical attendant is aware that he is stricken with a mortal malady. As the case advances, there are occasional severe shivering fits, and distressing night sweats—the pulse rises—the tongue is furred—and, from the appearance of the patient's countenance, it is evident that he is labouring under some great internal disease. Still there may be no symptom referable to the liver; great derangement of the bowels ensues, and there is much suffering from dyspeptic symptoms. In some instances there are severe spasms in the diaphragm, and violent tenesmus. After some days (or it may be even weeks) the patient is attacked with low delirium, and dies as if from effusion in the brain. This is an extreme case."

Under these circumstances, "when an individual has been exposed to the exciting causes of liver complaints, an attack of shivering, if unconnected with intermittent fever, even although there should be no symptoms referable to the liver, ought to lead to the most anxious inquiry into the condition of that organ. And if rigors be followed by irregular feverish symptoms, a clammy skin, and disorder in the primæ viæ, there will be reason to suspect the existence of puro-hepatitis. If, in addition to these symptoms, there be morbid sensibility in the region of the liver, pain on the top of the right shoulder, a dry cough, uneasiness while lying on the left side, a foul tongue, thirst, and unwholesome alvine dejections, the urine depositing a lateritious or pinky sediment, there can be little doubt in the diagnosis."

In puro-hepatitis, Mr. Bell prefers the repeated application of leeches to venesection, unless the circulation be more than usually disturbed. But mercury is here the great remedy, and no time is to be lost in endeavouring to produce salivation. It is remarkable, that, "in cases in which abscess exists, although the mouth sometimes becomes ulcerated under the use of mercury, true ptyalism does not take place." The general mode of administering the remedy is to give calomel in scruple doses, either alone or in combination with opium or hyoscyamus, every six or eight hours; mercurial ointment being rubbed in at the same time. Mr. Bell states, however, that he has sometimes succeeded in producing salivation after calomel had failed. Whatever preparation is adopted, whenever the breath is tainted there ought to be a remission in the activity of the treatment; and if the gums begin to swell, the mercury must be suspended. Counter-irritation, especially in the form of blisters, is strongly recommended, and the treatment generally illustrated by several interesting cases. Chronic sero-hepatitis and chronic puro-hepatitis are shortly spoken of, but not in a manner to require particular notice from us.

The functional derangements of the liver are described under five heads:—1. Morbid vascular fulness, attended with increased activity of the circulation, and producing a redundant secretion of bile. 2. A deranged state in the secerning functions of the liver, producing unhealthy bile. 3. Great deficiency, or even total suppression, of the biliary secretion. 4. Jaundice; and, 5. Gall stones.

Of these subjects, the only one we can make room to enter upon is the third—namely, deficiency or total suppression of the biliary secretion; a condition very apt to end in disorganization of the viscus.

"Symptoms.—These are, with the exception of the appearance of the alvine discharges, generally very obscure. There is, perhaps, a morbid sensibility in the liver; the patient will say 'he *feels* that he has a liver.' Pressure under the ribs, however, causes little uneasiness, and the other symptoms are often rather referrible to the duodenum and floating viscera, than to the liver. Thus there will be considerable uneasiness at the pit of the stomach, troublesome flatulency, restlessness a few hours after a meal, attended by a dull pain in the back, and a sensation of fulness deeply seated in the right hypochondrium. But the symptom which may be considered characteristic of the affection under consideration, is the appearance of the alvine evacuations. The fæces are found to be clay-coloured, or like newly-made lime mortar, generally unformed, and without the feculent smell; or they may be passed in the shape of hard balls, like the *album græcum*. But although thus unnatural, it is wonderful how frequently, in these cases, the fæces are passed with perfect regularity; and, as if to prove that bile is not indispensably necessary either to the peristaltic action of the intestines or to the concoction of fæces, I have treated cases in which the bowels were not only opened regularly once a day, but in which the fæces, with the exception of colour and smell, were apparently perfectly healthy. The appetite is generally good, sometimes unnaturally great; but the tongue is loaded, and the patient is liable to headaches; the countenance has a dirty sallow look; the pulse is slow; there is much languor, weariness of the limbs, and general inaptitude for exertion, bodily or mental; the skin feels damp and clammy, and the patient complains of occasional chills and night sweats; sleep disturbed and unrefreshing; urine at one time limpid and copious, at another thick, even when first passed, depositing much sediment. There is invariably great emaciation."

And again:

"No functional hepatic derangement is more obstinate than a failure in the biliary secretion, when it has been allowed to continue for any length of time. Even when relieved, the patient is liable to relapses; and when the complaint occurs within the tropics, it is seldom radically cured without a long sea-voyage, and a residence in a temperate climate. Much, however, may be done by long-continued courses of medicine, occasional journeys, and a relief from harassing duties. We may at least have the satisfaction, by such means, of warding off organic disease, the risk of which (as in all cases of failure in the function of a gland) is in this affection very great.

"In the treatment of this disorder, mercury can never be dispensed with. It is not, however, necessary that the system should be rapidly brought under the influence of the medicine; alterative courses, suspended and resumed from time to time, being generally the best method in such cases. Thus the blue pill, in small quantities, given twice a day*, combined with Dr. Scott's nitro-muriatic acid bath, will often produce almost immediate good effects. The hot bath should also be prescribed twice or thrice a week; mercurial ointment, or some stimulating liniment, ought to be rubbed in over the liver twice a day, or a large hot plaister may be applied over the whole of the right hypochondrium. The bowels ought to be kept open; bitters should be early prescribed; to be soon followed by quinine and iron.

"Along with such a course of treatment, exercise on horseback should be regularly taken, or, if convenient, boating and short trips to sea will be found very beneficial. The diet ought to consist principally of animal food, restricted of course as to quantity; and wine, or well-hopped malt liquor, in moderation, may be allowed. As it is of much consequence to enliven the patient's mind, he must be relieved from all harassing duties, and every encouragement should be given to amusements. The clothing should be warm, and the patient should be much in the open air. His bed-room should be large and well aired; he must not load himself with bed-clothes during the night. As in this disease the extremities are generally cold, worsted stockings ought to be worn; and, if necessary, on going to bed hot water-pans, or bottles filled with hot water, may be applied to the feet. In this country, patients should be warned against sleeping with fires in their bed-rooms; a habit which is exceedingly pernicious to invalids of every description."

We have thus extracted several passages which contain some useful information, and convey, we think, a fair idea of the whole work: it is written in a clear and unaffected style, and evidently contains the result of considerable personal experience and observation. We can safely recommend it to the attention of the profession.

* R. Pilul. Hydrarg. gr. xxiv.
Pulv. Opii, gr. iij.
Rhei.
Ipecac.
Zingiber. a. a. gr. xij.
Adde Tinct. Opii, gt. xij.
Tere simul opt. et divide in pil. xij.
One night and morning, or one three times a day.

The Physician's Vade-Mecum, &c. &c. By Robert Hooper, M.D. New Edition, considerably enlarged and improved. London, 1833.

What could tempt any one to edit this work anew? Of all the contrivances for retarding the progress of medical knowledge, none ever equalled, in the extent of the mischief it produced, the invention of the *Vade-Mecum*. To the practitioner who has acquired a knowledge of his art by legitimate modes, this kind of assistance is unnecessary: to him who has not done so, it is injurious. Entertaining this opinion of such works in general, we shall only say of the one before us that it contains no feature of any kind calculated to redeem it from the common ban. Indeed, the additions are an injury rather than an improvement, because they are made in the spirit of a partizan, not with the impartiality which ought always to attend a systematic writer; while persons either wholly unknown, or of very inferior authority, are quoted as fit guides to the student.

Turning to cholera, as likely to contain some new matter, we found that "the whole profession were opposed to contagion except those connected with Boards of Health." Pretty well, Mr. Editor! the facts are, indeed, "considerably enlarged" in this instance, whether they be "improved" or not. It is the same wherever contagion is alluded

to: one side only of the question is given. Thus, of yellow fever, it is said on the authority of Dr. Gilkrest, "no one believes this disease to be contagious at present." Now we are of opinion that yellow fever is not contagious; but when the student is told that "no one" thinks it is, he is very seriously misled. Every one at all acquainted with the facts, is aware that many do believe yellow fever to be a contagious disease, and that hundreds in this country and abroad, though not connected with "Boards of Health," think the same of cholera.

But it is not with regard to speculative points only that errors of the grossest kind are committed. Thus we are told, under the head of Cynanche Tonsillaris, that "port wine, used when influenza is epidemic, prevents the disease, and *all who neglect it are attacked!*" Iodine, as a remedy "for every form of scrofula, and for a great number of other tedious and hitherto incurable diseases," is also spoken of in terms of hyperbolical praise, which, with the *practitioner*, cannot be of much consequence, but addressed to *students*, must be injurious in proportion as the book has influence — which, however, we imagine will be very little. Other illustrations might be given, but the above are sufficient to justify the censure we have expressed. The original design of the work is bad, and the "improvements" have made it worse.

CASE OF EXTIRPATION OF THE PAROTID GLAND.

By Valentine Mott, M.D. &c. &c.*

J. B. a native of St. Domingo, aged 21 years, came under my care in the latter part of June for a tumor situated on the face. He stated that he first observed it in January last, shortly after a severe attack of fever, and that it gradually increased in size until a few months ago, when he became alarmed at its progress, and decided upon visiting this country.

Upon inspection I found a very hard tumor, about the size of an ordinary fist, involving nearly the whole left side of the face, and evidently formed of the parotid gland, apparently in a scirrhous state. From its magnitude, and as the only chance left for the recovery of my patient, I resolved upon attempting its extirpation, and with his free consent, after rendering the subject perfectly intelligible to him, fixed on the 13th of July for carrying it into effect.

Accordingly on that day the operation was performed. It was commenced by interrupting the circulation through the external carotid artery by ligature, and for that purpose an incision was made from the posterior angle of the lower jaw downward and inward about three inches in length, so as to expose to view the inner margin of the sterno-cleido mastoid muscle. An enlarged lymphatic gland was now exposed, lying directly upon the sheath of the vessels. Upon turning it to the inside, the external carotid was laid bare, and tied immediately below the digastric muscle, and a little above the upper border of the thyroid cartilage. From the tumefaction of this part of the neck the artery was nearly three inches from the surface.

An incision was next commenced above the jugum temporale, and carried downward in a semicircular direction, until it terminated upon the os occipitus. The incision in the neck was now extended upward, to intersect the one over the tumor.

On detaching the integuments in the form of a double flap from over the diseased mass, its black appearance removed the impression of its scirrhous character, and fully demonstrated a melanotic condition of the gland. I, however, determined upon continuing the dissection, and proceeded to detach it from its various connexions. With this intention, I commenced by dividing along the inner margin of the tumor the adipose and cellular tissue, until the inner edge of the masseter muscle was exposed to view. The finger was now introduced into the mouth, and cut upon, in order to avoid dividing its membrane, and after separating the tumor for some distance from the masseter, to which it closely adhered, I detached it from the jugum, which had become more or less carious from pressure. It was next dissected from the mastoid and digastric muscles, and from the posterior angle of the jaw, but as the patient complained of excruciating torture when the tumor was raised from below upward, I determined to continue the dissection from above downward, and accordingly sepa-

* This paper and the following are taken from the American Journal of the Medical Sciences.

rated it, with a few rapid strokes of the knife, from the capsular ligament of the lower jaw, and removed the bulk of the disease. The portion filling up the space between the styloid and mastoid processes was cautiously detached with the handle of a scalpel, and the faecial nerve or portio dura divided by a quick movement of the knife. At the instant of the division of this nerve, he seemed to evince more pain than at any period of the operation. The muscles of the left side of the face were paralyzed. All the remaining portions of the disease were, as far as practicable, removed.

Several arteries were tied during the extirpation of the tumor, and after its removal. The trunk of the temporal was cut as it emerged from the disease, and yielded a profuse retrograde hæmorrhage.

The operation lasted about an hour, and the patient lost perhaps a pint of blood.

After waiting a proper time, to see if any bleeding would occur, and refreshing our patient, although he did not seem exhausted, the wound was closed by several sutures and adhesive straps, and lint, compress, and double-headed roller, completed the dressings.

On dividing the tumor longitudinally, not a vestige of the original organization of the gland could be observed. The inner surfaces had the appearance of firm tar, and imparted a black colour to the fingers when touched.

30th.—Wound entirely healed, excepting at the point opposite the ear, which has every appearance of a reproduction of the disease. Complains of pain in the left knee, of which he has had several previous attacks. Directed leeches and warm fomentations.

August 12th.—Several tumors have made their appearance upon the scalp; fungus of the wound rather increased; a dark spot showing itself in the integuments of the diseased side of the face; tumefaction of the knee increased; complains of pain in the right side; skin assuming a yellow colour.

20th.—Tumors all increased in size; hepatic affection very decided; confirmed hectic, and is evidently sinking. Every thing done to make him comfortable.

31st.—In all respects worse.

Sept. 5th.—Died this morning. No examination of body was allowed.

ON THE EXCLUSION OF LIGHT AS A MEANS OF PREVENTING THE PITTING IN SMALL-POX.

By John M. W. Picton, M.D. of New Orleans.

A number of patients labouring under small-pox were admitted into the Charity Hospital of New Orleans during the year 1830. They were placed in a part of the establishment detached from the main building, and made to occupy separate apartments in the lower story. There are large windows in each apartment of that hospital, secured by iron bars and close shutters; also an aperture in each door, (opposite to the window) about twelve or fourteen inches square, and likewise secured by strong wires, or small bars; so that when the shutters formed what is termed the bow-window, there was afforded a constant current of air, which indeed might freely pass into the opposite apartment, independent of the accession derived from the intervening hall. The sun's light might ther fore be excluded, and even at the meridian the reflective power must be lost by the position of the building.

Thus arranged, each patient was subjected to the usual mode of treatment, and strict injunctions were given to exclude the light during the period of confinement. Of the individuals thus situated, and who were discharged, not one exhibited a pit or mark upon the body. Some had a slight eruption, and detached; others more diffused, though quite distinct, and the rest of the confluent form. The latter passed through the maturative and desiccating stages; and in the two former the eruption apparently received a check between the seventh and ninth days, without any of those unpleasant symptoms which accidental causes under other circumstances seem to induce.

Although disposed to regard the results of these cases with uncommon interest, as tending to show the beneficial tendency of exclusion of light in preventing the pitting, yet I could not feel satisfied until other examples should be presented beyond the walls of the hospital. The prosecution of my investigations was, however, interrupted by leaving the city. Upon my return in March 1831, I renewed my observations, and

endeavoured to extend my opportunities. In June, a friend having a case of small-pox under his care, at my request obligingly consented to adopt the mode previously pursued in the Charity Hospital.

In August ensuing, three cases of variola occurred in Girod-street, in the suburb of St. Mary, which were kindly confided to my management by another medical friend. In these instances, I gave precise directions with regard to the position of each patient, in order that they might enjoy the influence of a free circulation of air, and particularly enjoined the exclusion of light. I have every reason to believe that they were sedulously attended to. In two of these, the eruption appeared in the distinct form, and in the third, about fourteen years of age, papulæ were thickly diffused over the face and breast and superior extremities, evidently exhibiting the preparatory condition, to a full development of the confluent variety. They disappeared, however, on the fifth day, and rapid recovery followed. The two former passed through the different stages without a trace remaining.

These facts seemed to corroborate my most sanguine hopes; yet such is the scepticism we intuitively cherish, even in opposition to apparent indisputable impressions upon the senses, that I cannot consent to record them as unequivocal evidences, that "light" exercises such energetic affinities with, or modifications over, the diseased actions of vitality, as to render it certain that we can take advantage of that knowledge in our curative means. Notwithstanding this reluctance, allow me to ask for its probability for a moment, then we must be convinced by existing analogies that our views cannot be circumscribed by the consideration of variola alone; but they may embrace the extensive range of all the eruptive or cutaneous affections. If it should thus prove capable of arresting an eruption, or even an efflorescence, or the consequences of ulceration, it will, at least, have the effect to tranquillize many of those who are led to anticipate the period of convalescence as one of signal disfiguration and disgust.

ACCOUNT

OF

AN INFANT TOTALLY DESTITUTE OF BRAIN, CEREBELLUM, OR MEDULLA OBLONGATA.

M. Spessa, a surgeon of Treviso, has published a memoir on the above subject: we omit his remarks, but the following is the case alluded to. On the 21st of July, 1831, he was called to a woman named Santa Rossi, about thirty years of age, the wife of a fisherman, and the mother of several children, of a sthenic and irritable temperament. The pregnancy had arrived at its full period; the pains had already commenced, and the arm presented in the second position of Baudeloque. Turning was had recourse to, and the labour speedily brought to a favourable issue. The child proved to be of the female sex, well grown, about a foot in length. Notwithstanding its having unequivocal characters of being acephalous, it immediately exhibited manifest signs of life, moving the limbs, breathing, and crying. The heart and arteries pulsated in the usual manner. It lived eleven hours, after which it died suddenly, not having shewn any gradual decline. From the orbitary arch the integuments, instead of rising to form the forehead, descended obliquely to the back part of the neck, which itself was very short. This portion of the skin, which was injected with blood, was covered with a few long hairs. Behind, on the neck, there was a sort of mamillary projection, like the point of the little finger. While the infant was alive, on touching this projection an acceleration was produced in the respiration, and efforts were made resembling a sort of hiccough. The eye-lids were open, but motionless, and the same was the case with the eyes themselves and with the tongue. The mouth remained constantly partially open. The autopsy was performed in the presence of many scientific persons. There was no cranial cavity; of the cranium there was nothing but the base, irregular and very hard, the bones being blended together so as form an indistinct mass. No trace of brain, cerebellum, medulla oblongata, or membranes, could be discovered; nor at the base of the skull any vestige of nerve. The spinal marrow originated at the upper and back

part of the neck, under the skin at the site of the mamillary projection already mentioned, and entered the vertebral canal by an aperture situated between the base of the cranium and the atlas. The origin of the cord, as well as that body itself, appeared somewhat smaller, but of more firm consistence than natural: the same might be said of the nerves arising from it. On examining next the nerves which usually are connected with the contents of the cranium, they were all found occupying their wonted places, but at a little distance from the skull they began to diminish in size, and disappeared altogether before they had reached it. The other cavities presented no unnatural appearances, with the exception of the heart, which was rather large; the anterior ventricle was formed of two distinct cavities—that is to say, it was divided throughout almost its whole extent by a musculo-membranous partition; the foramen ovale was open; the valve which serves to close it was wanting.

Supposing the above account to be given with fidelity (and we have no reason to doubt this), the case just detailed must be regarded as, perhaps, the most complete instance of an acephalous child on record. It appears to us to come more entirely under such description than any of those mentioned by Geoffroy St. Hilaire or M. Breschet. The author evidently writes under some apprehension of being deemed heretical in even mentioning it; but he need not distress himself, he is evidently a good Catholic, and himself assures us that he is "fully and absolutely convinced of the truth of the principles adopted in every thing, and more particularly on this subject, by the holy church of Rome!!"

COLLEGE OF PHYSICIANS.

To the Editor of the Medical Gazette.

SIR,

I THANK you for once more advocating the cause of the licentiates—*i. e.* graduates of the Scotch Universities—against the unjust treatment which they receive from the Royal College of Physicians. But while I laud you for this meritorious act, I cannot help feeling and expressing my deep regret that you have admitted into your excellent journal the paragraph which begins, at the bottom of the 487th page of your last number, with—"But while we advocate the abolition of the degraded order of licentiates," &c. &c. I deny, sir, that the licentiates are a degraded order: they are an oppressed and an insulted, but they are not a degraded, order; their honour is unimpeached, and they are without a stain. The stain clings to their oppressors; *their's* is the degradation—their's is the stygian blot.

You will pardon me for stating, sir, that the rank and precedency of a physician depend on his University degree, and not on his being a licentiate or a fellow of the Royal College in London. These may give certain privileges, but they give no rank, however the diffidence of the one party or the impudence of the other may make it appear that they do, and for a very sufficient reason—viz. that the King, the fountain of honour, has not given the President and Fellows of the College that power. The Royal College of Physicians in London can no more make a man an M.D., nor give him rank, than the prime warden and fellows of the fishmongers' company can. None but our sovereign lord the King, the fountain of all honour in this country, can confer rank; and those on whom majesty has been graciously pleased to confer that right—such as on the Scotch, English, and Irish Universities, and the Archbishop of Canterbury. Some of our Universities derived the power of conferring rank from the Pope, but it would be of no use unless it were acknowledged and confirmed by the King; and when so done, the rank conferred entitles the bearer to equal honour and precedency, whether he derives it from a Scotch, an English, or an Irish University, or even from an archbishop. I challenge all the Fellows of the Royal College of Physicians to prove the contrary; and when you, sir, disclaim implying that all should stand on precisely equal footing, you, I am willing to concede, inadvertently give countenance to a proposition which is entirely and utterly untenable, and which, I trust, you will not be slow to retract, and announce to the world, in your excellent journal, that graduates of all the Universities in the United Kingdom are equal in rank, entitled to equal privileges,—that nothing less will satisfy them, because it would be unjust; and the sooner they are put in possession of

their rights, the better for all parties. If you have the goodness to insert this, you shall hear from me again.

ALPHA.

January 18, 1833.

[When we used the expression "degraded order of licentiates," our meaning was not what our correspondent seems to suppose, but this — that the grade to which we hold them to be entitled is denied them by the College of Physicians, who place the youngest Fellow above the oldest Licentiate;— and when we disclaim implying "that all should stand on a precisely equal footing," we meant (as, indeed, we think the context shews) that there must be some "governing body," having rank as such, "*within* the College, but not beyond its walls." This governing body might be the present Fellows, the vacancies being filled up by election. We think this would be very much better for the Licentiates than as they stand at present, and would be much more likely to be conceded than a measure which would take from the Fellows what they regard as their right, and what, at all events, they hold in present possession.—E. G.]

To the Editor of the Medical Gazette.

SIR,

I CANNOT refrain from expressing my total dissatisfaction with the remarks contained in the leading article, in your last number [12th inst.], "On Medical Reform."

Can you inform me, why knowledge obtained, as you say, on the banks of the Isis or the Cam, should be better, than knowledge gained in Edinburgh?

Can you inform me, why the study of the classics, or the mathematics, should form better *physicians*, than that of physic itself?

Can you inform me, why a signature to "the Thirty-nine Articles" should make a good physician? or why Episcopalianism is to be preferred in a physician to Presbyterianism?

If you cannot, will you kindly inform me, why a degree, taken in Oxford or Cambridge, should confer honours above a degree taken in Edinburgh? That it should confer less honour, as it does less real knowledge of physic, I could understand; but the question is, why should it confer *more!*

And, sir, do you think that they who have disdained to sign themselves Licentiates, will deign to sign themselves Members, even though that title were legitimatized?

Sir, I, who write to you, am a licentiate. I blush for those who conferred the title, as I should blush to subscribe it. And I would lose my right hand rather than subscribe at the very fag end of the "*tail*," as you express it. Of the two, I would rather be the oppressed than the oppressor. But why should there be, in a liberal profession, either the oppressor or the oppressed?

Be assured, sir, that no such half-measures as those at which you have hinted, will satisfy the truly noble mind of one, who, for conscience sake, perhaps, has graduated at Edinburgh, rather at Oxford or Cambridge. Let the Fellows of the College of Physicians know this. And, especially, let the *invitations from* the *Fellows to* the *Licentiates* to meet within the walls of a College which ought to be, as it were, their mutual home and asylum, *cease*, as an earnest of good to come.

I am not ashamed or unwilling to subscribe my real name. But the day is not yet come. For the present, my signature is—the odious, hated title of

A LICENTIATE.

January 17th, 1833.

Postscript.—If I might be allowed to suggest the proper plan of the medical reform of the College, I should say, let all be made fellows, let all possess equal privileges as far as legislation goes. There will still be advantages enough attached to graduation at Oxford or Cambridge, in the clannish connexions so formed with the aristocracy of the country, to satisfy the desires of reasonable men.

[We withheld the preceding letter last week in the hope that the writer would reconsider its contents, as through the medium of our Notices to correspondents we recommended him to do. This, however, he has not done, and we therefore, insert it for the edification of our readers, being always unwilling to refuse admission to any thing intended to illustrate the side of the question opposed to our own. To our mind, Licentiate's letter is one of the most unaccountable instances of perversion that we have for a long time met with.

We have only once more to recommend him to take up our article on the College, and study it well: he will then probably be able to gather our sentiments on reform, which he at present so unaccountably misunderstands.—Ed. Gaz.]

EVENING MEETINGS AT THE COLLEGE OF PHYSICIANS.

The meetings for the season at the College of Physicans commence on Monday next, on which occasion some observations connected with insanity will be read by the learned President.

The meetings are to take place January 28th, February 25th, March 25th, April 29th, May 27th, and June 24th.

MEDICAL GAZETTE.

Saturday, January 26, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
Cicero.

THE TEN HOURS' LABOUR BILL.

The mischiefs of that cold, heartless, and cruel system, which contemplates and uses man as a mere "producing animal," are at length, thank heaven! brought to light. The cry, the reiterated cry of distress from suffering human nature, is once more heard, and will not, we confidently anticipate, have been heard in vain. To the sympathies of all—to the benevolent exertions of the influential—an appeal is now made, which we trust will prove irresistible. The diabolical experiment, put in practice for the private ends of a few—ostensibly with the effect of maintaining our character as a manufacturing nation—has been carried beyond the limits which the physical endurance of human beings can bear: it must at length be stopped: the rights of humanity shall be vindicated.

We have on our table a body of evidence—the evidence given before the parliamentary committee on the factories'-labour bill—containing such a mass of damning facts as were sufficient to put the horrors of the Inquisition to the blush. The Bastile, or the severest place of punishment that ever fixed a blot upon any country, was but a type of those dens of suffering and degradation in which a large portion of the people of this kingdom has been condemned to draw out a miserable existence. Public commiseration could be excited, and large subscriptions raised for the abolition of slavery abroad, while till now no ear was turned to the voice of oppression existing at home. A spurious charity was directed to relieve the comparatively comfortable condition of the West Indian negro—while no mercy was extended to the tortured miserable white slaves of England. Our manufactures have flourished, but at an expense of human suffering and of human life, at which posterity will be amazed when the dreadful reckoning is laid before them: and such a reckoning will these minutes of evidence afford when the future historian approaches the subject of the internal economy of Great Britain in the 19th century.

Attempts, from time to time, have not been wanting to enlist the public sympathy in the cause of the abolition of those grievances. Parliamentary investigations regarding the condition of the manufacturing classes have of late years been frequently instituted; but they have been attended with little success, chiefly for want of being popular; but the public till now have been in ignorance of the details. It was not—there is some satisfaction in the thought—it was not for want of medical admonition and warning, that attention failed to be secured to this subject: John Hunter long ago predicted the evils, in

the shape of maladies hitherto unheard of, that would infallibly result from our manufacturing system: and a mass of professional evidence was tendered to government in 1819, contributing powerfully to strengthen the same view. Instead of predictions, however, and mere opinions, we now have facts to go upon—facts which are as unquestionable as they are appalling, and which, we doubt not, will lead to the speedy demolition of this horrible state of things.

The subject is one of many relations—it may be contemplated in several points of view—in its political, its moral, its religious, and its medical bearings. It is with the latter chiefly that we have to do — and, luckily for our design, the committee has furnished us with a body of professional evidence illustrative of the topics which we wish more particularly to notice. From the testimony of several of the witnesses, professional and otherwise, we shall first then gather as concise and clear an account as we can of the nature of the place in which the unfortunate beings whose sufferings we commiserate are employed, the kind and quantity of the labour which is imposed upon them, and the calamities and diseases to which they are subject. If we do not prove these places to be the hot-beds of disease, as well as the scenes of cruelty and torture, we shall have sadly failed in our purpose.

First, then, for the place. Dr. Young, of Bolton, in Lincolnshire, gives us some important information on this point. He examined several factories, both in his own town and in Manchester, and found their atmosphere generally to range between 70 and 90 degrees of the thermometer, and to be not only polluted with a vast quantity of dust and flue flying about—so that in some places individuals could not recognize each other within the distance of a few yards—but impregnated with offensive effluvia of the most disgusting description. Much of this artificial high temperature is derived from the employment of gas-lights, which not only destroy the purity of the air, but operate injuriously on the powers of vision. Are we then to be surprised to find in such a locality premature puberty, immorality, bodily languor—in short, all the ill effects of a torrid climate, without any of its redeeming qualities of a strong sunlight and an open sky? The consequences of this, along with the nature of the labour, and the time of life at which these wretched creatures begin to suffer, render it inevitable that their muscular and osseous systems can never be properly developed.

The labour in which the operatives are employed, though termed technically "light and easy," from the circumstance of its requiring no violent muscular exertion, yet by reason of its monotonous uniformity and long continuance, becomes insufferably painful. It lasts at present during from 12 to 15 hours, or longer, generally from 5 in the morning till 7, 8, or 9 at night, with scarcely any intermission—the meals being swallowed in the mill—the food frequently spoiled and wasted by the quantity of dust accumulated upon it. The mode of labour, and its excessive measure, exacted from young workers, produce, as might naturally be expected, various personal deformities, especially in depraved growth of bone, and undue development of muscle. This, with the foul and heated atmosphere in which two-thirds of the day are spent, and the violent changes experienced upon quitting work in an exhausted state, and being suddenly exposed to the comparatively cold air abroad, lay the foundation of complaints of a fatal description. The poor wretches, if they escape death from pulmonary consumption, are past labour at forty, or perhaps earlier, and seldom

fail to become a burthen to their parish.

Nor is this all: their dangers are not always so remote. In that languid condition which "tired nature" experiences towards the close of this most unnatural day—stimulation of every kind, including cruelties of the most brutal sort, are had recourse to, and accidents sometimes ensue at the recital of which humanity shudders: loss of life is trifling compared with some of the dreadful mutilations which frequently occur. A proof, too, that these accidents are the result of fatigue, is found in the fact, that they accumulate towards the conclusion of every week, as well as at the close of each day. Such is the labour, and such are the casualties, to which these young creatures, some of them not more than six years of age, and of both sexes promiscuously, are exposed. Does the reader inquire what may be the wages which these sufferings earn? In many cases, victuals alone!

But are we sure that the duration of human life is considerably shortened by employment in the factories? It is put beyond a doubt by the censuses of 1821 and 1831. Mr. Thackrah long since formed the opinion that a greater amount of disease existed in the manufacturing than in the agricultural districts; and the population returns have justified his conclusions. With respect to the West and North Riding of Yorkshire, this gentleman states in his evidence, that in comparing the former, or the manufacturing, with the latter, or the agricultural district, the number of persons in the West Riding, between 40 and 50 years of age, in a thousand, is far less than in the North; and when we go to other ages more advanced, from 50 to 60, 60 to 70, and so on, the proportion of persons in the West Riding greatly diminishes: in other words, the people in the West Riding have decidedly shorter lives than those in the North. And it appears from the comparative tables of the duration of life laid before the committee, that *about as many die before their twentieth year, where the factory system prevails, as before their fortieth year elsewhere.*

The great object of the framers of this factories' bill is to prevent children from being employed in those places previous to the age of nine, and to protect those employed, between that age and eighteen, from being subjected to more than twelve hours' labour in the day—two hours for meals included. The very fact of being content with terms so hard as those sought to be procured, is in itself a strong proof of the severity of the system which it is attempted to reform. There is no medical man, or person of any acquaintance with the animal economy, who will not see what we distinctly call the *hardship* of the alternative: for we hold that limiting the hours of labour to ten in the case of children of either sex bears more of the character of a license for tyranny than a protection from ill usage. Dr. Farre, we observe, suggests eight; but Mr. Thackrah's suggestion pleases us better:—"I would much rather say six," said this gentleman: "I speak as a medical man, and a friend to humanity." As to the necessity of extending protection to infants under nine, we are happy to find that no diversity of opinion was manifested by any of the medical witnesses.

In perusing the medical evidence generally, as tendered to the committee on this Bill, we cannot help saying that, in one respect, we derived from it no small gratification, while, in another, we were not a little disappointed. Never was more perfect unanimity among men of the profession; but this arose, we feel bound to say, from a circumstance with which we have some fault to find — namely, that the questions put to them were, as nearly as pos-

sible, constructed on a uniform model; — they were also, in great part, what is technically called leading questions, not admitting of much range in the replies, and, when they did, eliciting answers remarkable for their sameness. The skeleton form of the queries was of this sort,—after reading two of the examinations we could almost anticipate every question: — What is your profession?—(to which, by the way, with one or two exceptions, none of the learned witnesses answered correctly): what is most conducive to the health of young persons – is exercise necessary?— is pure air requisite?– are not the consequences of inhaling an impure and artificially-heated atmosphere for many hours in the day deleterious?—ought persons of a tender age, and during the period of their growth, to be protected from forced labour?—is it not highly prejudicial, in a physical as well as moral sense, that such young persons should be obliged to work incessantly for fifteen hours a day? &c. &c. Such a mode of conducting the medical portion of the inquiry, while it produced the striking uniformity we have mentioned, and perhaps answered the immediate object sought by the projectors of the measure, clearly bitted and bridled the greater number of the distinguished witnesses from expressing themselves as fully and as satisfactorily as the deep importance of the subject would otherwise have induced them to do. Were it not for the rail-road track in which the testimony of those gentlemen was confined, surely they would have unanimously stated, that, so far from ten hours constant labour being endurable, forced employment, like that in the factories, was altogether objectionable where such tender persons were the agents: at all events, that it was utterly absurd, as well as mischievous, to tie down all alike to the same quantity of work, as if they were so many mere machines, constructed on the same principle, and out of the same materials, and of precisely the same physical power; and that even five or six hours, though within the limits of possibility for a certain number of the children, yet might be downright cruelty to the remainder.

There was but one exception, so far as we could see, to this objectionable uniformity of inquiry—and that was when Dr. Farre was called upon for his testimony. This gentleman, it appears, was enabled to give a comparative statement of the condition of the children of negro slaves at Barbadoes, and those of white ones in our factories at home. We have been deeply interested with the humane, the enlightened, the truly admirable evidence of Dr. Farre: we shall take an opportunity of recurring to it again: meantime, we shall close our remarks for the present, with two of the able replies with which his examination concluded:—

"Assuming that the children of this country are not free agents, can you have any doubt whatever that they demand protection equally with the child of the West Indian slave?—I think the word demand is a very proper mode of putting the question: for I consider the nation responsible for it: and as a medical man I assert that if you deem it a part of your duty to make laws against *murder*, I consider that legislation is equally necessary for the prevention of death in any mode in which it can be prematurely inflicted, and certainly this must be viewed as a most cruel mode of inflicting it.

"You have no hesitation, then, in saying that, whether considered as a medical or a political question, a remission of the hours of labour imposed upon the children and young persons in this country would be essentially beneficial?—I view it not only as a benefit, but as a duty; and I would say, not only as a

physician, a christian, and a parent, but also from the common sympathies of a man, that you are *bound* to afford it."

We shall resume this interesting subject.

CÆSAREAN OPERATION.

In a recent number of the *Bury and Suffolk Herald*, which has been forwarded to us, we find an account of a case of Cæsarean section performed under extraordinary circumstances, and which we record as conveying a painful but perhaps a salutary lesson against an officious recourse to this most formidable proceeding. The facts are as follow:—

A woman, named Bonner, aged 29, an inmate of the workhouse at Woodbridge, was pregnant; and at the alledged expiration of her time is stated to have been "labouring under typhus fever—the last stage of that fever." Such is the account given by Mr. Rose, the parish surgeon, who was called to her, December 13, and who administered some remedies "with the hope of supporting her under the labour which had not then commenced." Nevertheless, she continued to sink; and on the 15th, when he found her "dying," he resolved to perform the operation above-mentioned. This intention he forthwith put into execution, and a dead child was extracted. The woman required to be held by several assistants, and was able to complain of the pain she suffered, but died within two hours after.

It appears that the only medical persons present on the occasion were Mr. Kirkman, superintendant of a lunatic asylum, who, by his own account, "is not conversant in midwifery," and two "young medical students." Now the other medical men resident in Woodbridge, having heard of the case, were desirous that an investigation should take place, and effected this laudable object after some delay and considerable difficulty—the parish officers being of opinion that it was unnecessary. However, on the 28th of December, an inquest was held, at which the above circumstances were elicited, in addition to which it was stated by Mr. G. De Lynn, a surgeon of thirty-four years' standing, that he had examined the body, (which had been disinterred) and that there was no proof "that this woman, Rebecca Bonner, could not have been delivered in the usual way;" and by Mr. Smith, also a medical man, that he had made a similar examination, and found "no appearances in the parts to prevent the birth of the child in the common way;" and by Mr. Beck, a surgeon, "that the pelvis was not only capacious, but as well formed as ever he met with."

The question, of course, immediately arises, why, (his patient having "a capacious pelvis," with "no appearances in the parts to prevent the birth of the child,") did not Mr. Rose effect the delivery "in the usual way?" and why, at all events, did he not call into consultation and to his assistance some of his professional brethren? In answer to the former, Mr. Rose asserts, "that under the state in which she was, he found it utterly impracticable to have extracted the child alive in the usual manner;" and, consequently, that he had recourse to the operation on the mother, seeing that at all events she must die, as the best chance of saving the child. Again, as to the second point: he did not consult his brethren in Woodbridge because they had not "any of them treated him as a professional brother—with even common respect;" but that he did call upon Mr. Armstrong, a surgeon at Chelten, for the purpose of asking his assistance, but who, unfortunately, was from home.

The only other circumstance requiring to be mentioned, and certainly standing in need of explanation, is the evidence of Mr. Moore and Mr. Tailor, the two apprentices who were present, that a very large dose of opium (said to be two drachms of the tincture) was administered to the woman immediately after the operation. How is the necessity for this thus to be reconciled with the previous almost moribund state of the patient; and were it otherwise, how came such an enormous quantity to be given.

We have told the history of the case, we believe, quite fairly and impartially; it requires no comment. The jury, in their verdict, pronounced it to be a "misadventure," and the Coroner, in their name, expressed their regret that no other medical men had been called in, and that even the parish officers were not consulted before the operation was performed.

GRATUITOUS PARISH DOCTORS.

Some weeks ago the worthy rulers of St. Pancras intimated to Dr. Roots, the physician to the workhouse, that, as the neighbouring parish of Marylebone had procured gratuitous medical attendance, they expected him to forego his salary in future, in imitation of so good an example. With this modest request Dr. Roots very properly refused to comply, preferring to throw up his situation, which he accordingly did. Upon this, an advertisement was put into the newspapers, inviting the members of the medical profession to undertake gratuitously the duties of this laborious and responsible charge. Up to Tuesday last, we are informed that no physician had offered himself, save one; and that he was deemed ineligible because he did not belong to the College of Physicians! We hear that the invitation is therefore to be repeated. We earnestly hope that no one will be found, under the circumstances, to accept a situation which Dr. Roots has, with such proper spirit, resigned. There is a disposition to trample upon the interests of our profession in all such matters, which can only be overcome by resistance. Besides, the conduct of any one who might condescend to become the humble, unpaid servant of the vestry, would contrast but very badly with that of his predecessor. Let the parish continue to advertise, and to do so in vain—it will be a useful lesson to others. Owen Glendower could "*call* spirits from the vasty deep," but none ever answered the call: so let it be with the conjurers of St. Pancras.

EXTRAORDINARY *SUBJECT* AT GUY'S.

All the town has been thrown into amazement by the accounts published regarding a body at Guy's hospital. A subject was brought there which was marked in the Return as that of a woman, but which proved to be of the male sex. This led to inquiry, when it was found that the deceased had lived and died under the guise of a female. Some suspicion, we believe, was entertained of foul play with respect to the mode of death, on which account an inquest was held. There seems no reason, however, for supposing that the deceased had met his end in an unnatural manner, however *unnaturally* he may have lived. The body presents the appearance of a feminine countenance and head, but there is nothing else to which that epithet can under any pretext be deemed applicable. The hair had been suffered to grow to the length it usually attains in women, and the whiskers, which are scanty, were concealed by means of a cap. There is but little appearance of beard. These physical peculiarities led to great facility in concealing the sex; and the extent to which the deception went is clearly shewn by Dr. Clutterbuck having attended him without detecting it. The deceased had lived on terms of familiarity with persons of his own sex. The tale is in our opinion too plain to require farther explanation, and too odious to admit of it.

CLOT-BEY.

This interesting and distinguished foreigner, to whom we have so often alluded in this journal, is at present in London: he is employed in visiting the various public institutions, in which he takes a lively and intelligent interest.

HOTEL DIEU, PARIS.

CLINICAL OBSERVATIONS ON ORIGINAL LUXATION OF THE FEMUR.

By Baron Dupuytren.

Translated from an edition published in Paris under his superintendance.

Anatomical Characters—Symptoms—Diagnosis—Causes—Method of Treatment.

Original luxation of the femur was some years ago the subject of an important memoir from the pen of M. Dupuytren. A case which lately occurred at the Hôtel Dieu afforded him an opportunity of returning to the subject. The individual alluded to was a man seventy-four years of age, affected with retention of urine. Several practitioners had endeavoured to introduce the catheter without success; Breschet succeeded once, but failed in a second attempt.

"This is a case," said M. Dupuytren, "calculated to illustrate the precept I have given you, to carry the instrument along the upper surface of the urethra, in order to avoid any false passages. Strictures, or other obstacles such as these, are almost always situated on the inferior part of the canal. I shall not, however, dwell longer on this

circumstance, because I am anxious to direct your attention to the affection of the hip-joint, which this patient exhibits. The heads of the femora are obviously dislocated; there is a marked projection of the haunches, and an inability on the part of the patient to separate the thighs. The simultaneous existence of this condition on both sides shews it to be a congenital affection. If he should sink, and his state of debility renders it probable, we shall examine minutely into the formation of the parts."

The result, which had been foreseen, having taken place, the body was carefully dissected.

Postmortem appearances in a case of Original Luxation of the Hip.

It was first observed that, as during life, it was impossible to separate the thighs, or to make them perform even a trifling movement of abduction, except by imparting to the extremity of the limb a circular motion of very wide diameter. The trochanters were much closer to the crests of the ilia, and much more elevated than in the normal state: the head of the femur was higher, the knees were more directed inwards, and the thighs shorter. In fine, there was a total change of the natural relations of the parts—an evident difference both as to length and direction. It thence resulted that the natural cavity for the reception of the bone was almost obliterated and its head deformed. The upper part of both thighs was increased in thickness, the trunk curved backwards, the abdomen carried forwards, the pelvis, instead of being oblique, was almost transverse; the thighs shorter, the buttocks soft and flaccid, depending on the unnatural approximation of the insertions of the great glutæi muscles, and their consequent relaxation. The glutæus medius, on the contrary, was distended, and pulled upwards; the glutæus minimus wasted; the pyramidalis, instead of being placed obliquely, as in the natural state, occupied a perfectly horizontal plane; the gemelli and quadratus were distended, and the abductors shortened.

At the left side, the original cavity, in its widest diameter, was not more than an inch broad. It was shallow, wrinkled, and filled with an oily substance. In front of the sciatic notch the external iliac fossa showed an extensive depression, shallow, lined by a thick periosteum, having almost the aspect of an articular cartilage. This was the place which had been in contact with the head of the femur. The head itself was diminished in size, rather flattened, unequal, devoid of any trace of an internal ligament, encrusted with an articular cartilage, but of finer texture than natural. The articular capsule formed a bursa, having its insertion on the superior and inferior edges of the old acetabulum. This bursa was the substitute for an osseous cavity, and permitted the ascent of the head of the femur into the cavity just mentioned. Its possible extension was about three inches, its thickness very considerable, its density almost cartilaginous.

At the right side the old hollow was a little larger, having the same aspect internally as the other. The external iliac fossa, instead of presenting, like that of the opposite side, a simple depression, showed a large and deep cavity with bony edges, situated before the sciatic opening, nearly on a level with the space comprised between the anterior superior and the anterior inferior spines of the ileum. The head of the femur, which was larger than that of the opposite side, retained more of its natural form. Like the other, it was encrusted with an imperfect articular cartilage, and the anterior of the false joint was lined by a synovial membrane. The orbicular ligament was not so thick as on the left side, although its extent was not restricted to the circumference of the preternatural cavity. But at this side the osseous edge formed a solid place of support, while at the left side the fibrous bursa alone confined the limb, by its resistance to the weight of the body.

There was, besides, extraordinary mobility in the articulation of the sacrum with the last lumbar vertebra. By pressing on the limb, and fixing the pelvis, the spine performed a straight movement, nearly to the extent of a foot. The relaxation of the cartilage was the sole cause of this singular flexibility.

Post-mortem examinations of this nature are very uncommon. The cases producing no accident, constitute a simple infirmity inadequate to the destruction of life. I have only had the opportunity of studying their nature with a few individuals. I have always observed that the muscles which have their attachments above and below the articular cavity are all dragged upwards towards the crests of the ilia. Of these muscles some are remarkably developed, others are diminished, and, as it were, atrophied. The first preserve their action; the others are embarrassed, restricted, perhaps totally impeded in their motions by the changes which have supervened in the form and position of the parts. Some are reduced to a species of yellowish fibrous tissue, in which the eye in vain seeks to detect any thing like muscle.

The superior portion of the thigh preserves its natural form, dimensions, and relations. The internal and anterior side of the head of the bone occasionally loses

somewhat of its rounded form, apparently in consequence of the friction it experiences against parts not adapted for its reception. The articular cavity is either completely deficient, or presents, as its sole vestige, a small, irregular, osseous prominence, in which it is frequently impossible to find any trace of cartilage, synovial or fibrous capsule or border, and which is surrounded by resisting cellular tissue, and covered by the muscles inserted into the lesser trochanter. In one of two or three subjects which I examined the round ligament of the articulation was much elongated, flattened superiorly, and as if worn in certain points by the pressure and friction of the head of the femur. This, again, is situated in a cavity sufficiently analogous to that developed in accidental unreduced luxations of this bone upwards and outwards. This new cavity, extremely superficial and almost deprived of any border, is situated in the external iliac fossa; that is to say, above and behind the cotyloid cavity, at a height proportioned to the shortening of the limb, or, what is the same thing, to the ascension of the head of the femur. In fine, we meet in these cases every appearance we see in those of spontaneous or very old accidental luxations, with this difference, however, that the date of the affection is evidently more distant; the disposition is either original, or at any rate it has existed from a very early period of life.

This original or congenital displacement of which the anatomical characters have thus been sketched out, has not been indicated by French writers *. Its nature was suggested to me by the history of Dautun, a patient of whom I shall say a few words in this lecture. In directing your attention to him, my object was not to swell the catalogue of human miseries, already too numerous, but to enable practitioners to avoid serious errors of judgment, and to protect their patients from useless and dangerous modes of treatment.

This alteration consists, then, in a transposition of the head of the femur from the articular cavity to the external iliac fossa—a transposition observed from birth, and which seems to arise more from defective depth and incompleteness of the cotyloid cavity, than from either accident or disease. The displacement is of the same kind as that which constitutes the luxation upwards and outwards. Two varieties of this disease are already known—the *accidental* and *consecutive*, whether spontaneous or symptomatic. To distinguish the luxation of which I now speak from those previously described by authors, I have given it the name of "*original*" luxation. The following is an example of this two-fold affection.

Congenital Luxation of the Heads of the Femora into the External Iliac Fossæ.

Jos. Paguar, aged 49, by trade a weaver, was admitted at the Hotel Dieu, the 21st of June, 1831, for a chronic ophthalmia, under which he had laboured from infancy, and which occasionally was subject to exacerbations. By bleeding, blistering, and footbaths with mustard, the ophthalmia was cured in a fortnight. When going out, he asked for a truss, to contain a voluminous scrotal hernia, previously supported by a suspensory bandage alone. On proceeding to examine the hernia, surprise was excited by the disposition of the upper extremities of the thighs. It consisted in a transposition of the heads of the bones from the articular cavities to the external iliac fossæ. This transposition was characterized by the shortening of the limbs, the ascent of the heads of the thighs into the external iliac fossæ, the projection of the great trochanters, the retraction of the glutei muscles towards the iliac crests, &c. The disproportion between the upper and lower parts of the body was very remarkable. The trunk was well developed, while the lower extremities appeared short and attenuated, especially when contrasted with the size of the pelvis, which had suffered nothing from what had passed externally to it. When standing up, the patient inclined the upper part of the trunk backwards; the pelvis was situated almost horizontally on the thighs; he touched the ground only with the point of the foot. He could mount on horseback only with extreme difficulty, and with the assistance of a chair. When on the saddle he could only keep his position by means of very short stirrups, which brought the knees on a level with the great trochanters. He pressed on the ischia; he could not grasp the horse's sides with his thighs. To walk was extremely painful, and his gait tottering; at every step the head of the bone supporting the weight of the body was seen to rise into the external iliac fossa, the pelvis at the same time descending, a circumstance evidently depending on the mobility of the heads of the thighs, a defect which the patient attempted to remedy by means of a belt which encased them. The act of running was less painful and tottering than that of walking. When placed horizontally on his back, the symptoms of the deformity dimi-

* Paletta of Milan published, in his *Adversaria Chirurgica*, some remarks on this complaint; but it is easy to perceive that they are very incomplete, particularly when compared with those of M. Dupuytren. Besides, the memoir of Paletta was entirely unknown at the time the distinguished French surgeon published his Essay, and M. Delpech, who, in his work on "Ortomorphy," made some extracts from it, had not in 1824 any knowledge of the above work, as is proved by a written consultation from him, which is still in our possession.—*Note in the French Edition*

nish. In this position the affected limbs could be easily lengthened or shortened, by pulling them or by pressing the limb gently towards the pelvis. All these displacements and movements were performed without pain—a fact which left no doubt respecting the absence of morbid changes, and of any cavity capable of receiving and containing the heads of the thigh-bones.

This patient, who only came to the hospital for his ophthalmia, requested his dismissal as soon as he was better. He declared that the malformation above described was congenital, and that from his first attempts at locomotion, his gait had been the same as then observed.

Various instances of Hereditary Original Luxation.

In conjunction with this characteristic example of double original luxation, it cannot but be of interest to record a very extraordinary instance of such malformation, apparently indicating, besides, that this conformation may be transmitted through many generations. There exists in the town of Mantua (according to the author of the communication) a family, several members of which have been and are affected by original luxation of the thighs. The oldest of the family is a woman aged eighty, Margaret Gardes, a fruitseller, whose statements are corroborated by the testimony of other persons of equal age. Two of her aunts on the maternal side, who died at seventy, were lame from their earliest infancy; they had high, thick, strongly-projecting hips, walked with the elbows thrust backwards, and waddled like ducks. Their father had a sister lame from infancy on the right side, and who died at eighty. Another sister, herself well-formed, gave birth to a child with a shortening of the right lower extremity. Margaret Gardes, the subject of the case, is a tall robust woman, of ruddy complexion, presenting the traces of great beauty. In her the displacement originated only at the age of thirty, and with symptoms of spontaneous luxation. The altered limb is one-fourth less in diameter than the other, and is longer by three or four lines. She married a foreigner, and by him had a daughter, named Simone, who had a congenital shortening of the limb to the extent of about three inches. This daughter married a man, himself well made, whose father had a double congenital luxation of the thighs. She had four children, two of whom presented the hereditary deformity. One is a girl, aged twenty-three; she has a luxation of both thighs, their heads being situated in the external iliac fossæ. The other is a lad aged twenty-one, who has a congenital luxation on the left side alone. The limb is shorter by five inches than the other; the head of the femur is directed upwards and backwards; the great trochanter projects forwards and outwards, the point of the foot is turned inwards; The functions of nutrition proceed in both limbs equally.

Symptoms of Original Dislocation of the Hip.

The characters of this kind of luxation, as of all others in which the head of the femur is directed upwards and outwards, are the shortening of the affected limb, the ascent of the head of the bone into the external iliac fossa, the projection of the great trochanter, the retraction of almost all the muscles of the upper part of the thigh towards the crests of the ilia, where they form about the head of the femur a kind of cone, the apex of which is the great trochanter—the almost complete uncovering of the tuberosity of the ischium deserted by these muscles—the rotation of the limb inwards, and the consequent direction outwards of the heel and ham, and inwards of the point of the foot and knee—an obliquity great in proportion to the age of the individual and the size of the pelvis, and from which results a tendency of the thighs to cross at their lower end—an acute and returning angle at the superior and inner part of the thigh where it joins the pelvis—and emaciation of the limbs in general, especially of their upper parts.

The movement of the limbs thus formed are in general very limited, especially those of abduction and rotation. Hence arise innumerable difficulties in standing and locomotion, and the other exercises in which the lower limbs are concerned. While standing, one is at once struck with the want of proportion between the upper and lower parts of the body, the imperfection of the lower extremities, and the singularity of the attitude. The trunk is developed, while the lower limbs are short and thin, as if belonging to an individual of smaller stature. This is rendered still more remarkable by the size of the pelvis. The projection of the trochanters also excites attention. As to the attitude, it is observed that the upper part of the trunk is inclined backwards, the lumber vertebræ projecting forwards, being concave behind; the pelvis is placed almost horizontally on the thighs; the individual only touches the ground with the point of the foot—all which circumstances result from the transposition of the ilio-femoral articulation, and from the centre of motion being situated at a point of the pelvis different from the natural one. When persons so formed desire to walk, we see them lift themselves on the tips of the toes, lean the upper part of the body towards the member which should support the weight of the body, then lift the opposite foot from the ground, and with difficulty transfer the

weight from one side to the other. In fact, every time the transfer takes place, the head of the femur, receiving the weight of the body, is pushed on the external iliac fossa, the pelvis sinks, and all the signs of displacement become prominent on this side, while they proportionally diminish on the other. It is by this succession of efforts that the body is as it were transmitted from limb to limb. It is manifest that the cause of these efforts is in the defective fixedness of the heads of the thighs, in the continual displacement they undergo, and by which they are alternately raised and depressed, and loaded with or freed from the weight of the body.

At first sight it seems strange that running and leaping should be performed with greater ease than walking. But in the former the energy of muscular contraction and rapid shifting of the body from limb to limb, render the defect of fixedness and the want of articular cavity, much less sensible. It is true that in running there is displayed a more marked equilibrium of the upper parts of the body, a more extensive movement of the pelvis at each side, and unwonted labour in the transference of the body from side to side. But, generally speaking, the most important of these difficulties disappear in leaping. The movements are somewhat different, as exemplified in some animals, whose bodies, not possessed of legs, are bent together at first, and then suddenly straightening, like a compressed spring, are projected to a certain distance. Nevertheless a kind of motion so fatiguing as that of these individuals does not permit them to make long-continued efforts.

When persons thus affected lie on their backs, it is surprising to see the extent to which the symptoms disappear. This depends on the muscles ceasing to drag the thighs upwards, the weight of the body not continuing to press the pelvis down between the heads of the thighs. What proves the correctness of this explanation is the ease with which the limbs may *b* lengthened or shortened in this posture: e if the distance from the crest of the ilium to the trochanter be taken as the test, it will be found to vary from one to three inches, in the erect and horizontal postures, according to the stature, age, and constitution of the individual, and the extent of displacement of the bones. All these transpositions are accomplished without pain; an evident proof, as before mentioned, of the absence of morbid action, and of the want of a proper cavity to receive and retain the head of the bone.

Diagnosis.—This luxation is not only important considered by itself, but is still more so in reference to diagnosis; in fact, presenting all the symptoms of that which results from disease of the hip-joint, it was like to be and actually was, confounded with it, and as an unavoidable consequence, it has always been subjected to the same treatment, although it is but a malformation, or at most but an infirmity.

Many persons affected with an original luxation have been condemned, in consequence of this error in the diagnosis, to keep their bed for several years: I have seen others who have been obliged to submit to applications without number — leeches, blisters, caustics, and above all, the moxa. I remember among others a girl who had twenty-one moxas applied round the haunches, without this barbarous and useless treatment producing the slightest change in the condition of the unfortunate patient.

I may allude among other cases of this kind to one wherein the nurse was accused by the distracted parents of having caused by her brutality or carelessness a dislocation in the person of a child committed to her charge, and which, in fact, had been born with this deformity; — to that of Dantun, the victim of a dreadful murder, whose body, after being mutilated and disfigured, was wrapped in a sack, and remained unrecognized, notwithstanding the most active investigation, till I pointed out this peculiarity of formation to the authorities, by which his identity was established. The history of his life carefully inquired into shewed that he never had had any disease of the hip; that he had come into the world with the deformity which led to his recognition after death, notwithstanding the horrid mutilations practised by the assassin, who had hoped thus to conceal his victim from every eye.

We may, however, easily learn, by the following signs, to distinguish these affections, so like in symptoms, but so different in their origin, their nature, and their treatment; viz. by the absence of all pain and all swelling, and of any abscess, fistula, or cicatrix; — by the simultaneous existence, in the greater number of cases, of a dislocation on each side: I say in the greater number of cases, because in some the affection exists only on one side. In twenty-six instances of this nature which I have seen, in two or three the dislocation was present only on one side. I remember, on particular, a boy who had this affection only on the right side, and what renders the case more interesting is, that he had a sister who had the same deformity, and in her also it was confined to the right side. The following case removes all doubt in this respect:—

Original Luxation of the Hip confined to one side.

"Mademoiselle F. eight years old, of weak constitution and strumous diathesis,

appeared at the public consultation at this hospital on the 31st of August, 1821. Her parents declared that the child had limped from the time she began to walk. She had met with no fall, nor received any blow on the hip when at nurse. Various expedients were tried, but without effect. When the girl is standing up, a wasting of the left lower limb can be immediately perceived, and a difference between the form and size of the two thighs; that of the left side is larger above and rounded below: the projection of the great trochanter upwards and outwards is striking, as well as the oblique direction of the femurs. The vertebral column presents a great degree of curvature; the head is thrown back to compensate for the effect produced by the transposition of the centre of motion: the belly projects: the knee and point of the foot are turned in: the ham and heel outwards. When she walks she may be seen to shift the trunk from one hip to the other. It is with great difficulty she can run, leap," &c. This was evidently a case of original luxation of the femur, and is remarkable in this respect, that it only existed on one side. (The case was communicated by Dr. Marx.)

Case of original Luxation of the Hip—Movements of the Limbs but little impaired.

Mademoiselle T. de J. was born on the 5th January, 1812, at the full time. No deformity of the lower extremities was observed at the period of her birth. At ten months she had an eruption on the head, which, however, was soon removed; but in a month afterwards she had the croup. Dentition went on favourably. At fourteen months the first attempt was made to let her use the limbs in walking, and it was only then discovered that she balanced the trunk first on one thigh and then on the other; that the weight of the body, instead of resting on the entire sole of the foot, was thrown upon the toes, which were turned inwards, as well as the knee, while the knee and hams were tilted outwards; that the limbs were raised with difficulty from the ground; and that she could scarcely separate the thighs from each other. From this time the parents consulted a number of practitioners; a multitude of things were recommended and tried without the slightest benefit—such as fumigations, frictions, lotions, and baths, with a tonic regimen. These means were continued with perseverance; the patient grew, and the malformation made equal progress: the lumbar spine was thrown forwards, and the viscera, pushed on by this, became prominent.

In 1821 M. Dupuytren was consulted for the first time, when the patient, now nine years of age, presented the following appearances:—The lower limbs, turned inwards, were remarkable for their shortness and emaciation; their direction was oblique, so that being apart above, they were much approximated beneath, almost, indeed, with a disposition to cross each other; the great trochanters were prominent at the upper and back part; the foot was much bent; the chest projected as well as the belly, the upper part of the body being carried forward. No deformity was perceptible on the trunk, or even about the pelvis, the dimensions of this last being natural. An attentive examination was made to see if there were any traces of fistulous cicatrices. (The same precaution was likewise taken with the other patients labouring under this affection.) None were discovered, and the unanimous declaration of the relations left no doubt on this point. The symptoms above enumerated were observed when Melle. F. stood, but when she lay down, the weight of the body resting no longer on the thighs, they were capable of being made to assume their proper place, on which all the above appearances ceased. A very remarkable circumstance was, that she could walk, run, and leap, like any other child.

Origin and Progress of the Affection.

To the symptoms above enumerated it is necessary to add the history of individuals affected with this kind of luxation; the appearance of the symptoms from the first step which the child takes, and their progressive increase with the growth of the upper part of the body.

Those affected with original luxation experience no pain in the hips or knees; they only feel fatigue and numbness when they exercise the lower limbs too much: there is no swelling round the ileo-femoral articulation, for the projection of the trochanters, and the increased volume of flesh round the neck of the femur, have none of the characters of tumefaction—they are the effect of the ascension of the head of the bone into the external iliac fossa, and of the movement which carries the muscles and their attachments upwards towards the crest of the ilium; there is no abscess, no fistula, nor the cicatrix of any, and consequently no indication of such mischief having existed, which is so frequently the result of hip-joint disease when it has terminated in spontaneous luxation; finally, the two thighs, or that which is affected, always presents the same changes of form—a circumstance so rare in disease of the hip-joint, that it may almost be regarded as diagnostic of the malformation of which I speak.

These proofs acquire still more validity from the history of individuals affected with original luxation: this shews that

they have never experienced pain in the hip-joints or knees, nor inability to move the former, nor had preternatural lengthening of the lower limb, swelling of the haunch, fever, nor sudden shortening after more or less of elongation; in a word, they have had none of those symptoms characterizing that painful and distressing malady which usually leads to spontaneous luxation of the hip. The history of these patients further shews in a decided manner—the first signs, the progress, development, and effects of congenital luxation of the femur. If called in betimes to children who are affected by it, we find from the moment of their birth indications of this malformation, such as an unnatural largeness of the haunches, projection of the trochanter, obliquity of the femora, &c.; but as it almost always happens that the deformity and the infirmity which results from it only attract attention when the child ought to begin to walk, is is generally only then that we are called upon for our opinion. The child at this period either cannot stand, walk, or run, or can only do so with great difficulty: sometimes, indeed, it happens that the parents, less careful and anxious than usual, only think that the child is backwards in its walking, and fail to discover the evil till its third or fourth year.

The evil becomes very apparent when the pelvis comes to increase and the patient forced to take longer and more fatiguing exercise: it is then that all the symptoms above detailed become manifest; but the cause and nature of the evil being still unknown even to most practitioners, some attribute it to a dislocation from external causes, such as a fall, &c.; others look upon it as a scrofulous affection, which, during pregnancy or after the birth, had caused wasting of the articular cavity, or of the head of the femur, and as a consequence the displacement of that bone. It must be confessed that the lymphatic constitution and ricketty aspect of those individuals give some colouring to this idea, and if I have adopted a different opinion, it is because I have seen the malformation in children of diametrically opposite constitution at the moment of their birth, and without any appearance of disease having been present; and, finally, because I have had opportunities of dissecting the parts, and thus finding in them a conformation and arrangement which excludes the supposition of any actual or previous disease.

At the period when the characteristic distinctions of the sexes begin to be developed, the growth of the pelvis more rapid and considerable in the female, renders the deformity more apparent in them; but when the pelvis has acquired its full size and the upper parts of the body their greatest weight, the effects of the original luxation are much increased, and indeed to so great a degree as to lead to the apprehension of disease of the hip. Then the eyes of the most inattentive are opened, and all doubts removed. This increase is marked by a daily increasing inclination forwards of the upper part of the body by the bending of the loins, and the projection of the belly, which goes on constantly augmenting—by the continual motion of ascent made by the great trochanters, the balancing of the trunk, and the lateral movement of the pelvis, and, if I may use the expression, the disarticulation of the femurs every time the body has to be supported.

The increasing weight of the body and size of the transverse diameter of the pelvis is that which aggravates the symptoms. The trunk, by pressing with augmented gravity on an articulation which has no cavity, fatigues the ligaments and muscles, and contributes to throw the head of the femurs up to the crest of the ilium; and that to such an extent, that I have seen the trochanters and heads of the thigh bones raised, in the space of a few years, into the external iliac fossa, and almost touching the crests of the ilia. The wideness of the pelvis in women, as it throws the parts farther asunder, gives them at the same time a greater divergence, which even adds to the grievous effects of the want of solidity in the ilio-femoral articulation. Thus do we see females, who when young girls could walk, run, and dance, upon becoming women are almost incapable of any violent exercise; and the incapability amounts to an absolute impossibility when the person is *embonpoint*, or dropsical, or pregnant. It should be observed, however, that the circumstances of the exterior have no effect on those of the interior of the pelvic cavity; and, both before puberty and after, the pelvis attains its dimensions suitable for the purposes of the viscera which it holds; it is fitted to receive and to transmit the product of fecundation just as well as in the best-formed subjects.

Causes.—How, then, does displacement occur? Is it owing to any disease of the fœtus which is cured before birth? Or is it the result of any effort or violence which has occasioned the head of the bone to spring from its cavity? and does the latter become obliterated through disease, or simply because it has not been employed, and has consequently become useless? Has nature forgotten to mould a cavity for the head of the bones; or, as M. Breschet thinks, has this cavity, which results from

the union of three pieces, become imperfect through some impediment in the growth of the bones? I shall not give a direct answer to any of these questions, but confine myself to some short remarks.

Pathological anatomy demonstrates that the fœtus is subject to a variety of disorders, which run their course, and terminate in cure or death, before delivery. It may accordingly happen that a complaint of such a nature as to occasion the luxation of the femur may take place; yet there are several circumstances repugnant to that hypothesis. In the first place, all the persons in whom the displacement has been observed have been healthy on coming into the world, which is opposed to the notion that they could have been affected in the womb with a disease that should occasion spontaneous luxation of the femur; nor, at their birth or after, have any of those swellings, abscesses, fistulas, or pains, been observed, which so generally accompany or follow those complaints. Does it not rather result from some violence which has forced the head of the bone from its socket?—or, in short, has it not been accidental, occurring like those casualties which happen during life—falls, strains, &c.? But on such a supposition, what sort of violence should it be that would produce such an accident? Let me be allowed to make one remark in favour of such an explanation. It is to be observed that the lower limbs of the fœtus *in utero* are strongly bent on the abdomen—that the head of the femur makes a constant effort against the posterior and lower part of the capsule—and that this effort, which is productive of no bad effect in healthy subjects, may be otherwise where the system is less normal and the tissues less capable of resistance. This being granted, it is readily conceived how the posterior and lower parts of the capsule, being forced to let slip the head of the bone, allow luxation to take place; and then, to account for the displacement upwards and in front, we have only to remember that the most powerful muscles which surround the articulation have a constant tendency to draw the head of the bone in that way, when once the head of the bone is out.

Now as to whether it arises from an impediment in the evolution of the ossa ilii,—it is, as I said, M. Breschet's opinion, founded on his own researches and the observations of several modern anatomists who treat of the growth of the fœtus, and particularly of its osseous system, that those points are always the last developed which are to constitute cavities and eminences, and those spots, especially where several pieces are to unite. It is further known that the cotyloid cavity is one of the last parts that become ossified. Then, since the pelvis, viscera, and parietes, receive branches of vessels distinct from those which supply the lower limbs (the continuation of the arterial trunk), it may so happen that, through some circumstances unknown, the development of the pelvis may take place later and not simultaneously with that of the femurs, and so the latter may be carried along the greatest depression in the exterior, and may become posited in the external iliac fossa.

In each of the three hypotheses just stated the luxation is supposed to be congenital; in one which it remains for us to notice it is conceived to be original, and to date from the earliest organization of the parts. There are said to be original vices of structure belonging to the condition of the germs: and might not, it is asked, the defect in question be traced to such a cause? On such an hypothesis, it is certainly very easy to conceive both the simultaneous displacement of the femurs in most of the individuals in whom it has been observed, and the perfect health they enjoyed at birth, and the complete absence of all disturbance or morbid affection, as well regarding the head or the bone as the cavity itself.

Treatment.—How should we proceed to treat this complaint? Palliative treatment at once suggests itself as the most rational, and this is the kind which I have adopted. It should be recollected that the heads of the thigh-bones have a natural tendency to get up into the iliac fossa, through the weight of the trunk which presses down the pelvis—a circumstance which plainly indicates the propriety of palliatives. It will then be perceived that it should be our chief object to prevent the weight of the body from pressing upon an articulation which wants a cavity, and to restrain muscular action from being exercised on the femur. Repose is acordingly the chief remedy, and the attitude best suited for the purpose is the sitting posture, in which the weight is supported, not by the ilio femoral articulations, but by the tuberosities of the ischia. For which reason too, it would seem proper to advise people who have to earn their bread, and who labour under this infirmity, to adopt some business which they can perform sitting; any occupation which would oblige them to stand much, or to move about continually, being evidently contra-indicated as dangerous in a high degree. But persons affected with this complaint cannot be condemned to a perpetual repose; there must be some means devised of relieving the inconveniences of such a condition—means by which they may be enabled to walk and take some

fitting exercise. My own experience has hitherto enabled me to find out but two methods of attaining this object: the first consists in the daily use (except when perspirations or the menses are present) of dipping-baths constantly employed—all the body to be immersed (the head protected with oiled silk) in fresh or salt water—cold—quite cold—for three or four minutes at a time, not more. The effect of these baths must be to strengthen the parts about the defective articulation, and, by augmenting their resistance, to restrain the tendency upwards of the heads of the bones. The second method requires the constant use of a cincture, to guard the pelvis and shut up the great trochanters, keeping them at an invariable height, and making altogether a compact body of the affected parts, so as to prevent the perpetual vascillation of the trunk on the imperfect articulations. Now, what I should recommend with regard to the cincture is this: it ought to be fixed round the narrow part of the pelvis, between the crests of the ilia and the trochanters; it ought to occupy the whole of this space, and for that purpose to be about three or four fingers in breadth, according to the age and station of the person. It ought to be well stuffed with hair and cotton, and covered with kid-skin, so as not to injure the parts to which it is applied, and there should be tight and shallow gussets put in on the inner surface of the lower margin on each side, to receive and to hold the trochanters, though not to confine them entirely. Buckles and straps at the extremities, and directed backwards, should be contrived to fix the cincture round the pelvis; and over all large drawers, stuffed and covered like the cincture itself, but widened and a little biassed about the tuberosities of the ischia, should be employed to keep the girdle in one place, where it should be always settled. I have succeeded by such measures in preventing the accumulation of inconvenience in those cases of luxation, and in rendering endurable the mischiefs which I could not remove. Some of my patients have given me unquestionable proof of this, inasmuch as some of them, feeling fatigued by the constant pressure of the cincture, resolved to give it up, but were soon obliged to have recourse to it again, not finding the requisite support without it, especially when they attempted to walk.

It was at first thought that traction employed on the lower extremities could be of no use: for, supposing that by these means it were possible to bring the limbs to their natural length, would it not seem clear that the heads of the bones finding no cavities to lodge them and hold them, the parts would lose the length which they had acquired by extension?—This opinion has, however, been modified by MM. Lafond and Duval. These distinguished practitioners tried the method of extension at their establishment at Chaillot on a child of eight or nine years of age affected with congenital displacement of both the femora, and after a few weeks succeeded in bringing both limbs to their due length and straightness; and, what is still more remarkable, on persevering for three or four months, the good effects became in a great degree permanent.

"Original luxation of the femur," said M. Dupuytren in conclusion, "is by no means so rare as might be thought. I have met with five or six and twenty cases of the kind in the course of twenty years, the period at which my attention was first called to the subject. A concluding remark which I would make may not be without interest, and that is, that almost all the persons I have met with affected with this disorder have been females; in fact, not above three or four out of the six and twenty have been males. Now we can scarcely admit that chance has been the sole cause of this disproportion: but, supposing it constantly so, whence comes it that the other sex is more exposed to original luxation than our's? I confess that I am unable at present to assign any particular reason that would seem satisfactory: I can give at best but a general reason, namely, that vices of structure are, as it has been constantly observed, much more common in the female than the male sex. Further experiences will, I trust, be forthcoming, at a future period, adequate to explain the phenomena and to complete my researches."

NOTTINGHAM GENERAL HOSPITAL.

To the Editor of the London Medical Gazette.

January, 17, 1833.

Sir,

The inclosed is sent to you for insertion in your journal, if deemed of sufficient interest; for it appears due to Baron Heurteloup, not only on account of his skill in the performance of this operation, but also from the very handsome manner in which he has acted on the present occasion, to give publicity to this addition of his list of cases.

I am, very respectfully,

Booth Eddison,

House-Surgeon.

Case of Lithotrity performed with the "Percuteur," by Baron Heurteloup.

On Saturday, January 12th, Baron

Heurteloup gave a practical illustration of the system of breaking stone in the bladder.

The patient, John Hancock, aged 60 years, a frame-work knitter, a native of the town, had been subject to gravel twenty years, frequently passing per urethram small stones, which, from the history he gives, have always been formed in the kidneys. About five years ago, a calculus, probably of larger size than usual, having passed from the right kidney, remained in the bladder; and after eighteen months suffering, he entered the hospital under the care of Mr. Oldknow, who performed the lateral operation. The patient recovered, and left the hospital in a few weeks. He had no return of the symptoms of stone for two years. About eighteen months ago he began to pass small calculi occasionally; and six months ago, one, which had passed from the left kidney, remained in the bladder, and producing the usual symptoms of stone, induced the poor man again to enter the hospital, desiring rather to be cut a second time than suffer the continued pain. His surgeon, Mr. Oldknow, considering this a very fit case for lithotrity, wrote to Baron Heurteloup, stating the circumstances. The Baron at once most handsomely offered to come to Nottingham, and perform the operation gratuitously. On Friday he came; and having sounded the patient, determined to operate on the following day. The medical gentlemen of this and the neighbouring towns assembled, and were exceedingly gratified with the operation which the Baron performed with his percussor. He introduced the instrument, seized the stone, and broke it so rapidly, that it excited the admiration of all present, more particularly of the patient himself, who all the time had been anticipating something serious.

The stone was of small size, and composed of the mixed phosphates. It is probable that no fragments remain except such as may pass per urethram. Many pieces, about the size of peas, larger, or smaller, have come away. The patient is relieved by the operation, and has not in any way suffered from it.

After the operation, the Baron gave a very interesting and satisfactory demonstration of his instruments.

In the evening, a number of those gentlemen who had witnessed the operation, had the pleasure of again meeting the Baron at a dinner to which they invited him.

ACCUMULATION OF THESES.

Every candidate for the doctorate in France, as with us, writes and prints a thesis, which he presents to the faculty conferring the degree. The number of theses presented to the Paris faculty since 1805 amounts to 160 vols. quarto! *Collection rare et precieuse!*

OPHTHALMIC SURGERY IN PARIS.

It has at length been decided that a clinic for *Diseases of the Eye* shall be established at the Hôtel Dieu. Is it not a little curious that the French, with all their boasted excellence of hospital arrangements, should have been hitherto destitute of an Eye Infirmary?

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Jan.* 22, 1833.

Abscess	3	Hydrophobia	1
Age and Debility	73	Inflammation	51
Apoplexy	13	Bowels & Stomach	6
Asthma	29	Brain	2
Cancer	2	Lungs and Pleura	4
Childbirth	14	Liver, Diseases of the	3
Cholera	2	Measles	19
Consumption	105	Miscarriage	1
Convulsions	42	Mortification	5
Croup	2	Paralysis	5
Dentition or Teething	5	Scrofula	1
Dropsy	25	Small-Pox	20
Dropsy on the Brain	23	Sore Throat and Quinsey	4
Dropsy on the Chest	1	Spasms	1
Epilepsy	1	Stone and Gravel	1
Erysipelas	3	Stricture	1
Fever	12	Thrush	2
Fever, Scarlet	14	Tumor	1
Fever, Typhus	1	Unknown Causes	85
Gout	1		
Hæmorrhage	1		
Heart, diseased	2	Still-born	24
Hooping-Cough	33		

Increase of Burials, as compared with the preceding week 338

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

January 1833.	Thermometer.		Barometer.	
Thursday . 17	from 33	to 42	30·10	to 30·07
Friday. . . 18	31	37	30·02	30·09
Saturday . 19	31	37	30·19	30·20
Sunday . . 20	33	39	30·20	30·22
Monday . . 21	25	35	30·23	30·26
Tuesday . 22	21	35	30·28	30·36
Wednesday 23	19	37	30·42	Stat.

Prevailing wind N.E.

Clear and frosty since the 20th.

On the evening of the 22d, about half past seven, a remarkably brilliant meteor was seen in the north, rather to the eastward of Cygnus.

Charles Henry Adams.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 2, 1833

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM*.

EPILEPSY.

The disease next to be spoken of is epilepsy. Those affections which I have considered subsequently to common phrenitis have been characterized by an excess of sensibility or an excess of motion—hydrophobia and neuralgia being an excess of sensibility; tetanus, chorea, and paralysis agitans an excess of motion. The diseases now to be considered are characterized also by an excess of motion; but, besides that, there is deficient sensibility in one respect—there is stupor. When I have considered these affections, I shall proceed to those in which there is deficiency only; for instance, apoplexy and paralysis. The present forms an intermediate link between those characterized by an excess of sensibility or motion, and on the other hand those in which there is a deficiency of both.

Character.—In epilepsy there are fits of a sudden loss of sense, with convulsions of the voluntary muscles; and the former, that is to say the loss of sense, continues after the convulsions have ceased, so that a person is said to go to sleep after the fit. The fact is, the convulsions cease before the loss of sense terminates.

Symptoms.—In the fit the countenance is ghastly and pale, or perhaps of a bluish red; it is sometimes sallow. You observe that the lips are livid, the neck and the cheeks are much swollen;—and perhaps the whole body, but especially the head and cheeks, are bedewed with sweat. There is foaming at the mouth, and generally the tongue is bitten. There are universal violent convulsions, horrid grimaces, a rolling of the eyes, and the pupils are dilated. Sometimes it happens that the urine and fæces are discharged involuntarily—the urine most frequently; and occasionally there is a discharge even of semen, with or without (I do not know which) an erection; but it is certain that some people suffer a discharge of semen in the paroxysms. The hands are generally clenched in the fit, and if you observe the heart, you find it palpitating strongly. The pulse is quick, and respiration is short, deep, and irregular.

Probability of there being no suffering during the fit.—When the patient wakes from the state of sopor, he has generally no recollection of what has passed, and perhaps, therefore, there is no suffering. The want of recollection of suffering is no proof that there has been no suffering; for we have all suffered enough in cutting our teeth, and we know nothing of it now, and so it may happen respecting more recent events: the fit may be attended with more or less suffering, and yet the individual not be aware of it afterwards; but I should think there was no suffering, and for this reason—persons do not suffer in general when they are hung. Although the individual may struggle, and although he may be all but dead, and may hang so long as to be insensible, it does not appear that there is any suffering. There is an account in Lord Bacon's works of a person who was hung and all but killed, and yet he did not suffer. There is a short account by Cowper the poet (which is very scarce, on account of having been bought up because it ought not to have been published), from which it appears that he three times attempted to commit suicide, and one of these attempts was by suspension. The

* See errata in the last page.

account was written by himself and found among his manuscripts. He there mentions that he suspended himself over his chamber door in the Temple, and became perfectly insensible. He only recollected a flash of light appearing before his eyes. His weight at last caused him to drop on the floor; there he was found, and after a time he recovered. He says that, although he was thus in the jaws of death and had become perfectly insensible, yet he had no previous suffering; and therefore, as there was no suffering in that state, it is probable that there is no suffering in epilepsy; that there is such a state of insensibility that nothing is experienced. I should suppose that in drowning there is no suffering, if it occur at once. Shakspeare's expression is, "Oh Lord! methought what pain it was to drown;" but there is no reason to suppose there is pain, if the individual go down and do not come up again; but if he come out of the water, the suffering is dreadful.

Duration of the fits.—Now these convulsions may last from a moment to fifteen minutes or more, and sometimes they recur after they have ceased, before the sopor is over. The sopor, or coma, is generally complete, both during and for some time subsequent to the convulsions, but not always.

This, therefore, is the character of epilepsy—a sudden attack of convulsions of the voluntary muscles, together with insensibility, the insensibility continuing after the convulsions have ceased.

Etymology.—The name of the disease is given to it from the suddenness of the seizure—επιλαμβανω, to seize upon. It is also called in Latin *morbus comitialis*, because if a person in the commission of the Romans was seized with the disease, it was considered a bad omen, and the commission was dissolved. It is also called *morbus sputa*, the spitting disease, from the custom of spitting into the bosom, to avert the unfavourable omen. The Romans were remarkably superstitious, and fancied it was a sign of ill luck to be seized with a fit, and therefore spit into their bosoms, to save themselves from something pernicious, or to do good to the patient. In common language it is called *falling sickness*; and now that the lower orders have got hold of fine names, they call it all sorts of things. The Jews ascribed it to the influence of demons, and you find it indicated in the New Testament, where persons are said to have been suddenly seized by an evil spirit and fell into the water or fire, because a patient who is liable to the disease may be near fire or water, and he will fall into the one or the other.

Occurs more frequently on one side than on the other.—You will find a circumstance in this disease which I mentioned as occurring frequently in all diseases of the nervous system, namely, that it occurs more on one side than on the other. I mentioned that paralysis continually does so; St. Vitus's dance affects one side more than the other; epilepsy does the same; and we shall see that hysteria likewise has the same tendency.

Period at which the fits usually occur.—The fits of the disease most frequently occur during sleep, or in the intermediate state of sleeping and waking, when we all experience a little delirium. If we fall asleep in a moment from a waking state, there is no delirium; but if we fall asleep gradually, the mind wanders, and if you wake suddenly there is nothing of the kind; but if you wake very slowly, then again a little delirium is experienced. We are, however, more accustomed to go to sleep gradually than to wake so, and therefore the delirium which you observe is far more common in going to sleep than in waking. Now it is at the instant when a person is neither in full action or at complete rest, that epilepsy particularly attacks him. You find a great number of persons have a fit just when they are going to sleep, or when they awake—many have it when they are asleep; and again, some only have it either when they are going to sleep or are about to wake.

Warning of the occurrence of a fit.—Occasionally the patient has no warning whatever, and has no knowledge of the fit. I have seen many persons who are not at all aware that they have fits. These have been persons in the decline of life who are in the habit of sitting in the house, not going about so as to run the chance of being injured, and who have been watched by the rest of the family. I have known them have fits for years, and yet they have not been aware of it, at least they pretended they were not. The individual has been seized in a moment, and has afterwards wondered what has been the matter. But some persons have good warning; some, previously to the attack, have vertigo and headache sufficient to shew that they are going to have it. Sometimes there is just vertigo enough, and no more, to enable them to escape from danger. Some have headache a day or two before the vertigo, but some have vertigo only just in sufficient time to make them get out of the dangerous situation in which they are placed. Occasionally a spectre has been seen at the moment of the fit—an image has passed before the mind before the fit took place. I recollect that Dr. Gregory used to mention in his lectures that he knew a patient who before the fit saw a little old woman come out of the corner with a stick, and when she approached and struck him, down he fell in a paroxysm. It is a mental delusion of the moment produced by an excite-

ment of the brain. I believe the fact is mentioned by Sir Walter Scott in his book on Demonology—not, by the way, one of the best he has written.

Sometimes before the fit there is a warning, occasioned by a sensation of tickling or crawling along the surface of the body. There is a sensation as if fluid were creeping from the fingers or thighs towards the trunk, and sometimes as though a spider or flea were creeping. When it appears like fluid, it is generally like *cold* fluid. This has been ascribed to a sort of rush of air or wind, and has been called *aura*, and being connected with the epilepsy is called *aura epileptica*. It does not follow the course of particular nerves; it appears to reside in the skin, and certainly there is no connexion whatever between it and the neurilema of the part. I have seen several instances of this affection, and I made a note of one case in 1826. A boy had a sensation of two auræ; they ran along the back of the foot up the front of the legs and thighs; each stream ran up the trunk, and they met at the epigastrium, and then it seemed as if there were five streams running from the two up the trunk. As soon as the auræ got to the epigastrium, down he fell. He compared the sensation, which was very rapid, to that of the creeping of a spider. I had another case of the same kind in May, 1826.

You will sometimes notice that, before the fit, the patient utters a loud scream. He is not aware of any suffering that occasions him to do it, but only says that he cannot help screaming. You sometimes find that the patient has a warning during the first fits; but when he has been long subject to the disease, no warning takes place. Sometimes after a fit not only will a patient forget it, but no symptom remains; and on the other hand, for some days people will occasionally be subject to headache and sleepiness. Sometimes these symptoms only remain a few hours, but in other cases they will remain a few days. You will occasionally find the fits at first very numerous, but gradually they become less so; while, however, they become less numerous, they generally become more severe and last longer. I think, in the majority of cases, the fits are most frequent at first, so that a person will have a dozen or twenty in a day; but as they become fewer, I have generally observed them last longer, and the severity is greater. Occasionally I know the reverse takes place—they are not so numerous at first: some have but one fit for many years—an interval of many years will occur between the fits, and, so far as I know, some have but one fit during life. Persons have had one solitary epileptic fit from some temporary cause, and the disease has never recurred.

Effect upon the mind.—If the disease have continued long and the fits have not been very infrequent, the mind generally becomes impaired; but if the disease have continued long, and yet the fits have not recurred except at long intervals, then the mind is not impaired. It does not necessarily follow that the mind should be impaired; but usually, if the disease last a long time, and the paroxysms are not very infrequent, you find impairment take place, and the reason is simply this, that the disease of the brain which gives rise to these fits at last disturbs other functions. It is not the epilepsy that causes it, but the cause of the epilepsy impresses other parts of the brain. That the disease, however, does not necessarily impair the mind, is shewn by the example of Julius Cæsar and Napoleon, both of whom, we are told, were subject to it.

Conjoined with other Diseases.—It is very common for diseases of the nervous system to be united together, one, two, or more; and therefore you find, in illustration of this observation, that epilepsy frequently occurs in chorea, frequently occurs in hysteria, frequently occurs in insanity and with idiotism, and not unfrequently with palsy; that is to say, the pathological state of the brain or spinal marrow, or both, will produce sometimes one symptom, and sometimes another. The disease may be such as to extend from one portion to another, and affect various parts. This union of different diseases of the nervous system is seen almost always. In St. Vitus's dance there is a peculiar constitution of mind, a little fatuity: apoplexy and palsy you see united every day, and apoplexy is the common termination of many diseases of the nervous system, of insanity for example. You may have these different nervous diseases co-exist or succeeding each other.

Varieties.—There is a great variety too in epilepsy. That which I have just described is the most common form; but there are very great varieties, so that persons may quarrel about the definition if they choose, and say such and such forms are not epilepsy. If you define epilepsy to be a complete loss of sense with general convulsions, then an incomplete loss of sense, or partial convulsions, is not to be considered epilepsy. But it is not wise to quarrel about terms in this way, so long as we understand what is meant by an expression.

Now it will sometimes happen that there is decided insensibility before the convulsions take place, and then during the convulsions a person is more or less sensible. This is one form in which the disease appears. You will occasionally see patients without convulsions at all; they will simply fall down in a state of insensibility,

and rise up again without knowing what is the matter with them. Occasionally, instead of these convulsions occurring throughout the body, they are confined to one side, and sometimes they are still more partial than that—they are confined to one extremity. Sometimes, instead of convulsions, you have mere tremor of the body, or a part of the body will shake violently. Occasionally during the fit there is delirium. The person shews that he is not insensible; but instead of being insensible, he is in a state of violent delirium, apparently in an alarming condition, although in general I believe there is no danger at all. Sometimes they have this delirium on recovering from a comatose state—they have coma, and after that delirium. Occasionally the disease assumes the form of partial tetanus, one-half the body will be in a state of the most intense spasmodic rigidity. I have seen two cases of this where the person was seized at the moment of the convulsions with a spasm of one-half of the body, attended with the most excruciating pain. One arm and one leg has been drawn up; yet there has been no danger in it, and the nature of the case has been shewn very plainly by the next paroxysm being epileptic.

Sometimes there is a variety in what occurs in this respect; a person is insensible to all around him, and yet has before the fit no internal unconsciousness. I have seen several instances where, before the fit, the patient became unconscious of external objects—that is to say, the comatose state came on before the convulsions; but in that apparently comatose state a state of sopor in which there was no perception of any thing around, the patient was internally in a state of activity, and that condition is called *ecstasis*. When a person suddenly becomes insensible to all around him, and yet the mind is in a state of activity without being aware of what he is about, it is called *ecstasis*, whether it be united with epilepsy or not.

Ecstasis.—Now in this state people sometimes walk, dress themselves, and even compose poetry, and yet they have no knowledge of it; and if they be awakened in this condition, they are alarmed, and quite ignorant of what has passed, or at least they are surprised at the situation in which they are placed. Sometimes they recollect it all, just as we recollect a dream. Sometimes we remember a dream, but sometimes we have no knowledge of it, but those near us see that we have been dreaming. So it is in this state of ecstasy, which consists in the mind being internally active: sometimes persons have a recollection of all that passed in the paroxysm. Sometimes the paroxysms are not quite complete, so that a person is half aware of what is going on about him. If they be in a situation where they have frequently been before, and have become habituated to it, they have been known to walk over difficult places where there is the greatest danger, but without incurring danger. These places, however, are well known to them, and habit has influenced their motions. Sometimes, however, the activity of the mind is so imperfect, that though they know where the window is, and how to open it, yet they forget that there is beyond the window the street, and they step out, and are dashed to pieces. This all arises from an imperfect activity of mind. This state of ecstasis is nothing more than active dreaming. In dreaming we are often active, reason correctly, and even compose poetry; but in this state of ecstasis more is done than that;—persons will compose to a great extent, reason accurately, and perform voluntary motion, so as to go from one place to another, and do many things, and yet for the most part they will be ignorant of it. I had a patient who had this ecstasis before the paroxysm of epilepsy. She was a girl, and subject to epilepsy, and before she fell down she was insensible to all around her, but in the state of insensibility she used to hum "Robin Adair" and "Home sweet home," so correctly, that none could find fault with her, but she was quite unconscious of it. After this the paroxysms came on, but she still remained insensible. The activity of the mind ceased; she became unconscious internally as well as externally, and the convulsions then came on. I had another patient more religiously and devoutly disposed, and she always sung hymns, not songs, such as "Robin Adair;" and she also sung in good time, so that no fault could be found with her.

Dr. Darwin considered this somnambulism, or walking in the sleep, which is only an imperfect degree of sleep, to be an epileptic disease. Whether it is true epilepsy or not is another thing, but he considered it to belong to the family of epileptic affections. Dr. Pritchard, of Bristol, whose work on nervous diseases is well worth reading, considers walking in the sleep and ecstasis both of an epileptic character.

Somnambulism.—If a person be asleep, and be seized with a partial consciousness, and partial voluntary power, it is called *somnambulism;* but if he be seized in a waking state, then it is called "ecstasis." It is the same state, only it may begin when you are asleep, by a degree of activity, or when you are awake, by a degree of insensibility. They come exactly to the same thing: they frequently occur without epilepsy, but they are frequently

united with it. Even the night-mare is considered by some as allied to epilepsy—as a very slight imperfect degree of epilepsy.

Incubus.—In the night-mare, which is technically called *incubus*, there is a degree of sense, but a deceptive feeling; generally some unpleasant dreams, and more or less loss of volition. You cannot make the effort you wish; you have a strong desire to make a muscular effort, but you cannot. It is actually only a variety of somnambulism, and when the paroxysm ceases, you can make a voluntary effort, and it is imagined you get rid of the night-mare by making the effort, whereas the effort is made because the diseased state ceases. I think it is a little degree of epileptic affection. There can be no doubt that it is a cerebral affection, and it may arise from eating suppers, and other things. It is singular that there is one house in the country where I always have the night-mare; and in my own case I have thought it has been the devil, the colour of oil-skin. There is a friend of mine in the country, at whose house whenever I went I regularly had the night-mare. I repeatedly changed my bedroom, and at last I did not go to bed at all, but slept in the drawing-room: still, however, I had the night-mare. I do not know the reason; possibly it was going from London, partaking of a late dinner, eating more than I should, being cheerful by seeing one's friends, and then going to bed. Certain it is that in that house for four or five years I regularly had the night-mare.

This state of ecstasis precedes the commencement of the fit; and I believe it sometimes takes place after the fit; but other varieties take place in the fit itself. I mentioned that sometimes the coma ceased as soon as the convulsions, and in some people you may have coma without convulsions at all, and that is a kind of epilepsy which is frequently mistaken for apoplexy. Many persons are said to have had twenty fits of apoplexy when they have never had one. Old people will fall down senseless, and will get up again just as if nothing had happened; and if a practitioner be near, he bleeds them, thinking it is apoplexy, and a cure is thought to have been effected; but there is no reason to suppose that it is any such thing. It appears to be only imperfect epilepsy, epilepsy without convulsions; and for this reason, there is no stertorous breathing whatever, no harm arises from it, and such persons very frequently, sooner or later, have regular epilepsy. You will see this sometimes in a slight degree, so that persons will not lose themselves; they feel that they are going; they catch hold of something, and they are right again. It is no doubt an imperfect form of epilepsy, and the coma is not fully formed, lasting only a few moments. I have known this occur, and then the coma to last longer and be more perfect, till after some years the coma has been joined with convulsions; so that I have no doubt elderly persons (and sometimes it happens to young ones) fall down senseless, and come to without suffering any consequences whatever, and have frequent attacks of it. I have no doubt it is neither more nor less than epilepsy without convulsions; that there is an approach of insensibility, so that a person feels he is going, but he takes hold of something, and recovers himself again.

Occasionally you will have mere faintness produced, but not enough to make the person take hold of any thing.

The convulsions, I mentioned, are sometimes very local; sometimes it is only an arm or a leg that is convulsed. I had a case occurring in a boy, in 1828, whose muscles at the back of his head were affected, and likewise the muscles of his eyes. He was frequently seized with a fit, which made him hold up his head and begin winking his eyes. During this state of partial convulsions, his head was drawn back and he was perfectly insensible, but he never dropped down. His father once fired a pistol in his ear, but the boy took not the least notice of it. He would heave a deep sigh, stir about, and be himself again. I have seen him repeatedly in a paroxysm of this description: he would have thirty of them in a day, stand still all the time, and be perfectly unconscious of his fit. There is a boy at this moment in St. Thomas's Hospital, who is nearly in the same state. When he is attacked he holds his forehead, and says he is unconscious. I never saw him in a fit, but I have frequently seen the other. So imperfect is the fit, that, if he be eating his dinner at the time, he continues chewing just as though the fit was not upon him, but he is quite unaware of what he is doing. I had another patient, in whom the head was drawn down, and, when sitting at a table, down his head would come upon it, till his nose was beat flat, like a kidney. Before he had epilepsy, his mother said, he sat "nod, nodding," till his nose was almost as flat as the rest of his face. I have seen cases affecting one part of the body only. I had an old lady under my care who had had hemiplegia of one side; and this side became subject to epilepsy, and was convulsed from time to time. It is useful to know these things, because you might think that a patient, in these anomalous forms of epilepsy, was suffering under some structural disease that might prove dangerous. If it be merely epilepsy,

you may give a much more favourable prognosis, so far as life and death are concerned; though the prognosis in epilepsy is generally unfavourable, because you rarely can cure it.

Children most liable to it.—This is a disease which is very common in infants and young children, and it will sometimes continue till puberty, and then cease; but it will sometimes occur again after the sexual period of life is over. I had a patient (an old lady) who informed me that she had epilepsy when a child every few weeks; the fits gradually grew rarer till puberty. During the menstruating period they ceased, and she had no fit for thirty years; but when menstruation ceased, then she had a fit every year or two—sometimes not so often. She had pain in the occiput for five years before the disease returned, and one day she suddenly fell down dead. Here, however, was an instance within my own knowledge, of a person having the disease when a child, its cessation at puberty and during the menstruating period, but when she relapsed into her former state then it began again. Generally, when the disease lasts through life, it begins just before puberty, or about that time. Dr. Heberden not only observed this, but he states that there was no mitigation, in his practice, from puberty. It is generally imagined that puberty mitigates or destroys the disease altogether; but I believe that the hopes of parents on that point are usually false, and that puberty does not influence it. We see it more frequently in young people than in old: either so many young persons die of the disease, and do not grow old, or it ends in other nervous diseases—particularly insanity; so that, at last, the individual is put in the class of insane persons. Whatever may be the reason, we certainly see it more frequently in young than in old people, and I suppose it arises from a variety of causes. Among epileptic people, a greater number die young than old: that is one reason; and another is, I presume, they fall into other diseases;—persons become fatuitous and insane, and then the epilepsy is considered only a secondary matter; and now and then it ceases altogether. Old people are most subject to that form of epilepsy which is characterized by coma without convulsions, and which I stated was often mistaken for apoplexy.

Males more subject to it than Females.—Males are more subject to the disease than females, excepting when it occurs in young children and infants. In infants the proportion is just the same, because there is not the individual difference of constitution; but as the period of puberty arrives, and there is the distinction between the sexes, then you find it more common among males than females. I believe I stated that I once made a calculation of the number of patients I had had with this disease: in 1829 I found that I had had thirty-seven patients in the hopital; twenty-seven of whom were males, and ten only females, and they were nearly all girls and boys; so that it is much more commonly seen in young persons than old ones.

Predisposing Causes.—In regard to the causes of the disease, we may first mention a certain hereditary predisposition. You will find this shewn, perhaps, not by brothers and sisters, and predecessors, uncles and aunts, fathers and mothers, grandfathers and grandmothers, having had the disease, but by having had other affections of the nervous system. The same state of the nervous system will frequently not produce the same disease—one shall have epilepsy, and another some other nervous affection. When, however, you see these things in different generations, you may class them together, and consider them as the development of an hereditary predisposition. You continually see in females something wrong in the nervous system, but it does not produce the same effect in all; some will have one thing and some another. You will frequently see epilepsy conjoined with a curious form of the head: it is very often united with a deficiency of intellect—with a deficiency of brain—and of course fatuity, or idiotcy. Idiotcy, I may mention, is the term given to that imbecility of mind which is connate, and fatuity to that which occurs after birth. Epilepsy is frequently united with it, and very frequently united with that form of idiotcy which depends, not upon disease of the brain, but upon a deficiency of brain. You find many people have a narrow forehead—a low forehead, sloping back; and you find them have epilepsy. This is not universal—neither is it general; because any derangement of the nervous system may produce epilepsy. Many persons are idiots, not from there being a deficiency of brain, but the brain is of bad quality. But there is one kind which depends entirely upon a deficiency of the anterior part of the brain; that no one now can deny. Where such is the case, it is common for epilepsy to be united with it. It is very common to find a sugar-loaf form of the head in epileptic patients. Epilepsy is sometimes united with a large head. You will recollect that I mentioned that the hydrocephalic man, who had ten pints of water in his head, was epileptic. It is frequently united with a large head; sometimes it arises from a preternaturally thick bone;

and, on the other hand, you have epilepsy in the most beautifully formed head, simply from some accidental disease in the head; but one circumstance connected with the predisposition to epilepsy, is an idiotic form of the head—a shallowness of brain.

ON SOME SUBJECTS COLLATERAL TO CLINICAL MEDICINE.

A Lecture delivered at St. Bartholomew's Hospital, January 16, 1833,

By Dr. Latham.

Pathology—What are its Elements—How Anatomy contributes towards it—How Chemistry—How Experiment—How Clinical Observation—Illustrative Instances in Acute Inflammation of the Larynx—in disordered conditions of the Urine—of the Blood—Dr. Prout—Dr. Stevens—The Knowledge of Local Morbid Processes one Element of Pathology—Inflammation—its vast extent as an object of Inquiry—its general Laws—its modifications in different Structures—Specific Diseases—Scrofula—Cancer, &c.—Dropsy—Spontaneous Hæmorrhage—Surgery properly introductory to Medicine in the order of pursuit—A recommendation to study Diseases of the Eye.

Before I proceed to the subject of my present lecture, I wish to advert for a moment to some remarks of mine made upon a former occasion. You will recollect, perhaps, that I deplored the custom which had obtained among young men, of bestowing much time upon the study of nosological arrangements, in order to fit themselves for examination at Apothecaries' Hall; admitting, however, that if they were to be examined *nosologically*, they must learn *nosologically*: and then I expressed a hope that the obligation they were now under, of bestowing a twelvemonth upon the clinical observation of disease, would henceforth excuse them from the necessity of learning physic by any less efficient method; and that, as they were now to be taught physic in the wards of a hospital, they would be examined as if they had *there* learnt it, and no where else.

Now it is my duty to state, that since my remarks were made public, information has been furnished me, by the best authority, that the course of examination at Apothecaries' Hall is no longer governed by any artificial arrangement of the kind set forth in Dr. Cullen's Nosology; that the student is not required to learn either *this* Nosology or any other; and that he cannot better prepare himself for examination than by diligently observing the course of diseases and the effects of remedies at the very bed-side of the patient. I do exceedingly rejoice that I am able to make this announcement to you.

I promised you that I would take an opportunity of speaking a little more at large concerning those pathological studies which are the proper auxiliaries and concomitants to the observation of disease in the wards of the hospital.

But what is pathology? It would seem to imply whatever, either of discourse or reasoning, has any reference to diseases. But this is much too large and loose an acceptation: yet I cannot determine the exact compass of its meaning, so as to bring it within the limits of a definition.

For popular uses it is often well to lean to the popular sense; and the popular sense regards pathology as conversant with *explaining* the phenomena of diseases, not merely with *observing* them. This is just an intimation of the truth. But we must take a nearer view of the matter, and guard against any mode of expression which may betray us into error at our setting out.

True it is, that pathology is "conversant with explaining the phenomena of diseases, not merely with observing them." But it is also true, that, without observation of the living body, there can be no pathology. Observation needs certain helps to give it a pathological aim: but these are only subordinate; and it still belongs to observation to concentre all that they are capable of teaching in the real knowledge of disease.

This should be clearly understood. Observation, working by itself, was able to win from the waste a large field, and to bring it into cultivation, and to reap from it a wonderful harvest. But the field was peculiarly its own: it was not the field of pathology.

When anatomy betook itself to investigate morbid structures, and chemistry to analyse morbid fluids, and experiments of various kinds upon the animal body pushed their researches in their several ways, a number of new facts were brought to light; and diligent men made an inventory of them, and clear-sighted men gave them an order and arrangement. But neither was *this* pathology.

The truth is, that not one of these, taken separately, can arrogate to itself the name and character of pathological; but all taken together, and brought within the sphere of mutual illustration, furnish the full amount of our knowledge concerning the nature of diseases. Therefore, whatever is learnt by dissection, concerning forms and structures; whatever by chemistry, concerning elementary constituents; whatever by experiment, concerning

the appearance and behaviour of parts and organs, under any new conditions in which they are artificially placed; and, finally, whatever is learnt concerning the actings and sufferings of disease in the living man; all these, in their sum and aggregate, must be deemed to constitute one pathology.

Now, believe me, you are never *more* engaged in studies strictly pathological than when you are busied about the sick in the wards of the hospital; when you are observing external signs, indeed, but seeking to penetrate beyond them, and endeavouring, through them, to come at the actual procedure of the disease itself. And believe me, also, that you are never *less* employed in pathological studies than when you are dissecting, or analysing, or experimenting, if the facts thereby adduced are suffered by you to remain inert and useless, and dead, and are not delivered over to the observation, that it may turn them to good account.

Anatomy and chemistry, and experiment, by their own authentic facts, are most necessary guides and safe-guards to the knowledge of disease by observation of the living body. But these have not so much enabled observation to enlarge its proper territory as to penetrate deeper into the same soil.

I have seen a man, young and full of flesh, and with the form and plumpness of health, laid out dead. And I have scrutinized all his organs thoroughly and carefully; and all were healthy and perfect, save the margin of that little chink which conducts to the larynx. And here there was a slight swelling, partly of the membrane which invests it, and partly of the cellular substance beneath; but there was no ulceration, no breach of surface.

And could *this* occasion death? Why, there was hardly a perceptible narrowing of the passage. And could this (I say) produce death? Yes! indeed could it. Truly this little swelling is a mighty disease. In two short days it had subdued and annihilated this very man. Not all the force of remedies, or all the vigour of his own frame, could save him. I had seen him with all his might fighting for breath; but in vain, for he died strangled.

But whence do we chiefly learn the pathology of this disease? In the corpse or in the living man? Why did the little lymph and serum *here* effused become a fatal mischief? The corpse did not, and could not tell us. For any thing it disclosed, he might still have lived; for after death the glottis was open, and air was made to pass freely through it to the lungs.

But what the corpse could not teach, the acting and suffering of the living man declared intelligibly enough. He spoke, and coughed, and breathed hardly and convulsively, and in an agony, and with a loud scream, or croupy noise, and he could not swallow. At length, voice, and cough, and breath, were all suppressed, and he died.

After death the glottis was open; but what was its state during life? Unquestionably it was greatly narrowed, or nearly closed: all that the patient did or suffered gave proof of the fact.

But what *can* narrow the glottis if it be not narrowed mechanically? Surely nothing but the *vital* action of its own muscles.

Behold, then, the whole pathology of the disease! Those tiny muscles, which move the arytenoid cartilages and the vocal cords, could not bear the contiguity of the disease of the mucous membrane. It irritated them into a mighty spasm, which no effort of the will, no struggle of the whole body, could arrest or control; and acting beyond their natural sphere, they dragged into a forced approximation every part which they could move, and nearly closed the glottis.

Here is a disease of which the pathology is complete, and so clearly and intelligibly made out by dissection of the dead and observation of the living body, that it would not be difficult to assign exactly how much is due to one and how much to the other. The material change of structure, in its kind, its seat, and extent, is disclosed by dissection after death. This is the point of departure for the whole disease, and small enough it seems. But the disease, in all its magnitude and terror, and the very means and agents of its peril and fatality, become known by observation of the living body.

It is useful sometimes thus to analyse the sources of our knowledge, that we may apply to the same in fuller confidence when we desire its increase.

But I have not done with this beautiful instance, which has exhibited a perfect piece of pathology, as the conjoint work of clinical observation and of dissection. I will still make use of the same instance —this acute inflammation of the larynx, in order further to exhibit to you how pathology can add new and wonderful resources to practical medicine.

As I was going round the hospital one morning, a dying woman was carried in and laid upon a bed. What a frightful picture she was! Cold, and livid, and pulseless; her eyes starting from their sockets; her mouth wide open, and lips, and tongue, and teeth, black with sordes; and breathing convulsively, and with a kind of scream. With what agony she struggled for life! And what force she

used to preserve it! Tossing about her arms; striking aside all who came near, for they kept the air from her; and dashing away a cup of water that was offered, for she knew a single drop would suffocate her.

What was to be done? All I could learn was that a few days ago the woman was well. She got wet; and in consequence she had sore-throat and hoarseness. She had been bled without relief. Symptom after symptom arose rapidly and incontrollably, until they reached their present awful consummation.

This was quite enough to know. I ordered her trachea to be opened. Mr. Earle was at hand, and did the operation at once. The relief was complete, and she sank into a calm slumber.

For two weeks she breathed through the wound entirely; then partly through the wound (as it began to heal) and partly through the glottis, her voice beginning gradually to return. At the end of three weeks she breathed entirely through the glottis, and in six weeks she was discharged well. I have twice since, at distant intervals, met her in the street, and she has recognized me with a smile.

Now, do you ask what it was that called for the use of this extraordinary measure, and what was the manner of its success? Revert to the pathology of the disease, and you will see.

The disease was acute inflammation of the glottis. But dissection finds nothing in inflammation of the glottis which is *peculiar*. Dissection does not discover why it is not just as curable as inflammation of any other organ. But recollect, not one half its pathology can be learnt by dissection.

For the rest we look to clinical observation; and clinical observation teaches, that all that is peculiar and intractable in inflammation of the glottis is derived, not from its own nature, but from the part it occupies. In its own nature it is as curable as inflammation of any other part. But the glottis, from its essential irritability, will not suffer inflammation to abide upon it while it goes through the process of a cure. The muscles of the larynx, if they must act, will *now* act convulsively, and act they must; for the larynx is an organ of perpetual and vital use, and in that use the muscles are engaged.

Hence the necessity of placing this organ under some artificial condition, which would enable the constitution to dispense with its use for a time. This is effected by opening a new passage for air through the trachea into the lungs, whereby the larynx is left at rest, and its inflammation brought within the same possibility of cure as that of other parts.

Thus we have seen how clinical observation, guided by a well-ascertained anatomical fact, was able to concentre a complicated series of morbid actions and sufferings in one point, and arrive at a consistent pathological result. And we have seen also, how that result, leading to a new and successful method of treatment, obtained thereby the best confirmation of its truth.

In like manner, chemistry, by giving the aid of its authentic facts to clinical observation, has led the way to large and consistent views of pathology, which *alone* it could not have enabled us to reach. In the hands of Dr. Prout, chemistry has become a key to pathology. As a chemist, he has pushed the analysis of the constituents of unhealthy urine much further than his predecessors. As a physician, he has turned both their discoveries and his own more largely and successfully to the uses of pathology. While he has given his own peculiar skill and genius to the work of chemical analysis, he has still adhered closely to clinical observation: and thus he has detected in the disordered actions of different parts, and of the constitution at large, a manifest pathological alliance with the morbid products of the kidneys.

Read his chapters especially upon "the Lithic Acid Diathesis," and upon "the Phosphatic or Earthy Diathesis," and you will see, not only how the characteristic constituents of the urine in the one are opposed to those in the other, but that the lithates have a peculiar kind of constitution to which they are allied, and peculiar forms of disease with which they are apt to be accompanied; and so have the earthy phosphates; and that these are as much contrasted with each other as the characteristic constituents of the urine itself.

I recommend Dr. Prout's book upon Diseases of the Urinary Organs to you for the sake of the important information which it contains; and, moreover, as the best specimen of that method of philosophizing which medicine requires and admits. For if we consider the peculiar place which medicine holds as a department of knowledge, and how many things may be made to bear upon it which seem hardly to belong to it, no work can be too much prized which will teach us how to reason upon medical subjects, and especially how to unite the conclusions of any demonstrative experiment with the results of clinical observation, so as to render them both subservient to an explanation of diseases.

When we speak most modestly of medicine, we call it nothing more than a conjectural art. But this conjectural art is so closely bordered by the neighbourhood of the sciences, and draws so much from their principles and discoveries, that we

may be pardoned for sometimes calling it, and even believing it to be, itself a science.

Dr. Stevens, by experiment as a chemist, found that there was a condition of the blood in which it lost its due proportion of water, and its due proportion of neutral salts, especially common salt. And Dr. Stevens, by observation as a physician, learnt that this condition of the blood was associated with the malignant symptoms of yellow fever. The contemplation of these facts led his mind to the employment of a new practice, the object of which was to give back its defective ingredients to the blood by the administration of salt and water; and thus he succeeded in curing an enormous proportion of those who, by any other method of treatment previously known, would have been thought incurable.

Here chemical experiment and clinical observation, leading (as it were) each other by the hand, proceed together, and arrive at the seminal principle of the disease. Passing by this organ and that, and this function and that secretion, they penetrate to the spring and source of all, even to the blood itself, and *there* they find it, and apply a remedy which is able to reach it *there*.

Truly these things are calculated forcibly to arrest the attention of every philosophical physician. Are we upon the verge of a great pathological discovery? We know how much belongs in common to all diseases called febrile. Dare we presage that the worst, and hitherto most fatal symptoms of all fevers, will soon be shewn to have one origin? that a pravity, or deficiency in the constituents of the blood, is the cause? that this is demonstrable? and that it is remediable by the simplest means which are always at hand?

Thus far I have endeavoured, by suitable instances, to shew you the elements of pathological knowledge in actual operation, and how they work their way to the rational explication of the disease, and to the successful remedy.

But these elements must be possessed before they can be used. And, besides what results from chemical observation, which is one element, there are others which (you have seen) are supplied by anatomy, and chemistry, and experiment; and by these means you must acquire them, or by the instruction of those who already understand them.

I must presume that you are already tolerably acquainted with the structure and functions of the body in its healthy state; for otherwise you have a slender chance of comprehending its diseased conditions. The same blood-vessels, the same absorbents, and the same nerves, which are the agents of health, are also the agents of disease. The blood vessels supply the pabulum by which the whole body and all its parts live and grow and perform their natural functions, and the blood-vessels also supply the pabulum from which every morbid structure and every morbid secretion is furnished and maintained. The absorbents bring in from without whatever is capable of assimilation and conversion into blood, and thus furnishing the materials by which the blood itself lives, they become, in the first and highest sense, the very springs and fountains of the body's nourishment. But the absorbents, which have assigned to them the process of ulceration in all its degrees and extent, become also, in an especial manner, the instruments of the body's destruction. The nerves impart pleasure and the nerves impart pain. They regulate motion according to the will, and they withdraw it from the dominion of the will, rendering it convulsive and disorderly. Thus are the conditions of health made to give place to the conditions of disease by the instrumentality of the same agents, but by other modes of action.

You must seek to understand these things. As soon as you enter upon the business of clinical observation, you must have some right conception of them, if you would observe usefully; and ever afterwards, while your practical experience increases, you must take care that your knowledge of morbid actions keeps pace with it; that, as your views become enlarged, they may be still precise, still *pathological*.

A discouragement often attends the first inquiry into morbid actions, from a belief that they are in their very nature so irregular that no clear notion can be obtained concerning them. But, although morbid actions, in comparison with healthy ones, may be called irregular, they are not irregular in themselves, but capable of being reduced to laws and conversant with principles.

For this reason, your inquiry into the nature of morbid processes should be careful and wary at every step. For here, if any where in the whole range of your professional studies, you must clearly understand each particular as you proceed, until you reach the point at which you discern the proof of a general law, and from that point you will advance rapidly and pleasurably into a larger field.

Now the study of morbid processes begins with inflammation. And even popular opinion has learnt to associate many portentious things with the notion of inflammation; and justly, because the world finds us perpetually talking about it and perpetually dreading it. Practically,

inflammation is never absent from the minds of medical men. Wherever an organ labours, wherever there is pain, the first practical question which we seek to determine is, whether there be inflammation present.

Inflammation is unquestionably the most capacious of all medical subjects; and fortunately it is that to which the best minds of our profession have been especially directed; and, more fortunately still, which they have best succeeded in illustrating. We are, therefore, sure of the best guides to assist us in the knowledge of it.

And since the knowledge of inflammation consists in great part of demonstrable facts, it is the more valuable on account of its certainty. And, moreover, since it is in a peculiar manner fundamental of almost all other knowledge in pathology, it is manifestly indispensable.

You must study inflammation as if it were a subject of rigid philosophy, carefully and patiently, and with the purpose of understanding every stage and step of it as you go along.

In inflammation there are numerous processes included; these may either be considered as parts and parcels of one inflammation, or some only as properly constituting the inflammation, and the rest as its products or consequences.

There is the *vascularity*, in which the blood-vessels act an important part within themselves prior to any change in the condition of parts without.

There is the *effusion*, in which the contents of the blood-vessels escape into the surrounding textures; these are serum, or lymph, or blood.

There is the *suppuration*, in which a new and peculiar fluid is formed.

And, coincident with the e processes, there are adhesion—ulceration—granulation—gangrene. Of which some are destructive and some reparatory.

Now the several processes have their own physical conditions which separate them from each other. And thus they require a separate study; by which you may know the very channels and agents of each according to its kind, and what the arteries, what the veins, what the absorbents do, and what the nerves.

But there is nevertheless a strict physical alliance between them; and, therefore, they must also be studied collectively. One does not merely precede the other, but naturally conduces to it; another does not merely follow, but naturally germinates from, its antecedent.

But there is no such thing as inflammation in the abstract. It must belong to some part or structure. Yet, as soon as you begin to contemplate it in one structure, you must not imagine that you are to find it in all other structures strictly the same. It is the same in kind; but it has different forms and modifications, according to the part it occupies. You may first study inflammation in the subcutaneous cellular membrane. I would advise you to do so, because here it exhibits the plainest example, of itself, and all the processes which it includes here display themselves prominently and in a regular succession. But beware of calculating the progress of inflammation in the brain, the lungs, or the spleen, by what you have seen of it in the subcutaneous cellular membrane. What in this case is the commonest process of inflammation, viz. suppuration and abscess, those organs very seldom admit.

Some or other of the processes enumerated occur in all organized tissues, whenever they are inflamed. But different organs are more ready (if I may so say) to accept this and to refuse that, as they are induced by peculiarities of their own structure. Perhaps there are no two organs of the body which exhibit inflammation exactly under the same aspect, and the variety is owing (as far as we know) either to the different tissues of which they are composed, or to a different arrangement of the same tissues.

Consider, then, that concerning inflammation you have two great objects of inquiry. The first embraces what it is in itself, the rationale of its several processes, and the general laws which govern it, wheresoever it is found. The next embraces what it is under all the modifications with which it is capable of being impressed by the various structures and organs which it occupies, its general laws still remaining inviolate—what it is in the brain and spinal marrow, in the lungs and in the heart, in the liver and spleen, in the complex structure of the joints, in every coat of an artery, in every vestment and membrane of the eye, and in the walls and marrow of the bones.

But this immense subject of inflammation, in all its details, surely cannot be mastered by the student during the brief period of his pupillage. Nevertheless he may make his entrance upon it, and may proceed so far in it as to reach some just conception of its general laws. Besides, now is the time when he has peculiar helps at hand which will enable him to prosecute the inquiry in the right way. What these helps are, I will tell you presently.

Thus the knowledge of inflammation may be regarded as the ground-work of all pathology. It is the commonest as well as the most comprehensive of morbid actions. I call it *common*, because it seems to arise inevitably in every man and in any part of the body under certain circumstances; you may even produce it at will.

Besides inflammation, there are other

morbid actions the processes and products of which require your study. These are not *common*, in the sense which has been just implied. Scrofula, or cancer, or fungus, or hydatid cysts, cannot be produced at will; neither are they incident to all bodies; neither do they inevitably result from any known conditions. These diseases are called *specific*, as contradistinguished from inflammation, which is *common*.

Concerning specific diseases, we have not the same amount or the same certainty of knowledge that we have concerning inflammation. We have a large inventory of facts, but not a clear insight into the general laws which influence their production; and knowledge, as long as it falls short of this, is still uncertain and precarious.

Besides these, there are certain other diseases which require to be studied in the very processes out of which they arise. They are not so mysterious as specific diseases, and yet not so *common*, or so well understood, as inflammation. Many conditions of their production we profess to be acquainted with; but still we cannot produce them at will. Dropsies and hæmorrhages are of the class I mean. Each of them is a very large subject.

I have been speaking of all these diseases—of inflammation, and dropsies, and hæmorrhages, of scrofula, cancer, &c.—as *local*; that is, as having a place and locality in which the special morbid processes of each are carried on; for it is to such processes that I desire now to direct your attention, the knowledge of them being one of the elements of pathological medicine.

Not that each has not more belonging to it than its local process which deserves inquiry—some disorder of parts remote, or of the general system, out of which it may primarily arise. But, however this may be, they none of them—whether inflammation, or dropsy, or hæmorrhage, or scrofula, or cancer,—have any *demonstrable* existence, until they declare themselves by modes of action and modes of suffering, *in the part*, which are beside the uses and conditions of *Health*,—by something added to, or something deducted from, or some change wrought upon, its constituent structures.

Now I have told you, that, during your pupillage, and at this Hospital, you have peculiar helps, enabling you to make a successful beginning in this element of pathology, the knowledge of local morbid processes. You have lectures both medical and surgical. Of surgical lectures, a large portion is always occupied in describing and explaining the processes of inflammation, and in illustrating them as the results of injury, or accident, or disease, in parts and organs which fall within the special province of the surgeon. The medical lectures, also, are largely explanatory of inflammation, what course it takes, and what termination it effects in different internal organs; how this course and termination vary in serous, in mucous, and fibrous membranes; how in the pleura, the pericardium, and the peritoneum, they are of one sort—in the lining of the trachea and bronchi, stomach and bowels, bladder and urethra, of another—and still of another in the dura mater and perieranium; and how each circumscribed viscus of the body shapes and qualifies its inflammation in its own manner, and to a particular end.

Concerning dropsies, besides their remote cause, medical lectures dwell upon their cause *in the part*, or the very process of the effusion; and shew why one organ or structure should more readily accept it than another.

The subject of hæmorrhage—I mean that hæmorrhage which is independent of injury or accident from without—is laid before you in the same lectures; and the process of its production shewn, as it occurs in the brain, in the bronchi and lungs, in the stomach and bowels, in the kidneys, bladder, and uterus.

Of specific diseases, take cancer and scrofula as examples from among many which bear different names, and are formed (perhaps) by different processes. These are diseases with which both medicine and surgery are equally concerned; and the teachers of each have most curious and interesting information to give respecting their growth by a well-defined succession of morbid processes. Of cancer, the female breast and uterus, and the stomach, are the most frequent seats, while hardly any part is exempt from a liability to it. Of scrofula all parts are the seat. It is enough to say, that it is the essence of that all-pervading disease pulmonary consumption, to engage every one, who intends to practise physic, in the endeavour to learn all that is known about it.

Concerning these several orders of disease, inflammation, dropsy, and hæmorrhage, and specific complaints such as cancer and scrofula, let me further add, that, besides the study of each as it is in itself, in its own morbid process, there is a study of them also in combination, which belongs to the knowledge of pathology; for they occur as frequently in combination as alone; one process running into another, or one process exciting other processes all around it. Thus inflammation will run into dropsy or hæmorrhage; and it will be so blended with scrofula, as to be called *scrofulous inflammation*. Cancer can hardly reach its fatal consummation without inflammation and hæmorrhage; and scrofulous tubercles of the lungs often excite, at the same time, inflammation of the surrounding pulmonary structure, hæmorr-

hage from the bronchi, and dropsy into the cavity of the pleura.

You really must have some correct notion concerning all these things before you can derive the profit which you ought from clinical observation; and as I know you cannot go through a laborious investigation of them at present in all their accurate detail, I must refer you to the sources of information nearest at hand. I must advise you, for you have all attended medical, and most of you surgical lectures, and have taken and preserved your own notes of them,—I must advise you, to review all those parts of such lectures which expressly treat of morbid processes. Those of you, who are already conversant with surgical practice, will do well constantly to bear in mind what you have seen upon the exterior of the body. You will find it of daily use in every medical case you observe. Processes of disease within and without the body are of the same essence. Their forms only are influenced by structure, and are different in different parts.

Unquestionably, there is no better introduction to the practice of physic than the practice of surgery. It is a course which I strenuously recommend to all those who have time to carry it into effect. The best and most highly instructed men feel the necessity of it, and do not shrink from it. I believe I am correct in saying, that of men educated at the universities, and then resorting to St. Bartholomew's Hospital with the view of becoming physicians, during the last twelve years, there has hardly been an individual who has not gone through the entire business of a surgeon; not as a mere looker-on, but as a dresser, for as long a period as if he was to practise surgery all his life. I mention it to their honour; for an admirable race of physicians has been produced by this system. Thus it has become the established practice here, for all who intend to be physicians to begin with surgery. Professor Haviland of Cambridge first brought the practice into fashion by his judicious advice to all within the sphere of his influence; and I have done all in my power to second the recommendation of my excellent friend. The benefit consists mainly in this, that it makes you familiar with the visible processes of disease and reparation while they are actually going on.

There is yet another recommendation which I would offer to you—and let it not seem a strange one, whether you are to be physicians or surgeons. If you desire to make pathological knowledge the ground-work of your credit and usefulness through life, let me advise you not to allow the period of your pupillage to pass by without making a special study of the diseases of the eye. Here you see almost all diseases in miniature; and, from the peculiar structure of the eye, you see them as in a glass; and you learn many of the little wonderful details in the nature of morbid processes, which, but for the observation of them in the eye, would not have been known at all. Let every one of you, who has a few months to spare, give them to the Eye Infirmary.

Now, after what has been stated, you will perhaps be ready to ask me, Whether it be indeed true, that all this sort of knowledge is required to fit a man to practise physic? and I will answer you honestly, That it is not required. Many a clever man practises physic with tolerable success, who has never troubled his head about morbid processes, and who has not the remotest notion how those things come to pass which he has been witnessing, in their effects or their symptoms, all the days of his life. A man may practise physic without it, but he cannot be a *first-rate* practitioner without it. In the treatment of diseases we often minister to the symptoms, and the symptoms only; but, in the treatment of diseases, we often minister partly to the symptoms, and partly to the very processes of the diseases themselves;—which he only can do who knows what they are. Believe me, he who would be a first-rate practitioner, must lay his foundations broad and deep in the knowledge of morbid processes; otherwise, although he may sometimes prognosticate truly concerning life and death, he can *never give* an accurate diagnosis concerning the nature of diseases of which he can know nothing. Above all, he must never hope to benefit mankind, by advancing the knowledge of his profession a single step.

SMALL-POX AFTER VACCINATION.

To the Editor of the Medical Gazette.

North Shields, Jan. 22d, 1833.

Sir,

It is a well-known fact that small-pox after vaccination has become of much more frequent occurrence within the last few years.

Twelve or fifteen years ago, cases were occasionally met with, but comparatively rarely; but since that period it has every succeeding year become more frequent; and in this district, at least, it has for some time past, and does still prevail, to a considerable extent, it being no unusual circumstance to find five or

six individuals of the same family successively attacked by that disease.

And not only is the small-pox, after vaccination, becoming much more frequent, but it is becoming also much more virulent. It is true, in the greater number of cases, the disease is modified, often turning on the fifth and sixth day; but cases are by no means rare where the disease is confluent, and runs its full course, unmitigated by the previous vaccination, and death occasionally ensues.

From what I have above stated, it would appear that vaccination is losing its protecting influence; and it becomes a matter of serious consideration to ascertain to what causes we are to attribute this failure. Is it, that its protecting power wears out after a certain number of years, and that it becomes necessary to repeat the operation? Or is it, that the vaccine virus loses wholly, or in part, its virtues, by passing so repeatedly through the human system?

The latter is the opinion that has forced itself upon my conviction, because the disease has principally attacked young persons, and such as have been vaccinated within the last ten or twelve years, and by far the largest portion have been done much within that period, so that the numbers attacked are in the inverse ratio to the number of years which have elapsed since they were vaccinated. Should this be found to correspond with the experience of others, and I trust this communication will draw the attention of the profession to the subject, it next becomes a matter of consideration, what plan can be adopted to afford the greatest security from so direful a scourge as the small-pox; and the idea immediately suggests itself of procuring the vaccine lymph from its original source; but as this is a matter of some difficulty, as the disease sometimes does not appear amongst the cows for several successive years, some plan must be had recourse to for the purpose of keeping up a regular supply; and this object, I think, might be attained by a certain number of cows being vaccinated every spring, and the lymph thus produced sent to every principal town in the kingdom, reserving a sufficient supply in glass-tubes hermetically sealed, to inoculate a fresh number of cows the following year. The only difficulty seems to be in procuring the first supply of lymph from the cow, but this, with a little trouble, might be overcome.

The establishment for carrying this into effect might be united to the vaccine institution, and the additional expense defrayed by an annual subscription amongst the medical practitioners, who would be entitled to a supply of the vaccine lymph thus obtained. I trust some of your correspondents will make known how far their experience confirms the views I entertain upon this important subject.—I remain, sir,

Your obedient servant,

EDWARD GREENHOW.

ON THE

EFFECT OF COMPRESSING THE URETHRA IN GONORRHŒA.

To the Editor of the Medical Gazette.

SIR,

THE effects arising from compression of the penis in cases of chronic gonorrhœa (before the accession of gleet) have not, that I am aware of, been sufficiently attended to in modern practice. From the favourable termination of cases treated by this method, occurring under my own observation, I am fully persuaded of its efficacy, and am justified, perhaps, with your permission, in giving these results publicity in your valuable Gazette. Almost every practitioner, in a combat with this disease, has, sometime or other, to regret the inefficiency of his weapons of defence; for frequently, with combined skill and varied efforts, all remedies fail to check its progress—it runs into a chronic form; and it is to this stage, after the subsidence of inflammatory symptoms, that I would more particularly point the attention of my brethren. The following case *inter alia* may serve to illustrate my purpose. A person came under my care labouring under an obstinate gonorrhœa virulenta, which had resisted the usual round of medicines prescribed on such occasions. Cubebs had failed and copaiva, and the man had taken turpentine, and other stimulating diuretics, without abating the discharge. There was no ardor urinæ. Upon examination, a firm hard swelling was discovered, originating in the fossa navicularis, about the size of a

pigeon's egg, which, upon two previous occasions, had rapidly extended from that point to the prostate gland, irritating the spongy texture of the penis, and causing into it an infiltration of blood, which rendered it enormously distended. In the present instance, however, the swelling was comparatively trifling, and unaccompanied by any particular sensibility. A small mercurial plaister was applied under the corona glandis, and a bandage of moderate pressure enveloped the penis; it was removed at night. After the first day of the application the discharge was certainly lessened, and on the third and fourth very perceptibly so, and it decreased gradually, without causing the slightest inconvenience, until it entirely disappeared. The swelling was afterwards effectually removed by the steady application of the compression.

I am aware, sir, that this method possesses neither the merit of a discovery nor even the air of novelty; for it was insisted on by some of the older writers, and Martinet has recently successfully adopted the practice upon the Continent. I could wish it were more universally assayed; for I am convinced that many of the evils resulting from protracted cases of gonorrhœa, and even of gleet itself, may be averted by the timely application of this mode of compression.

I am, sir,
Your's very obediently,
R. H. Allnatt, M.D.

Wallingford, January 29th, 1833.

COLLEGE OF PHYSICIANS.

MAXILLA TO VESTIBULUS.

London, Jan. 26, 1833.

It would be impossible, my dear friend, in this present time, to confine the discussion of our Charter and Bye-laws within the walls of the College, even should we wish it; but why should we wish it? Our interest is that of the public—free and entire,—not of its particular sections—whether in the Court, at the West End of the Town, in the Universities, or at the Club-Houses. All men belong to us, and we to them. How ill, then, it would become us to be secret, arrogant, and exclusive, who are not Physicians unless we have first graduated as citizens of the world. Besides, "exclusivism" is out of fashion. If we wish to keep our rank as "gentlemen," we must not as individuals only, but as a body, be frank, liberal, open, and hearty. The poison-spring, which (when you and I were boys — aye, and long since we left College) was fast polluting the broad stream of English society, by which our Politics were obstructed, while it soured our Religion, and made of our Science a thing of rot and refuse—the foul and cheerless morgue, that so long embittered all our social relations—is now confined to a channel, narrow, distinct, and insignificant; trickling still, it is true, by the side of the general current, but no longer staining its waters or impeding them in their onward flow.

If the public are becoming democratic (I do not use the term in its invidious political sense), should the College play the Aristocrat? Surely, in our corporate capacity, we cannot link ourselves too widely with society—we cannot be too popular—we should hold on, not only by the Court, the Clergy, and the "Upper Classes," but by all that is strong, lasting, and prominent. Is disease a respecter of persons?—and were we not instituted "for the surety and comfort of all manner of people?"* Like death, we knock at all doors. How gladly would I pursue this subject had I time for it. How easy would it be to prove that the "Upper Classes" are not our best friends. Their meddling selfish patronage—their vain, silly interference—has been the bane of English Physic—the one great curse, in my heart I believe, during late years, of our profession—which in itself, like mercy, is twice blessed. Do you remember the names of the men and women who gave evidence in favour of St. John Long, at the Old Bailey?—all of them "persons of the highest respectability," with more or less of "distinction" attached to their whereabouts! May the fates defend us from an exclusive alliance with such an aristocracy as this, in the times that are coming! The standard which these people would fain establish for the medical character, is not one which the profession should or will acknowledge. Their *amour propre* would be mortified by a manner not less courteous, a bearing more simple, an education infinitely more extended, than their own. This is human nature. By the opinion

* See Act 3 Henry VIII.

of no *set of men* should we be justified; but to that of the public at large, which combines and corrects all others, we must be content to refer.

The College, be assured, my friend, unless it be public—unless it be professional—now-a-days is NOTHING. Our existence as a chartered body, would be sacrificed by neglecting this great principle: in respecting it, we shall find much that we have hitherto failed to secure. But, after all, supposing that it was our wish and our interest to continue as we are, exclusive, as the Bye-laws of sixty years ago ordained that we should be, have we a RIGHT *thus* to administer the Charter? This is the GREAT question, for it may and will be answered by others than ourselves: by lawyers, by licentiate physicians, by the public at large, all interested more or less in our proceedings. Has the College, in the spirit of its Charter, a RIGHT to institute a separate class of "candidates" for the Fellowship, thus preferred, not in their capacity of "men of the faculty in London" and its district, but from the circumstance of having received their preliminary education in the Universities of Oxford and Cambridge? Does the public health require—is any public interest advanced by such exclusive regulation?

This last inquiry is the WIDE one; for in it are included the PRESENT feelings and interests of those concerned. Agitation HERE, and much of a bad kind, is certain: but let not the question of expediency supersede that of simple primitive right, which leads us back to the Charter. I have confessed my partiality for it,—bear with me, then, while I again present it to your notice, in its "native purity," unfettered by statutes, ordinances, and bye-laws—unencumbered by politics or political religion. "Wisdom of our ancestors" is not one of my phrases, and I assuredly never thought to fall in love with a corporation act of Henry the Eighth's time: yet here I am still plaguing you with Linacre's Charter. Vive la Charte! I am persuaded, that if it had fair play, EVEN NOW, under the Reformed Parliament, in these days of refinement twice refined, it would please all parties,—answer all purposes,—and, after a time, establish for the physician's character a standard of intellectual attainment and (what is more, my friend, than intellect) of *moral dignity* higher than any which London and its faculty have yet known. No one, were the Charter a truth, could affect to consider the College of Physicians as an off-set of the University Clubs, as a nursery of court and dowager prescribers, as a Common-Room emulous, for its members, of rank with that of my Lord's Chaplain and my Lord's Land-Steward. Under the charter, if fully and fairly administered, no echo of such whispers could long remain. The College would then be known and respected as a Union of Physicians appointed by the public, assembled and consulting for its good. But after all my eulogies of our Charter, would it not be vexing, most particularly so, to find that we had forfeited it through mal-administration or neglect of its provisions? And yet they tell me (some of the would-be lawyers) that our Charter is legally extinct. Do put the case to your brother, of Lincoln's-inn—a real lawyer—"a ripe and good one." It is worth a fee. Remember, we have property at stake: books, bricks, and bottles; admission and building fees; a share, at least, in all the temporalities of Pall-Mall East. How rich, moreover, our inheritance by descent, through the College of Harvey, Heberden, Baillie's fame! There is something (a good deal) worth preserving by those who are in present possession; therefore they are to be despised who say, let it go! If we have a right, by our Charter, to what we hold, let us study our tenure and maintain it. The Charter, which is our true position, cannot be too often examined by those who, like you and me, have the interest of half a life concerned in its defence. I have been looking at it again, since I last wrote to you, and I find that I might have made out a stronger case in support of my opinion, that in the College, as first established, were included, on equal terms of Fellowship, the entire body of the "Faculty of London." I told you that the "Elects" were directed to be chosen from the Commonalty; and this was correct, in reference to the two additional Elects who were associated, by the Act 14, 15, with the six physicians specified by name in the original Charter." But the perpetual succession of the "Elects" is to be kept up, we are told, by a selection, within thirty days of vacancy, from "the most cunning and expert men of and in the Faculty of

London?" no mention herein made of the College, corporation, or commonalty, as a body distinct from or less general than that of the entire faculty of London. We cannot, surely, suppose that it was by this intended to "choose, name, and examine," as "Elects," any physicians but such as had already been admitted Fellows of the College. Is it not curious, by the way, that the act should be so particular about the selection, naming, EXAMINATION, and ADMISSION of the elects, while it omits all mention of similar proceedings as necessary for the Fellowship?—the more so when, by the clause, "No person of said POLITICK body (mark the *politick*, and commonalty aforesaid, shall be suffered to exercise and practise physic, but only those persons that be profound, sad, and discreet, groundly learned and deeply studied in physic," we find it implied, that even Fellows of the College might be subjected to an examination affecting their right to practise. On the margin of the Act confirming the Charter, as on that of subsequent Acts printed in "Goodall," you will find "eight elects of physicians of London,"—again, "four physicians of London to have oversight of the others." My inference from all this is, that "the commons and the Fellows of the College," in the early days of the charter, included all the licensed "Faculty of London." You will find this question discussed at length in the Reports of "Goddard's Case," "Letch's Case," that of "Rex *versus* Askew," and of others printed in the body of Willcock's "Laws relating to the Medical Profession;" a book which soon will be found on the library table of every London physician.

Let me, however, in my vanity, assure you that I had studied the Charter and the subsequent Acts, and had made up my mind about them, before I had read a word of these Law Reports. You will observe, that in some of the pleadings it is stated that the Charter contemplates the existence of two classes of physicians; one a corporate governing body, the other licensed to practise only. This is not borne out by the terms employed. Undoubtedly there were men of the faculty NOT of the College, yet subject to its authority; such were those applying for its license: but there is no mention of a class of LICENSED physicians distinct from the Fellows of the College.

However, I would not be understood as denying to the College the RIGHT of selection, election, and admission into their corporation or Fellowship, subsequently to granting the license to practise. This principle of election was established as early as 1555, on the first day of February in that year, by the ordinance declaring "that every person thereafter to be admitted a member of the said College or Commonalty, should, before his being admitted, &c. &c. be *elected* by the President and College aforesaid, to be a member of the said College." Perhaps it is better that there should be an ELECTION, independently of the license, previous to admission into the governing body or Fellowship of the College; though, in my own opinion, every physician of six-and-twenty, who has been recognized by the College as fit to PRACTISE, (by practice, I do not mean PRESCRIPTION ONLY, but the discharge of all the physician's trusts and duties, public or private), every practitioner designated by them, in their license, as a man of learning and integrity, and thus introduced, under their sanction, to any or all the families of London and its district, should at the same time be considered fit to vote for the election of the College officers. The physicians, Licentiate of the College as distinguished from the Fellows, are now (be it remembered) men of much higher attainments, of more matured age, than when they were first excluded from the government of the College. However, even admitting (which in law, I am told, is equivocal) a RIGHT in the College to limit its numbers—to select and to elect its members from those who hold its license—there can, I conceive, be no doubt in fairness, according to the Charter, but that all of the London faculty who hold a license from the College, are alike ELIGIBLE to its Fellowship, and that any distinction supposed by the College in the ELIGIBILITY of the Licentiates respectively, must refer to them as *Londoners*, and must rest on their right and exercise of the faculty in London. Their admission to the Fellowship might, in the public interest, be made dependent on the length of time during which they had held their license—on the services they had rendered by it to the public—

on the opinion entertained of their claims by the Fellows already chosen, as expressed by their votes in council; but surely should not be determined by circumstances preceding their application for the College license—and least of all, by circumstances bearing no reference to London or its district, but arising from distant localities, of which no mention is made in the Charter, or in the body of the Act confirming it.

All men of the Faculty in London are LEGALLY eligible to the Fellowship, for all such men were actually incorporated by the terms of the Charter, and all are EQUALLY eligible; for in being "men of the Faculty in London," they fulfil the one only condition of eligibility as required by the Charter. But who are the men of "the Faculty?" Who were the persons first incorporated under this designation by the Charter? This enquiry leads us back to Act 3 Henry VIII.; which "Act for the appointing of Physicians and Surgeons" I recommend to your best attention, as it may be considered in the light of a preamble to the Charter, and to the Act by which the Charter was confirmed. In this first Act, which, like the subsequent one, contemplates ESPECIALLY the health of London and its district, we find it declared that "great learning and ripe experience are necessary for the science and cunning of physick;" and "that no person shall take upon him to exercise and occupy as a physician, or surgeon, except he be first EXAMINED, APPROVED, and ADMITTED," by a board consisting of four Doctors in Physick, (with "other expert persons for surgery, in that faculty,)" and meeting under presidence of the Bishop of London, or of the Dean of St. Paul's. The persons who had been thus "EXAMINED, APPROVED, and ADMITTED," were "the men of the Faculty," whom the Charter incorporated seven years afterwards, for the "common wealth of the realm, in the due exercising and practising of physic." Is it not strange, that in the subsequent Act (14, 15 Henry VIII.) there should be no mention of examination, approval, and admission, as necessary for incorporation with the London College? This could not be an oversight, as, in both acts, full directions are given for the examination and licensing of COUNTRY physicians. My inference is, that these necessary arrangements for keeping up the succession were left to the directions of the President and the College, consisting, as it then did, of all physicians in London and seven miles round, who had been already examined, approved, and admitted to the exercise of their profession, under the operation of the first Act. Here, again, by the context of the two Acts, I find reason to believe that the examination for the London license was an examination for the Fellowship; that admission to the license, following on approval, was admission to the Fellowship; that in the first days of the Charter, one was the same as the other. The RIGHT of *selection* and of *election*, in either case, remains with the College,—as long as its ELECTION is made from the GENERAL body of men of the faculty of London, all being recognized as equally eligible; its privilege of SELECTION from the same GENERAL body resting entirely on grounds of advantage to the Common Wealth, in the due exercising and practising of the faculty of physic. Any bye-laws framed on a principle less comprehensive than the Charter, or inconsistent with the Common Law of the Realm, (and there are such Bye-laws in the College Statute Book), are, in the interest of the College, to be deprecated, —and will not long be tolerated by the Public. We will find a day for them. Let us now dismiss the Charter—sensible, liberal as it is. We have supposed a RIGHT of *election* in the College: let us inquire how and when it was first exercised; let us consider how it SHOULD be exercised in these new and coming times. But pray! let me *implore* of you to remember, all through the inquiry, that ELIGIBILITY is not ELECTION; a truth, which nearly every one seems to forget, in this matter now first beginning to interest the profession. By widening the range of eligibility to the class of Candidates for its Fellowship, the College would not NECESSARILY increase the number of its Fellows, or lessen their standard of respectability. The effect would, I believe, be one of a contrary kind; though, for myself, I see no reason why every LICENTIATE should not become, as in the olden time, AT ONCE a FELLOW, by tenure of his license. At all events, this, my friend, is certain—that if we do not widen the range of eligibility, we perish: and why should we, if we can save ourselves, and ought to do so, in our duty as citizens of the state, and in our regard for the

health of our fellow-subjects. Adieu! I am *not wrong* in thus addressing you: this is a PUBLIC question.

Yours ever,

MAXILLA.

ON THE ECONOMY OF PAROCHIAL INFIRMARIES.

To the Editor of the Medical Gazette.

SIR,

I ENTIRELY concur with you in applauding the conduct of Dr. Roots for giving up his appointment of Physician to the Workhouse of St. Pancras, when the Vestry intimated to him that that office must hereafter be filled gratuitously. I also think it speaks loudly for the independence of our profession that no physician has offered his services to supply Dr. Roots's place, who was eligible to the office.

My soul recoils from every attempt to lower the worth and dignity of our profession, and I regard such conduct on the part of the Vestry of St. Pancras in that point of view.

But there is another, a higher mode, of estimating the value of the office of physician to parochial infirmaries, to which I beg leave to draw the attention of the profession and of the public. It is that of the opportunity afforded the young physician especially of prosecuting the study of his profession during the early years of his practice. And, to come to the point at once, I would say let that office be offered to *all* the resident physicians of a parish, without exception; let them accept it who will. Let them, each and all of them, have their allotted patients, as they are introduced in successive weeks. In this manner no young physician will mourn under the feeling of want of opportunity for pursuing his profession during the leisure and waiting of the early years of his practice. And how infinitely higher is this consideration to that of pounds, shillings, and pence!

I do not say that these physicians should not be properly remunerated; but I do say that this is a minor, lower consideration; and I say let ALL enjoy the advantages, pecuniary or otherwise, who, living in the same parish, really support the same institution. The time is come for doing away with monopolies, of what kind and in what place soever they may be. My motto is, "*non uni sed toti*"—"for each and for all." How unbecoming of the Vestry and of himself was the monopoly of St. Marylebone by Dr. Hooper, for years and years, when he was residing ten miles from the place!

A physician can attend to very few patients, *well*. I regard twenty-five as the highest number from which a real investigator of the science can profit. Allot five minutes a visit for each patient—and some would require, and ought to have, triple and quintuple that time—and there is in twenty-five patients daily occupation for two hours, independently of inspections.

There is another circumstance worthy of attention. On what principle is the general practitioner excluded from the advantages which parochial infirmaries might confer on him? Why should the office of surgical attendance on the poor be confined to what are termed *pure* surgeons? The general practitioner does undertake the care of surgical cases in private practice; why not in a parochial infirmary?

I trust the time is not far distant when the question will be, *not* who shall have this or that lucrative or advantageous office in our parochial establishments, *but*, to how many can these benefits be properly extended?

To this subject I purpose shortly to return. It is wide and important, and at present I am in haste.

Your obedient servant,

FOR EACH AND FOR ALL.

Jan. 29, 1833.

FRENCH HOSPITAL APPOINTMENTS.

To the Editor of the Medical Gazette.

SIR,

My attention has just been called to that part of the account of medical education in France, given in your journal, in which it is stated that the surgeons of the French hospitals are appointed by the Ministers of the Interior, for Paris, and by the Prefects, for the Provinces. This statement is not exactly correct—at least as far as Paris, Lyons, Montpellier, and Strasbourg, are concerned. In these cities the second surgeon is elected by public concours, and it is he who, at the decease, resig-

nation, or (at Lyons) expiration of service of the first surgeon, occupies the place of the latter. The most memorable of these concours in Paris was that at which Beclard, Marjolin, and Dupuytren, competed for the office of second surgeon to the Hôtel Dieu. It is true that some of the surgeons are appointed to the minor Parisian hospitals, upon the presentation of the hospital administration, from the surgeons to the *Bureau central d'admission aux hôpitaux;* but these are elected by *concours*, and therefore it is always by this test of merit they obtain their appointments, sanctioned, as a matter of course, by the minister. You will find, sir, that, with with very few exceptions, public concours is the ladder from the students' bench to the professor's chair, in all the public medical institutions in France.

Your obedient servant,
T. KING.

10, Hanover-Street, Hanover-Square,
Jan. 22, 1833.

[We have to thank Dr. King for his note, but we cannot find *where* we have said any thing like what Dr. King imputes to us. On the contrary, in a late No. (p. 453) we say, regarding the French medical appointments—"There are a physician and surgeon *en chef* attached to each establishment—appointed by the prefect; and the assistant and inferior physicians and surgeons, who are qualified for their places by the *concours*." Our correspondent may possibly have read hastily, and misunderstood, an extract from Dr. Johnston in the same page.—E. G.]

MEDICAL GAZETTE.

Saturday, February 2, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

MEDICAL EVIDENCE ON THE FACTORIES' LABOUR BILL.

WE last week called attention to the general objects of this Bill. We gave some particulars relative to the revolting nature of the factories as places of labour; we noticed the cruel kind of occupation which is followed in them, and the alarming mortality by which it is attended; and we slightly alluded to the tenor and general character of the professional evidence. This latter part of the subject we deem peculiarly our own; with the moral and political aspects of the question—fertile as they are in reflections of solemn import—we will not interfere: but the physical consideration of labour in the factories, we conceive belongs specially to our province; and, with the impulse of duty to actuate us, we do not intend to abandon it till we have fully expressed our opinions.

With this view, it may be as well to proceed at once with an abstract of what was elicited from the medical witnesses by the parliamentary committee. The report is voluminous, and our space is circumscribed; but we hope to omit nothing material.

The first professional witness who was examined was Mr. Lutener, of Newtown, Montgomeryshire. From this gentleman's evidence, it appears that it is the practice, in the Newtown mills, to work the children, not only by day, but on two or three nights every week—that is to say, the children work, on these occasions, for six-and-thirty hours continuously. They are of both sexes indiscriminately, and left alone during the night, without the least superintendance.

"I have never seen," says Mr. L., "any particular disease amongst them. They are not those rosy healthy children that our agricultural children are; they are thin and sallow-looking, and exceedingly dirty. It is impossible that human nature can support this labour, though there are no obvious bad results at present. . . . We have had frequent accidents, because the children get sleepy at night, and get their hands in the work. I and my partner have had frequently to amputate the hands and fingers of children."

He adds, that he thinks eight or nine

hours' labour as much as would be consistent with health in persons under eighteen years of age.

The next professional witness was Mr. Sharp, of Bradford, in Yorkshire. He bears the strongest testimony to the excellent arrangements adopted in Mr. Wood's mill in that town, to which he was himself appointed the medical attendant: yet, from the ample opportunities thus afforded him of forming an opinion, and a favourable one, he holds that the children are overworked. Among the diseases developed by the system, he notices scrofula, consumption, fever, and general debility; with ulceration of the legs. He mentions deformities also, and the common occurrence of accidents. Being questioned as to the general effect, whether he thought it tended to shorten life, he replies:—

"Yes, I do; but if I may be allowed, I will add a remark to that answer. I think, amongst the ill effects produced, the injury to the general health is of more consequence than any particular deformities. I would not lay so much stress on the deformities as on the breaking up of the constitution; the injury to the general health.

Mr. S. Smith, of Leeds, states, that, in a great number of instances, he has known the children in the factories to be worked for fourteen, fifteen, sixteen, and eighteen hours a day; and in a standing position all that time. The posture he considers far worse than the labour; he holds it to be harassing in the extreme; not only on account of the constant and complicated muscular exertion required for the purpose, but by reason of the increased action of the heart requisite when the upright position is long sustained. The general effect of the labour is to throw the body "out of condition;" and though there may be no actual disease present, yet there is a continual tendency to disease. To the diseases most commonly attendant on this kind of occupation—such as scrofula and phthisis, &c. Mr. Smith adds varicose veins and depraved growth of bones. In noticing the effects on the ligaments, this intelligent witness subjoins the following curious fact:—

"By long-continued standing, the knees become so weak that they turn inwards, producing that deformity which is called 'knock-knees;' and I have sometimes seen it so striking, that the individual has actually *lost twelve inches of his height* by it; which may be proved in this manner: a well-formed man will, in general, stand the same height as the length of his arms when extended. I have seen individuals of that class, whose arms, thus extended, have measured nearly six feet, but who only stood about five feet high."

And what he says of accidents is remarkable:

"I have frequently seen accidents of the most dreadful kind that it is possible to conceive. I have seen cases in which the arm was torn off near the shoulder-joint; I have seen the upper extremity chopped into small fragments from the tip of the finger to above the elbow; I have seen every extremity in the body broken; I have very frequently seen the most shocking cases of laceration that it is possible to conceive. . . . I am thoroughly convinced that many of those accidents take place during the time at which the children are exhausted, sleepy, and tired, from the long perioddurin which they have continued their labour: they are in that state of lassitude and fatigue, that they cannot keep their eyes open; and I believe frequently their fingers become involved in the machinery whilst they are in that helpless state."

One case, of which Mr. Smith gives an account, is so monstrous an example of the proceedings and effects of the factory system, that we almost hesitate to lay it before our readers, notwithstanding the strong manner in which the witness vouches for its authenticity. It is this:—

"In the last case (of deformity) that I saw, which was about a month ago,

a young girl, of about 15 or 16 years of age, went to consult a physician in my neighbourhood, and, finding it was a surgical case, he sent her over to me. She was a patient who went for gratuitous advice; she was very much deformed in her knees and her ancles, and also very much reduced in her health and strength. Upon investigating her case, I found that she had worked from five in the morning till nine or ten at night; but in order that I may not exceed, I will say nine, though I believe it was ten at night: for six months in succession she had worked for those hours, and during the whole of that period she had not been allowed a single minute for food, for rest, or for recreation. She was obliged to take her breakfast as she followed her work; she was obliged to take her dinner as she followed her work; and so with her other meal!"

In conclusion, Mr. Smith thinks the contemplated limit of "ten hours" an extreme period; under which, he says, it is very probable that many children will suffer.

We now come to Mr. Thackrah's evidence. The researches of this gentleman are well known to the profession, and it is scarcely necessary to mention how ably his views of the effects of factory labour were supported before the committee. We stated in our last number the facts which Mr. Thackrah had ascertained respecting the great mortality in the manufacturing districts. He explained a number of other circumstances in his examination connected with the system which are worthy of note. The diseases of the lungs, which are most prevalent, he attributes to the dust of the mills, and in the flax mills he considers it most injurious. The intemperance also of the factory people, he states, produces much mischief: they are accustomed to a stimulant diet and a great quantity of liquor. But the great evil is excessive labour, by which the operatives are "worn out." Mr. Thackrah adds, that a bill for regulating the hours of labour in our factories is as much required for the protection of the children from themselves and their parents, as from their masters; for they (the children) are easily induced to undergo extraordinary exertion. We are thus brief with Mr. Thackrah's evidence, because there is much of it of a politico-economical, or at least of a non-medical, nature.

Of the evidence of Dr. Thomas Young, of Bolton, we have already given some material particulars—the result of his personal cognizance of the mills. This gentleman also visited the Sunday schools, with a view to ascertain the effect of the factory labour upon the children. He gives ample details in his evidence; but his general note is this:—

"The general appearance of the children in those schools is extremely unfavourable, as contrasted with those engaged in other employments. They have a sallow and unhealthy aspect; many of them have a peculiar flatness of the foot, and are much stinted in their growth.....I consider (however) the examination of Sunday schools a fallacious test, for this reason—that comparatively few children, I am sorry to say, attend them, and those few, we may suppose, are favourable specimens: they are the children of religious parents, of parents who take an interest in the religious and moral instruction of their children; and I found their appearance in the schools very superior to what I had anticipated from seeing them in the factories."

We might add to this, from other parts of the evidence, that the factories themselves are fallacious to visitors, as there are preparations made when visits are expected: the results of the system are in the hospitals and in premature graves.

As to the immorality that exists in the factories—a circumstance amply substantiated by almost every witness examined—we extract what Dr. Young states on the subject:—

"The animal propensities are early developed in the mills, and very frequently before the development of those moral feelings which would restrain their indulgence: there is little modesty

among the females. These remarks must, of course, be received with some limitation: there are, of course, some exceptions, and I hope many. I have often observed them coming out of the factory: their conduct was indecorous and their language gross and obscene. I have been informed that illegitimate children are rare; but I beg to suggest that the very circumstance of the frequency and promiscuousness of intercourse which has been reported to me must operate against conception."

It would appear, from other testimony given before the committee, that the "check preventive" does not depend simply upon the circumstances alledged by Dr. Young; but that the demons of the Carlile school have been busy in these hot-beds, and their printers have admittance when no other books are known.

Mr. Malyn was the next medical witness. This gentleman, as the pupil of the late Mr. Simmons, of Manchester, enjoyed peculiar advantages in observing the habits of the factory people in that town. He was physician's clerk to the Infirmary, an establishment through which not less that 13,000 patients pass in the course of a year. Mr. Malyn's testimony, however, goes chiefly to corroborate the statements of some of the preceding witnesses, regarding the harrassing nature of the labour, and its deforming effects on the frames of the young operatives, the prevalence of scrofula in Manchester, with sundry forms of bronchial disease. Complaints resembling consumption are frequent; but the distinction between these and true phthisis (he says) is readily appreciable by the stethoscope; the bronchial affections besides being readily to be accounted for by the inhalation of flue, dust, and such like irritating matter.

So much for the evidence of those among the medical witnesses who were conversant with the doings in the factories. Of the other professional men who were summoned by the committee to give their testimony, almost all had to rest on theory alone. Many of their opinions are valuable, and we shall probably analyse them in a future paper; but we are warned by the length to which we have been carried, to be economical of the space which still remains to us. Let us turn then to the evidence of Dr. Farre, of which we have already spoken in high terms of commendation.

It was the rare lot of this gentleman to be able to speak from personal observation of the actual condition of the West Indian slave, and to compare it with that of the operative in our factories. Upon being asked whether there are limits fixed in the plantations to the labour of young slaves? he replies that their employment is always of the lightest kind; that when they do work, it is in the open air, never at night, and they are well fed. But even the adult slave (says Dr. Farre) in the most vigorous constitution of body is not subjected to any thing like the labour exacted in our factories. Then comes this question and answer:—

"Do you happen to know whether the owners of those slaves (alluding to the children) attempt to make a profit by their labour before they arrive at that period of life when they are capable of rendering it?—Never; I have always, as a medical observer, considered that their employment was used only as a training for health and for future occupation."

And to the question, whether this regulation of labour is not eminently advantageous to the planter himself in point of property? his reply is in these strong terms:—

"Certainly; it is *necessary*. In English factories every thing which is valuable in manhood is sacrificed to an inferior advantage in childhood. You purchase your advantage at the price of *infanticide*; the profit thus gained is the death of the child. Looking at its effects, I should suppose it was a system directly intended to diminish population."

The view which is here taken is further developed in the following interrogatory and response:

It appears from an official document presented to this committee, that a greater proportion of mortality exists wherever this system of long and irksome labour is allowed: would you be prepared for such results from the principles you have stated? I think that the result is so inevitable, that I view it as a species of infanticide, and a very cruel, because lingering species of infanticide, resulting from the over-extension of a principle in itself good—the principle of cheap production demanding overlabour; and that the only safeguard to the state consists in opposing this principle of political economy by the medical voice, whenever it trenches on vital economy."

Here we pause for the present, leaving the reader to reflect on the painful and disgraceful system which exists amongst us; and praying him, if he be an abolitionist of slavery abroad, to recollect the charity which should begin at home.

LIBRARY OF THE BRITISH MUSEUM.

A SORT of remonstrance has been sent to us by a gentleman connected with this establishment, complaining that we adopted, in our late article on the "Mismanagement of certain Libraries," Professor Rennie's list of books not to be found in the Museum, the said list being totally incorrect. We can only say that *our* list is correct; and we reiterate our assertions regarding the works which we named. The few titles suggested to us by Mr. Rennie's anonymous article in the *Englishman's Magazine* (his preface to Montague we have never met with) we took care to be sure of: they were, as we stated, "verified by ourselves," and we added several articles not mentioned by him: so that, grossly incorrect as Professor Rennie's list may have been, (and we soon found that it was so,) our's was of quite a different stamp. In a question of this kind there is no use in general and vague assertions*: we desire to know in what particular we have been wrong? Was it in what we said of De Blainville, or of Brogniart, or of Goldfuss, or Jourdan, or Foderé, or Orfila, Tortosa, Scarpa, Sprengel, Swan, Stephens, &c., or of the glaring imperfections in the sets? Whoever says generally that the books in our list *are* in the library, says what is not borne out by the catalogues; and if they be in the institution, why not there set down? In short, let any one assure us that any particular work in our list—Goldfuss's *die Petrefacten*, for example, or De Blainville's *Principes d'Anatomie comparée*, or Foderé, *Traité de Med. Leg.*, or Orfila, *Leçons de Med. Leg.*, is in the library, and has been there even within this week (when we again verified our statement)—and we shall gladly publish the fact, with an acknowledgment of our error.

MEETINGS AT THE COLLEGE OF PHYSICIANS.

THE meetings for the present season commenced on Monday the 28th, on which occasion the rooms exhibited a very numerous and distinguished assemblage of noble, learned, and literary characters, including some of the leading members of the Government, as well as the heads of the Church and the Law,—men whose presence fully proved, that in this country, at least, the profession of Physic enjoys a place and a consideration in society, which it has not attained in any other quarter of the world; and M. Clot, (whom we noticed among the visitors,) the European surgeon and Egyptian

* As a specimen of the vagueness with which it has been attempted to contradict us, it has been intimated that there is no such book in existence as Cruikshank *on the Absorbents!* The learned assertor of this curious fact ought at least to have looked into Watt or Sprengel before he stated it. We will now, however, inform him where he may see a copy: there is one in the King's library; and we take this opportunity of acknowledging that its existence there escaped us when we published it in our list.

Bey! (himself not the least interesting personage present) will be able, on his return, to inform his enterprising master, from what he has himself witnessed, that so highly is medicine esteemed in England, that the first in station and talent are forward to patronize its objects, and associate themselves with its practitioners. We have always entertained and repeatedly expressed the opinion, that every such display of respect and fellowship offered to our profession by those men who, whether from the aristocracy of birth or the nobility of mind, hold the first rank in society, tends to raise us as a body in the public estimation. Taking this view of the subject, we have been astonished at the lukewarm interest in these meetings evinced heretofore by so many of the Fellows, who would do well to imitate more closely the example of their President, and second more zealously those efforts which he has so successfully made; for it is but justice to observe, that Sir Henry Halford has been the chief supporter of the whole — without whom the meetings would probably never have been established, and unaided by whom they would speedily be discontinued. He has not only used his influence in securing the presence of those calculated to give lustre and eclât to the proceedings, but has employed his pen in essays upon popular subjects, and such as are peculiarly adapted to excite interest in a mixed audience of gentlemen and scholars, by clothing the details of medicine with the graces of literature. We were pleased, however, to observe, that there was a larger attendance of Fellows than usual on Monday last, and we trust that hereafter they will not rest satisfied with opening their halls to their professional brethren, but by their presence, and by their contributions from the stores of their experience, shew them a more sincere and cordial hospitality.

The business of the season commenced by Sir Henry Halford reading a paper of his own—

"*On the Treatment of Insanity, particularly the Moral Treatment.*"

After adverting to the appeal which the subject of insanity made to the sympathies of humanity, and to the mingled terror and pity with which those so afflicted were usually contemplated, the learned author proceeded to observe, that there was not necessarily more than one faculty of the mind implicated in the disease, namely, the judgment. In insanity the perceptions and the memory may be undisturbed, whereas in delirium all the powers of the mind are influenced. As the judgment is the attribute of the mind first impaired, so indecision is often its earliest manifestation, being, as observed by Burke, the natural accomplice of violence and suspicion, without adequate cause; then come delusions or notions, which are assumed without any foundation in the realities of fact and nature. Proof that these exist, and influence the conduct of the individual, manifests "unsound mind," and warrants a decision to that effect.

As the mental disease advances, the body becomes more reconciled to its presence, and medical treatment is proportionably less requisite; but, at the onset, it is of great importance to discover the organ which chiefly suffers. If this be the digestive system, the restoration of the healthy action of the stomach and intestines becomes the great object which is indicated; if sleep has forsaken his patient, the physician will then strive to restore it by "poppy and mandragora, and all the drowsy syrups of the world." Or the mind may be at once overwhelmed by the blighting influence of sudden misfortune, or the annihilation of elated hope. It is related of Omichund, a Gentoo merchant, that he became instantly deprived of speech, and speedily of reason, on learning that his name had been omitted in a treaty made by Colonel Clive, in which he expected a stipulation would have been inserted, conferring on him a large sum of money for his services against the Nabob of Bengal. Or, on the other hand, wealth suddenly acquired, may be so at the expense of reason; and, indeed, it appears, that, in 1720, more persons became insane from the unexpected pos-

session of enormous wealth, than from the loss of all their property, which many suffered by the speculations of the same period. When such causes of great mental emotion have been applied, it is necessary to examine into the state of the blood-vessels of the head, lest they should have become loaded by the violence of the moral impression. Again, some eruption may have been checked—some evacuation suppressed—some "strong propensity of the system improvidently thwarted;"—all of which require their appropriate remedies.

In the second stage, which is one of excitement, scarcely more can be done than to guard against the risk of the patient doing injury to himself or others. Under the paroxysm, restraint alone is efficient—reasoning is useless and misplaced; but the duration of this unavoidable coertion Sir Henry has seen much shortened by tartarized antimony—a remedy which he recommended, both as controlling the violence of the fit, and as being easy of administration.

The chief object of the learned President, however, was to convey his views on the subject of moral treatment.—"The mind, (said he,) if I may trust my own experience, is not less intuitively disposed than the body to exert itself to throw off disease; and I think I have seen a marked period when these effects are to be expected. Indeed, it has been collected from the records of 500 cases of insanity which have recovered, that 450 of them manifested decided improvement at the expiration of three months." A calm follows the excitement, usually proportioned to its violence, and during which the delusions are less pertinaciously dwelt upon by the mind. The patient will himself begin to doubt their reality—his estranged affections return—his carelessness of his person diminishes—and his inquiries shew a desire to be informed of the "dream" which has possessed him. Now is the time for a discreet friend and skilful physician, to whom he may speak of the delusions which still disturb him. The truth of these the attendant ought not rudely to deny: but, with due tact and discretion, to hint his doubts of their reality. He will always avoid deceiving his patient, but encourage him to submit his hallucinations to *his* unbiassed judgment. "He will act, as it were, upon a system of education, and will aim thereby at confirming the spirits and strengthening the mind of the convalescent; and as the discipline employed in youth serves to encourage and enforce the predominance of reason over the passions, so will discreet converse assist in restoring reason to the seat of which disease had dispossessed her, and in giving her back again her proper sway over wild impulses."

For this purpose, the mind is to be engaged by presenting new objects, and recalling former pursuits. If the patient has been partial to any amusement of a harmless kind before his illness, this is to be resumed. Among these music was particularly mentioned. With this he may be indulged immediately. In illustrating its effects, the learned author referred to the history of Saul, and glanced at its power to mitigate the sadness of seclusion, in a case where his "loyalty as a good subject" was added to all the usual sources of interest in his patient. The instance afforded by a gentleman from Yorkshire, who suddenly lost all his property, was more fully detailed. "He could hardly be said to live—he merely vegetated; for he was motionless till pushed, and did not speak to or notice any body in the house for nearly four months. The first indication of a return of any sense appeared in his attention to music played in the street. This was observed a second time; and, induced by this good omen, the sagacious humanity of his attendant offered him a violin. He seized it eagerly, and amused himself with it constantly. At the expiration of six weeks, hearing the rest of the patients of the house pass by his door to their common room, he said, 'Good morning to you all, gentlemen! I am quite well, and desire to accompany you.' In two months he was dismissed cured.

Again, if the patient have previously had a predilection for any particular train of studies, this taste is to be gratified and encouraged within proper bounds, whether after the counsel of Bacon, he would "entertain such as fill the mind with splendid and illustrious objects, as histories, fables, and contemplations of nature," or cleanse away the "thick-coming fancies" by the pursuit of mathematical studies, appropriately called, by one of the Grecian philosophers, "the purgatives of the soul." As an illustration of this latter principle, the case of the elder Dr. A—— was adduced. He became deranged in the country, and believed himself reduced to beggary. He was advised to study Euclid. He did so with the best

effect; and was enabled to commence practice in London, which he continued uninterruptedly until his death.

The study of the Holy Scriptures Sir Henry stated to be a most efficient resource where it could be allowed with propriety; but this requires much caution in its adoption, and is always to be shunned when the disease has been originally connected with religion. Until the "great imagination" has been overcome, and the judgment invigorated, evil instead of good may result from bringing such subjects before the mind. If, however, religious exercises be not forbidden by any of the circumstances alluded to, they are to be regarded as most appropriate and salutary occupation for the mind, as proved by the experience of nine years in the Asylum at Lancaster. The learned author alluded to the circumstance of Dr. Johnson's interview with Collins, the poet, who had been deranged a short time before,—[He found him with the New Testament in his hand. "I have but one book," said Collins, "and that is the best."]—and then passed on to the story of the sensitive and elegant Cowper, quoting, from one of his letters, the expressions of his gratitude to Dr. Cotton. "I was not only treated by the Doctor, (says Cowper,) with the greatest tenderness whilst I was ill, and attended with the utmost diligence, but when my reason was restored to me, and I had so much need of a religious friend to converse with, to whom I could open my mind upon the subject without reserve, I could hardly have found a fitter person for the purpose My eagerness and anxiety to settle my opinions upon that long-neglected point made it necessary, that, when my mind was yet weak and my spirits uncertain, I should have some assistance; the Doctor was as ready to administer relief to me in this article likewise, and as well qualified to do so, as in that which was more immediately his province. How many physicians would have thought this an irregular appetite, and a symptom of remaining madness! But, if it were so, my friend was as mad as myself; and it is well for me that he was so."

The great object in the pursuits recommended by the learned author, is to occupy the thoughts and keep the judgment in activity, and thus to prevent the intrusion of "unreal mockeries,"—as frightful dreams are prevented by keeping the senses awake to new and exciting impressions. The same means, too, are applicable to those, who, having once recovered, are again in danger of a relapse. It is curious, that the patient himself is sometimes the first to perceive that his mind "is obscured by the flying vapours of incipient madness." Two patients were pointed out to Sir Henry some years ago, during a visit which he made to an asylum in the neighbourhood of London, both of whom had many months before been dismissed cured, but had again come back, and been admitted, at their own request, to their old apartments. Once, also, he was consulted by a gentleman on the recurrence of some symptoms which had formerly preceded attacks of insanity. One of the circumstances particularly alluded to, was his being haunted incessantly by an overture of Handel's. His apprehensions were realized; he became insane, and never again recovered.

The concluding portion of the paper was devoted to some remarks on the tests of recovery from insanity. Some will not be satisfied with the patient's own admission of having been insane; but Sir Henry does not think this "quite fair," particularly if, as usually happens, frequent argument has previously taken place on the subject of his delusions during the progress of his cure. But, on the other hand, it is not always safe to assume that a patient has abandoned his insane imaginings merely because he ceases to speak of them; many, perceiving that we regard them as proofs of their minds being diseased, have the art to conceal them. The cases quoted by Erskine, on the trial of Hatfield, were hinted at in illustration, and the fact mentioned that the writer had heard the late Lord Ellenborough express his decided conviction that a lunatic had recovered, after having witnessed him sustain a lengthened conversation upon an important topic with acuteness and discretion. Yet was this person a few days afterwards under the full influence of his hallucination, but giving utterance to his thoughts in Latin, that he might escape being detected by his attendants! The question of "a test" is one of great moment, and we give the result of the experience which Sir Henry Halford has had in this respect, as nearly as may be in his own words. "What, then, (said the learned baronet) shall we consider a proof of

recovery; and when shall we be justified in opening the door, and allowing a person who has been insane to go out and resume the management of his own affairs? Undoubtedly, if he do in good faith, as Cowper did, acknowledge that he has been ill, though he now claims to be considered well; if he has discarded the one overwhelming idea, and has ceased for some time to indulge in those unfounded conceits, and in those overt acts which arose out of it, and which characterized his distemper; if he has been habitually well, and his general manner and demeanour do now manifest a contrast with his late behaviour; and if he continue to command himself, and his conduct be uniformly natural and proper for a given time;—then I would say with the physician in King Lear, "Be comforted, good madam! the great rage you see is cured in him;" and I should think it safe and proper to emancipate him—at least on trial."

MEDICO-CHIRURGICAL SOCIETY.

Tuesday, Jan. 22, 1833*.

Two papers were read, the first being entitled

"*On Malignant Tumors connected with the Lungs.* By John Sims, M.D. Physician to the St. Marylebone Infirmary."

Case I.—A well-formed young woman, 25 years of age, was admitted at the Infirmary, having great difficulty of breathing, pain in the chest, and cough. She had been in pretty good health till within a short period of her application. The symptoms did not yield to the remedies employed, and others appeared of a still more unfavourable character. Several distinct tumors could be felt at the lower part of the abdomen, rising out of the pelvis; and a number of enlarged lymphic glands presented themselves above the clavicle of the right side. Fluid collected in the peritoneum, the ankles became œdematous, and the thoracic symptoms (cough and difficulty of breathing) increased, being, however, unaccompanied by purulent expectoration, or other appearance of phthisis. The sounds of the ventricles were heard in their usual place, but the impulse of one or both was equally distinct anteriorly over a portion of the thorax on the right side. The right arm assumed the appearance of phlegmasia dolens, from inflamed veins. The diagnosis made from the above assemblage of symptoms was, that a tumor of malignant character occupied the right side of the chest, and was connected with the lungs and heart. Sloughing of the back having taken place hastened her decease, and the post-mortem examination disclosed a tumor of considerable size, embedded in the right lung, and closely attached to the great vessels at the base of the heart. It was at some points firm and fibrous, at others soft and brain-like. Several tumors of large size were attached to the uterus and its appendages, analogous to those in the chest. The right subclavian vein was filled up with layers of fibrine. This last was exhibited to the society, but circumstances had prevented the removal of the tumors.

Case II.—J. J. a baker, æt. 43, of middle stature and athletic form, a year ago applied to Dr. Sims for advice, on account of an attack of hæmoptysis, with the usual symptoms of a congested state of the lungs: the quantity of blood expectorated from the lungs was occasionally large. He was much relieved by general and local bleeding, digitalis, blisters, &c. He was then lost sight of till last October (30th,) when he was admitted at the Marylebone Infirmary. His appearance had become altered for the worse, and his symptoms generally aggravated. The right side of the chest was dull on percussion over a considerable portion of its anterior surface, and respiration was inaudible by auscultation. The jugular veins seemed three times their natural size, and large tumors presented themselves above the clavicles, alternately increasing and diminishing in size. Similar treatment to that above mentioned was adopted, with the effect of mitigating the symptoms, but this proved only transient, and he died on the 28th of December. The diagnosis in this case was similar to that in the preceding. On examination, a tumor was found on the right side of the chest, pushing down the diaphragm, and encroaching on the left side of the thorax. The heart was lower than usual by several inches, and thrown out of the mesial line. A great portion of right lung hepatized: in some parts, the substance called *brotile*, of a dusky red colour:—the tumor extensively attached to this lung, and having insinuated itself between the larger vessels and bronchial tubes: trachea compressed: most of the bronchial glands healthy. The descending cava much increased in length, and appears to have identified itself with the diseased mass, as if the channel were continued through the tumor, the venous coats having been absorbed. The heart also was implicated in the morbid degeneration, especially the left auricle, in the interior of

* This report ought to have appeared last week, but was necessarily omitted for want of room.

which the tumor had made great progress. The tumor altogether occupied about one-third of the entire cavity of the thorax, and was of various consistence, the hardest resembling cartilage; the softest being pulpy; and a third consistence being intermediate. A model and drawing of the tumor were exhibited.

A third case was detailed, in which a woman, 58 years of age, had several small, indurated, moveable tumors in the skin, over different parts of the body. She complained of pain about the abdomen, which was rather tumid and hard in the hypogastric region, with constant gnawing pain through the hips; scanty urine, and great pain in emptying the bladder; extreme emaciation and debility. About six months ago had an attack of profuse hæmorrhage from the uterus, which had not returned since. She gradually sunk, and on examination after death, the small external tumors were found to be of cartilaginous hardness and uniform texture, and similar tubercles were found internally in all the viscera in all the cavities of the head, chest, and abdomen.

The second paper was entitled

"*Notes of a peculiar appearance observed in Human Muscle, probably depending upon the formation of very small Cysticerci.* By JOHN HILTON, Demonstrator of Anatomy at Guy's Hospital."

A man, named Proctor, aged 70, was admitted at Guy's Hospital for cancer of the penis, and during three months nothing remarkable was observed either in the progress of the disease or any other respect. At the end of this time, which was about a fortnight before his death, a great number of what appeared to be common lice were seen on the head and face. He had been at his admission perfectly clean, and there was no other patient in the ward similarly affected. The hair became matted together, and superficial ulcerations were observed on the integuments of the head. The hair was removed by shaving, but after death, when it was about a quarter of an inch long, another accumulation of lice was found.

The subject was prepared for injection, and subjected to a temperature of about 100° of Fahrenheit; five days after death, on proceeding to the dissection, the attention was arrested by a mottled appearance of the pectoral muscles, and the same phenomenon presented itself in all the voluntary and respiratory muscles to which, however, it was confined. The muscles were pale, soft, and not so distinctly fibrous as usual; between the fibres, and having their long axis parallel to them, there are situate several oval bodies, transparent in the middle, and opaque at either end, altogether about $\frac{1}{25}$ of an inch in length. No organization could be discovered with the aid of a microscope. A small portion of muscle, impregnated with them, was inserted under the skin of a rabbit on the back. This was done in three cases; but the animals all died within seventy-two hours, and without any appearance of the bodies in question being revivified. A portion of the body was also exposed to gentle continued heat, but putrefaction went on as usual without any signs of life in the corpuscules. Dr. Addison placed a portion of muscle in a glass tightly covered with paper, perforated by pin holes; it was slightly moistened occasionally with water. On referring to it "casually," some weeks after, a number of small flies were seen in the glass, apparently differing from the common fly, and some bodies were observed in the muscle, larger than those originally placed in the glass; from some of these an embryo fly was liberated. Dr. Addison, however, being aware that external communication was not absolutely cut off, is unwilling to draw any inference from the above.

Œsophagotomy.

Just as the President was about to ad journ,

Mr. ARNOTT rose, and said that he had some further information to give, in addition to what he had stated on a former evening, relative to the case of the child in whose œsophagus a piece of bone had become fixed. He had since performed the operation of œsophagotomy upon it, and extracted the piece of bone. Here Mr. A. minutely described the mode in which he had proceeded with the extraction, and exhibited the bony substance to the Society. [It was the same which is represented by a wood-cut, in Sir Charles Bell's lecture, in our last number; where also the description of the operation is given.] The child, Mr. A. further observed, went on well for a time, so as to justify the perfect propriety and efficiency of the operation; but the lungs were diseased, and the little patient ultimately sunk.

The PRESIDENT thought that Mr. Arnott was entitled to great credit for the skill which he displayed in the operation—"an operation," said the learned President, "which has never, so far as I am aware, been performed in this country."

Mr. ARNOTT quoted some French cases—we believe from Velpeau—showing that the operation was not unknown in France.

The PRESIDENT, in the name of the Society, requested Mr. Arnott to furnish a written account of the case, to be recorded in the Transactions.—Adjourned.

ROYAL INSTITUTION.

Friday, 25th Jan. 1833.

B. B. Cabbell, Vice-President, Esq. in the Chair.

Professor Brande on Chemical Notation.

This being the first meeting of the present session, a very numerous auditory assembled to hear Mr. Brande's explication of the new system of chemical notation, introduced by Berzelius, with the modifications proposed by himself. Should any such schemes be generally adopted, the scheme devised by Mr. Brande appears to us to be much more simple and philosophic than that of his celebrated compeer. Still, after all that the learned professor urged in favour of these signs, we cannot but think them adapted rather for the concealment than the promulgation of knowledge; and we, therefore, earnestly beseech the chemical lecturers, at least of our London schools, to pause before they give them their sanction.

In the Library, we noticed among a splendid collection of natural curiosities and works of art, a most elaborate series of figures, designed to illustrate a work on the Natural History and Antiquities of Egypt, just on the eve of publication.

On Friday next, Dr. Faraday will give some further account of his Electro-Magnetic Researches.

EXTRACTS FROM THE CASE-BOOK OF THOMAS WELLS, M.D. of Columbia, S. C.*

Case VI.—*Temporary Obstruction of the Œsophagus.*

October 6th, 1827.—Was called to see a child, aged 2 years, son of a Mrs. Cook. Found him sleeping quietly, and apparently in good health, unless there might be some little appearance of anxiety in his countenance. His mother said that four hours before he was sucking a piece of beef-steak, too large for him to swallow, which he however attempted to do. It stuck in the upper part of the œsophagus, and threatened s ffocation. A woman near him had the presence of mind to thrust her finger into his throat and push the morsel down. This gave him immediate relief, and all was thought to be well. Soon after he attempted to swallow water; was attacked with spasms of the muscles about the throat, and was more or less convulsed throughout the whole muscular system, until the water was ejected. A few swallows of milk were directed to be given him. He was very soon attacked with spasms as before; a gurgling noise was distinctly heard in the œsophagus, and the milk was returned. This attempt to swallow was followed by considerable pain for fifteen or twenty minutes along the tract of the œsophagus; it then subsided, and left him at ease. As there did not appear to be any thing immediately alarming in the case, I directed the mother to give him a piece of sponge-cake, milk, &c. occasionally, in hopes that by repeated efforts to swallow, the obstruction might be removed. Saw him again in the evening, eight hours after the accident; he was feverish and restless; the mother had made several trials with cake and milk, but it gave the little fellow so much pain that he at last utterly refused to attempt to swallow any thing. A common sponge probang was introduced into the stomach; the obstruction was found just above the cardiac valve, and was easily removed. He suffered very little from this operation. Repeated trials were now made to induce the little patient to swallow milk, but without effect, his previous attempts had given him so much pain: at last a few spoonfuls were poured into his throat, and the moment he found it no longer attended with pain, his appetite and thirst were voracious and insatiable.

The stimulus of the piece of meat lodged in the lower part of the œsophagus had caused speedy digestion and expulsion of the food from the stomach at the time, and subsequently a state of excitation in the gastric mucous membrane, not yet amounting to disease, but which called strongly for food to allay it.

The next day the little boy was quite well.

Case VII.—*Extensive Division of the Soft Palate.*

A lad, aged 5 years, nephew of Messrs. L. and E. Nov. 1st, 1827, was running with one end of a piece of reed-cane, a foot long, and about an inch in diameter, cut square across at the extremities, in his mouth. He fell forward: the end of the cane coming in contact with the ground, it was thrust violently into his throat. I saw him very soon after the accident happened; there were two lacerated incisions, extending from the centre of the back part of the bony arch of the mouth, backwards and outwards on each side something more than an inch, and terminating within less than half an inch of the inferior margin of the velum palati. The soft parts were cut or torn through, making a triangular

* American Journal of the Medical Sciences.

flap, the apex of which had fallen forwards and downwards, and hung dangling upon the root of the tongue, leaving the posterior nares and pharynx fully exposed. There was considerable hæmorrhage, and the child and friends were exceedingly alarmed.

A short, common surgeon's needle was heated in the flame of a lamp, bent to a proper curve, armed with a ligature, and confined in Dr. Physick's forceps for taking up deep-seated arteries. The patient was placed upon a table, and held by assistants. The mouth was kept open by a large cork placed between the back teeth, and his tongue depressed with a spatula.

The needle was passed through the apex of the flap, and then through a corresponding portion of the mucous membrane and cellular substance on the roof of the mouth, and the ligature tied by the common stems, for such operations where the fingers have not access.

It was not attempted to insert more than one suture, although this did not bring the parts into exact contact, but the swelling which supervened in the course of a few hours, as was anticipated, fully obviated that difficulty.

He was kept as quiet as possible, not allowed to swallow any thing for the first four days except a little milk and toast-water, and these as seldom as practicable. At the end of this period adhesion was found to have taken place at every point. There is not the slightest deformity of the parts remaining.

There was considerable difficulty in this little operation from the struggles of the patient and the contracted space left for us to act in, the mouth being already pretty well occupied by the apparatus for keeping it open and depressing the tongue; indeed, without the above instruments, or others equivalent, it would have been found impracticable either to pass the ligature or to tie it.

CASE X.—*Hypertrophy of the Tongue.*

A daughter of George Roberts, of Lexington, aged 6 years, was brought to Columbia for professional assistance in May, 1829, with an enormous enlargement of the tongue; otherwise she was in good health, and a fine robust girl.

The following are the dimensions and state of the tongue at the time: length as it remained at rest and hung down over the chin, from the superior incisors to its apex, two and a half inches; circumference just in front of the lips, six inches; breadth from one angle of the mouth to the other, a little more than two inches. It had undergone a very considerable change in structure, was much more dense than natural, and not subject to change in its dimensions by the action of its own muscles, or if at all, very slightly so. Its motions otherwise were sufficiently free; upper surface smooth; inferior covered with the cicatrices of old ulcers, several of which, where the tongue rested upon the alveolar processes of the lower jaw, but imperfectly healed; colour darker than natural. Within the mouth the tongue had undergone no apparent change, except a moderate increase in width and thickness. She had formerly suffered much from inflammation and ulceration of the mucous membrane of the tongue, but this difficulty had been obviated for the last six or eight months, by keeping the organ covered with cloth-bags, becoming immediately saturated with the mucous secretions of the parts, afforded a complete protection from the external air. If these bags were omitted for a few days, the surface became very sore and painful. The front teeth had been displaced from the lower jaw by the long-continued pressure of the tongue. The lower lip was folded downwards. The anterior portion of the superior maxillary bone had undergone a slight curve upwards, the inferior a much greater curve downwards; so that when the back teeth came in contact, the front were an inch asunder, or, rather, the space between the upper teeth and the corresponding alveolar processes below was something more than an inch. She managed to eat, by placing the morsel of food between the back teeth with her finger; fluids were introduced into the mouth through a tube, such as the spout of a coffee-pot: could articulate with a good deal of distinctness.

We could obtain nothing very satisfactory of the history of this case from the father, by whom she was accompanied. Her mother had died during her early infancy, and she had been placed with her grandmother away from him—the parties not of the most intelligent class. It seemed, however, from the father's statement, that the difficulty commenced, when she was about eighteen months of age, with an attack of what we suppose to have been common glossitis: the tongue became suddenly swollen, and protruded from the mouth—continued in that state for two or three weeks, when the swelling gradually subsided, and it was again brought within its proper limits. During the next two and a half years she had repeated attacks of a similar character; worse, and of a longer duration, in cold weather. All that he could say of the constitutional symptoms at this period was, that "when the tongue swelled the child cried a great deal, and was very sick, and the old lady was in the habit of dosing her frequently with salts."

For the last year or two there seems to have been no particular change in the dimensions of the tongue, save a gradual in

crease, corresponding with the general growth of the system.

Not considering it within the scope of medical science to bring the tongue back to its normal state, and being confirmed in this opinion by that of several of my medical friends, the removal of that part external to the mouth was proposed and acceded to, and would have been done by one stroke of the knife, but for the refractory character of the patient, and the timidity of the father. The following plan was resorted to, and is, on the whole, perhaps the best operation in such cases, and with such patients; but, in adults, where the surgeon can have the convenient use of all his resources for controlling hæmorrhage, there can be no objection to free excision, the least painful mode of operating.

The child having been freely purged, and kept on a gruel diet for two or three days, a seton needle, half an inch broad, armed with a double ligature, was passed through the tongue from below upwards, cutting traversely; the ligatures were carried obliquely backward, and firmly tied on either side, so as to give to the remaining tongue a somewhat pointed appearance. The gush of blood on passing the needle through the tongue was very considerable, but almost instantly ceased on the ligatures being tied: twenty hours after the strangulated portion was removed by two strokes with a bistoury, from the centre outwards in the course of the ligatures, which was followed by a few feeble jets of blood from the lingual arteries, and a slight oozing from the substance of the tongue for a few minutes. There was considerable irritation and constitutional disturbance after the application of the ligatures, which required a small bleeding and an anodyne; these symptoms all disappeared soon after the final excision.

The dressings consisted simply in the application of a pledget of lint moistened with a saturated solution of chloride of lime, renewed three or four times in the twenty-four hours, and a handkerchief tied over the mouth to protect it from the air. On the fourth or fifth day the child was walking about in the open air, and appeared to suffer very little: at the close of the second week the wound was nearly healed, and she was taken back into the country, with a request that she might be brought back to Columbia again in four or five weeks, which was accrodingly done. On her retnrn the wound was perfectly cicatrized, and the body of the tongue reduced to its natural dimensions. She had full command of her lips; and it was very evident that the jaws would soon be brought into their proper relation to each other by the natural action of the muscles. She could articulate with sufficient distinctness, and give all the letters of the alphabet their proper sounds.

Four months after this her father called on me, and said that his daughter had fully recovered—the jaws had lost their curvatures, all the teeth coming in contact. Mr. R. called on me again a few weeks since, and informed me that his daughter enjoyed good health, and had felt no symptom of the old complaint in her tongue since her recovery from the operation.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Jan.* 29, 1833.

Abscess	2	Heart, diseased	2
Age and Debility	63	Hernia	1
Apoplexy	12	Hooping-Cough	14
Asthma	36	Inflammation	58
Cancer	3	Bowels & Stomach	5
Childbirth	12	Brain	4
Consumption	82	Lungs and Pleura	5
Constipation of the Bowels	1	Insanity	8
Convulsions	31	Jaundice	1
Croup	1	Liver, Diseased	1
Dentition or Teething	7	Measles	10
Diabetes	1	Miscarriage	1
Dropsy	23	Mortification	3
Dropsy on the Brain	10	Paralysis	3
Dropsy on the Chest	2	Small-Pox	17
Epilepsy	2	Spasms	1
Fever	15	Thrush	1
Fever, Scarlet	3	Tumor	2
Fever, Typhus	2	Unknown Causes	2
Gout	1	Stillborn	22
Hæmorrhage	2		

Decrease of Burials, as compared with the preceding week . . . 173

METEOROLOGICAL JOURNAL.

January 1833.	THERMOMETER.		BAROMETER.	
Thursday . 24	from 20	to 39	30·40	to 30·27
Friday. . . 25	22	35	30·26	30·10
Saturday . 26	27	41	30·08	30·01
Sunday . . 27	25	39	29·98	29·92
Monday. . 28	31	44	29·87	29·75
Tuesday . 29	33	40	29·46	29·34
Wednesday 30	33	39	29·48	29·62

Prevailing wind S.W.

Except the 24th, generally cloudy; rain at times on the 26th, and three last days.

Rain fellen, .125 of an inch.

CHARLES HENRY ADAMS.

LITERARY INTELLIGENCE.

Directions for the Analysis of Inorganic Substances, translated from the French by G. O. Rees, will shortly be published.

ERRATA.

In Dr. Elliotson's lecture, in our last No. p. 533, *for* "there is the best authority for calling it chorea, and not corea," *read* "for calling it chorēa, and not chorĕa;" and p. 535, col. 1, line 16, *for* "a distant existing cause may of course be found," *read* "a distinct exciting cause," &c.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 9, 1833

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

EPILEPSY—(concluded.)

Predisposing Causes.—Not unfrequently you see this disease connected with a particular form of head; that is, with a narrow, shallow forehead. Sometimes it is connected with a head rising back in a sugar-loaf form, but it is frequently seen with an exceedingly narrow, contracted, short forehead; not that I conceive that has any thing to do with the production of the disease, but where the brain is more or less deficient in development, very frequently the patient is likewise epileptic. It sometimes exists in chronic hydrocephalus, and various other diseases of the head, but you frequently, of course, see it in the best formed head. There is a predisposition to it, indeed, from any cerebral disease whatever; whatever disease may exist in the brain, the person so affected is very liable to have epilepsy. The same state which produces one disease of the brain, may, either by its intensity, or by extending to other parts, produce epilepsy.

Very often, however, you will find the predisposition to this disease inexplicable. You will see a person seized with an epileptic fit from some circumstance which will not produce it in another, and yet between the two individuals you can discover no difference. It is the same with all other diseases; you see a predisposition, or an indisposition, to them, unconnected with external circumstances. You cannot tell why, for example, one person will take a contagious disease, or become affected the moment he is exposed to it, while another equally exposed escapes; and so it is frequently with regard to epilepsy.

Exciting Causes.—If the predisposition be very strong indeed, then the slightest exciting cause will produce it; such as shall scarcely more than quicken the pulse in another person. It has followed tremor: you will find many cases of epilepsy evidently ascribable to extreme dread. Injuries of the head, not in one part merely, but any part, will produce it. The suppression of habitual discharges, whether natural or artificial, has the same effect; and so also has the suppression of irritation. It will arise in females from a suppression of the menses; and, in males, from the suppression of an haemorrhoidal discharge which has become habitual. It arises from the cessation of a mere irritation; for example, from the cessation of an accustomed cutaneous disease without discharge. The cessation of gout will produce it, and also tumors, especially if they be situated on the head. This I mentioned in the case of phrenitis. The presence of the tumor produces inflammation of some particular part, so that epilepsy occurs; or the tumor being removed, causes a greater quantity of blood to be thrown on the brain, and thus the disease is induced. It occasionally takes place in violent fever. In fever the brain is frequently in a state of great excitement, and epilepsy occurs. Sometimes, among other symptoms, it has been excited by worms in the intestines or stomach, by teething, and even by a stone in the bladder. Any irritation of any part of the body whatever, if it amount to a certain point, and the person be predisposed to the disease, may produce epilepsy. There is an instance mentioned in the Edinburgh Medical Essays of the disease being produced by a small hard body in a nerve at the lower end of

the gastrocnemius externus muscle. The disease had existed twelve years, but on this body being removed it entirely ceased. It is produced, as you have already seen, by inflammation of the membranes of the brain. When speaking of arachnitis or acute hydrocephalus of children, I mentioned that epileptic fits were very common. Poison will produce it; mineral poisons,—lead, for example,—and all the tribe of vegetable narcotic poisons will give rise to it. Small-pox will also produce it: you will recollect I mentioned that it is common for children at the period of the eruption of small pox to have epileptic fits. Dangerous hæmorrhages may produce it: when a person is almost expiring from hæmorrhage, the collapsed state of the brain, the want of blood, excites convulsions. In some persons common copulation will produce it, the œstrum venereum; so that some persons have got into considerable difficulties from being subject to epilepsy. It is said that Napoleon had epileptic fits on these occasions, and that a serious mistake was once made; that the wrong bell was rung, and a number of persons came into the room who ought not to have seen him in that situation. I do not vouch for the truth of the circumstance; but it is certain that he was subject to epilepsy, and that he had it on these occasions—not on every occasion, but at periods of particular excitement. Imitation will produce it, especially in females; if they see it in others, they are prone to fall into the same state.

Morbid Appearances.—You thus see that any violent irritation, whether mental or corporeal, in whatever part of the body it is situated, may produce this disease. Mere inflammation of the brain, or injury of any part of the head, may cause it, when there has been no disposition to the disease before; and it may entirely cease on the cessation of inflammation within the head, or the cessation of any cause of excitement there whatever. On this account you may frequently expect to find nothing in the head: as any irritation of any part of the body may produce it, it is not reasonable to suppose, that you must, in all cases, find disease in the head. It may, however, arise from inflammation and irritation of various kinds in the head itself; and under such circumstances you may expect to find disease in that part. Now this is just what really occurs. Sometimes, on opening epileptic persons, you find nothing at all in the brain; even when there has been no evident exciting cause at a distance. When there is an exciting cause at a distance, you cannot expect to find any thing in the brain; but where you can discover no exciting cause at a distance, where there is no stone in the bladder, no tumor, no worms in the intestines, where the cause has been supposed to exist solely in the head, the disease has sometimes, and not unfrequently, disclosed nothing after death. It has appeared to be a disease of mere function, and has not produced any structural change. This, however, is always to be taken into account—that a great number of persons who open heads are not qualified to do so: that is, they are qualified to perform the mechanical operation of opening the head, but they are not able to say that every part is perfectly sound. It requires that a man should be a good morbid anatomist, and take great pains, before he examines the head, and declares that there is nothing at all morbid in it.

But after this disease, we find, occasionally, an abscess in the brain, softening of the brain, induration of the brain, and tumors in and upon it. We also find exostosis, thickening, and effusion; not that the thickening and effusion have been the cause of the disease, but the irritation which produced the epilepsy likewise produced effusion and thickening. You may find every disease whatever, that is found in the brain, in persons who have been epileptic, because any organic affection of the part may produce the disease. Dr. Pritchard, to whose work on Nervous Diseases I referred, as being an excellent production, says that he witnessed two dissections where nothing was seen in the brain. There was a man in St. Thomas's Hospital who had been there from a boy, having been engaged as surgery-boy, who used to tumble about, and I have heard that he was drunk, but I do not wish to discredit his reputation. He died about two years ago, and his brain was examined; and, although he was idiotic as well as epileptic, it was said that nothing whatever was discovered. It appears that Wenzel, a German anatomist, and others, formed a society for the investigation of cases of this disease, so far as it regarded the *post-mortem* appearances; and they say, that in fifteen cases out of twenty the cerebrum was sound, but the pineal gland was diseased, and also the cerebellum, which was altered in consistence, colour, and size; but I know that I have opened persons who have died of epilepsy, and nothing whatever has been found in the cerebellum, or any where else. And, again, one sees the cerebellum continually diseased without epilepsy. I believe the truth is, that any irritation whatever will produce this disease, which is nothing more than a great excitement of those parts connected with the voluntary muscles.—You will find it stated in Dr. Carter's account of a lunatic hospital in France, that one of the physicians there, among the

number of lunatics under his care, examined about 30 adult persons who had been labouring under this disease, and he found, he says, no disease of the brain, but of the medulla spinalis. These observations were too limited: if 60 had been examined instead of 30, I have no doubt but that the inference would have been different.

Theory as to the Pathology.—Now although this disease so frequently arises from an inorganic affection, or a temporary source of irritation, yet it is an infinitely more permanent disease than St. Vitus's dance, or hysteria, and infinitely more frequently does it arise from organic causes. It arises less frequently from structural change than palsy; but infinitely more frequently from that source than either chorea or hysteria. Perhaps whatever spot is the source of irritation in the whole body, whatever spot even of the brain itself, the cerebrum, or the cerebellum, it is probably the medulla oblongata which is the chief seat of excitement. My reason for arriving at this conclusion is, that pressure on the medulla oblongata always causes sleep. This has been ascertained experimentally in individuals, where no other part of the brain existed than the medulla oblongata, the cerebrum and the cerebellum having been deficient. It is said, that in the case of certain fœtuses, if the medulla oblongata be slightly compressed you have convulsions, but if it be more compressed you have sleep; and it is also ascertained, that if a sharp instrument be passed into the brain there is no sensation felt, but as soon as it reaches the medulla oblongata, or the origin of the nerves, as people sometimes say, you have epilepsy. I think these circumstances make it probable that, whatever the cause of irritation is, it acts there. However this is only a probability; it may be the chief seat of chorea, tetanus, and hysteria, as well as of epilepsy.

Diagnosis.—As to the diagnosis of this disease, we have first to make a diagnosis of it from nothing, to ascertain whether it is in existence at all—not to distinguish it from other diseases, but to distinguish it from nothing at all. This necessity arises from the circumstance of impostors frequently pretending to labour under this complaint, because it looks so frightful, and excites so much the attention of bystanders. In the feigned disease, the pupils are not dilated, the nails and the face are not livid, and if the hands be forced open, they are instantly clenched again. In real epilepsy, if you force open the hands they remain so; but if a person be feigning the disease, and you open them, he will close them, to shew that it is real! Some imitate the foaming of the mouth by putting a little soap under their tongue. Again, in the feigned disease there cannot be such palpitation and rapidity of the pulse as in the genuine affection. The impostor by tossing about may quicken the pulse, but he will not produce that thumping of the heart against the ribs which you find in the real fit; and in the feigned disease he does not very well bear the putting the edge of your thumb nail under his, so as to make an attempt to tear the cutis from the nail. A very horrid sensation is produced by this method, perhaps as sharp an agony as any the human body can experience. It is borne in real epilepsy, but in the feigned disease it is found very unpleasant, and impostors take the hand away, or strike you. You will observe that in the feigned disease they generally take pains to fall down in a comfortable place; they do not fall against the fire or hot bars, nor against the edge of a table, and so run the chance of getting a black eye, or lacerating their face; they generally fall down in some convenient place, and like a cow lie down steadily and quietly. One other mode of ascertaining it is to propose in their hearing some terrible means, such as the actual cautery: if they hear that, and especially if you bring a red hot poker, they will instantly get up. Many have been detected by talking of some severe means; the pulse, in consequence of the emotion, will then become quickened in spite of their efforts to be tranquil.

You will distinguish epilepsy from hysteria by there being in most cases a complete loss of sense, by there not being globus hystericus, and no laughing, crying, sobbing, nor shaking, during the convulsions, and no delirium. Occasionally you have hysteria in epilepsy, and you have then globus hystericus; but if it do exist it is only in a slight degree, and if it exist in no more than a slight degree, you are justified in considering it a case of hysteria rather than epilepsy. If there be globus hystericus, you will expect all the symptoms of hysteria together—laughing, crying, sobbing, and perhaps a copious discharge of very limpid urine. The best mode of making the distinction is not to depend upon one symptom, but to take a general survey—to remember that in epilepsy there is usually a complete loss of sense, and that in hysteria there is only an incomplete loss of sense, and above all the fits do not come on regularly before convulsions; patients will become sensible, and then, in the midst of their sensibility, the disease begins again, whereas epilepsy generally goes on in a pretty regular manner.

Prognosis.—With respect to the prognosis of the disease, if the cause be evident and is of a temporary and removeable nature, your prognosis would be favourable; but if you cannot discover a cause for it, but see at the same time that the cause is

not of a temporary nature, or within your power to remove it, then your prognosis should be unfavourable. If you discover the cause, and find it cannot be removed, still of course your prognosis must be bad. The disease altogether is one of the most intractable you can have to treat: it is a disease which in the large majority of cases cannot be cured, though in most cases you may lessen it.

Treatment.

Now the first thing to be considered, provided you do not find an exciting cause which it is in your power to remove, is, to consider whether the patient be plethoric or not, or if there be any inflammation. If there be an inflammatory state within the head, or the patient be plethoric, without inflammation, then certainly blood should be taken away. In the fit itself, I should remark, there is nothing to do but to place the patient's head high; to put him out of danger, so that he may not knock himself; to loosen his neckerchief, and put a cork or piece of wood into his mouth, to prevent him biting himself. If there be any danger of apoplexy, of course you may bleed; but this is not usually the case. In the convulsions of infants I stated that cold affusion had been found to do good, and I do not know that in epilepsy it would do harm. Some persons say that they have recovered patients from these fits, by putting salt into their mouth. I know that you may frequently recover hysterical women by this means; I have seen them shake their heads, splutter, and open their mouths; but epilepsy is not so soon got rid of: still, however, it may do some good.

If there be aura epileptica, then you may frequently stop the disease by putting a ligature between the part from whence it arises and the centre of the body. In a case of this nature to which I have already alluded, where there were two auræ, a ligature was placed on each side, and when the patient complained of the sensation, some one tightened them, and at last the fits ceased so long that he went out of the hospital; but I heard, after a still further lapse of time, that they had returned.

To speak, however, of the treatment at large, and not of the particular fit. If the exciting cause be evident, you must remove it, if possible. If it be ascertained that there are worms, you cannot tell whether they are the exciting cause; but it is right to remove them. If there be a stone in the bladder, the operation of lithotomy should be performed. There was a case, rather a celebrated one, I believe, of a man, many years ago, who had received an injury of the head, and in whom epilepsy ensued. A surgeon at St. Thomas's hospital imagined that the removal of the piece of bone might cure the disease—that a spicula of bone was most probably proceeding from the inner table. A circular piece of bone was removed by means of the trephine, and there luckily was the spicula, and he never had a fit afterwards. The spicula is preserved in the museum at St. Thomas's. I should imagine you may find a large number of people epileptic who have received an injury of the head, but you might knock again with the trephine many times without such a lucky hit. Mr. Wardrop cured a case of epilepsy, beginning with aura in one finger, by amputating the small joint of the finger. Of course if any other organ be diseased than the brain or spinal marrow, if possible we should remove it.

The disease frequently arises from mental causes, and physic there can be of no use: we must administer to the state of mind, if it be in our power to do so. The disease once pervaded a whole school in Holland, in consequence of imitation. One of the boys had epilepsy, and the whole school became epileptic. It was cured there by making an impression on the mind. The boys were all arranged round the room, and were told that the first boy who fell in a fit should be flogged. This put a stop to the disease. I have no doubt that many times we might cure ague in the same way.

If the disease have appeared on the cessation of another, we should, if possible, re-excite the original disease. If it occurred after gout and rheumatism, we should apply strong mustard poultices to the joints; but, besides that, we should endeavour to lessen an inflammatory state in the head, notwithstanding we were endeavouring to re-excite the disease at a distance.

Supposing there is no exciting cause to be found, then you may almost always do good in the disease by adopting antiphlogistic treatment. In the first place, in general you find it useful to insist upon complete abstinence from distilled and fermented liquors—wine, spirits, and beer of all kinds, and gradually from meat. Persons cannot bear an abstinence from meat well at first: if any one make the experiment to abstain from it all at once, he will find himself grow weak; but if he abstain from it gradually no inconvenience is felt, and a great number of persons can live very well without it. You should also persevere in keeping an open state of the bowels; there should not only be one motion a day, but two. The head should be kept constantly cold by the use of a shower bath and frequent washing of the head. In addition to all this, if the patient be plethoric, venesection, bleeding, and leeches, will

be found very useful. Of course, the degree in which all this is done must be varied in different people, and some persons are too weak to admit of any thing of the kind; but if their state of body will admit of some part of this antiphlogistic treatment, and more especially if it will admit of a great deal, you will find great alleviation. I know that most persons who come to St. Thomas's hospital are relieved, but I believe none are cured, and I have little doubt that the benefit they derive there is simply from antiphlogistic treatment. Many are better before there is time for medicine to have any effect, because they are instantly put on milk diet, or gruel, or slops.

It is, however, to be remembered, that this is not to be borne in every case; that there may be debility, and that a patient may be made worse by a plan of this kind; and even where a plan of this kind is proper, you may make them worse by carrying it too far. I have seen many cases where patients were better to a certain point, and beyond that, by lowering them, they became worse, and then, by going back to that point, they were better again. But it is necessary, even if patients be weak, if you cannot push antiphlogistic regimen to any extent, still to avoid stimulants, and those things which cause a flow of blood to the head, and great excitement of that organ.

I need not say that setons, issues, and moxæ, are sometimes useful; but occasionally I have found them useless. The application of tartar emetic ointment at the back of the head and scalp is a very severe mode of treatment, and I have not found much benefit from it; but by antiphlogistic treatment, and keeping the bowels open, I have almost always seen great benefit produced.

There can be no harm in trying mercury and iodine, because there may be some organic disease in the head which these will remove. There may be irritation; there may be mere chronic inflammation; there may be something to be absorbed; and mercury may do good in such cases. Iodine may likewise do good as a part of the treatment, but I should not advise you to try it very far. As a part, I may say, of antiphlogistic regimen, mercury and iodine are serviceable: they act by causing absorption; but I am not aware that they do good, except in removing the effects of chronic inflammation.

But besides all these things, which may be deemed rational treatment, there are certain specific remedies in this disease which we employ empirically—that is to say, remedies which are found to do good without our knowing why. They will not cure the disease once in many many times; but when they do act beneficialy, we know not their mode of operation.

The nitrate of silver is one of these, and no doubt it has done great good. You may begin with the eighth or the sixth of a grain in a child, but to an adult you may give a quarter, or half of a grain, and increase it to six or seven grains. I think Dr. Fowler says, in a case published in the Transactions of the College of Physicians, that he once gave fourteen grains every six hours. I know that when you get to a few grains, it frequently purges too much, so that you cannot push it farther. It is a remedy which has a tendency to excite gastritis. The salt, or muriatic acid, that is in the stomach, is decomposed by it, and that is the reason why some people bear a great deal. It has a tendency to act on the mucous membrane of the stomach, and therefore, when you are exhibiting it, you should press on the stomach, to see if there be tenderness. There is no rule for the dose; some will have these effects from one or two grains, and some will bear five or six with impunity. But, besides these immediate effects, there is another, of a chronic nature; it has a tendency, if it be given for a length of time, to make the skin blue. If it be given in minute doses, I believe, for so short a time as three months, there is a chance of the skin being blue. The decomposed salt is deposited on the surface of the cutis, more and more decomposition takes place, and the cutis becomes black at last as though you had taken a lead pencil and rubbed it on the surface. You will see some persons almost as dark as mulberries, and you would fancy that they were going to fall down from congestion of the head; but they are merely stained by this medicine. It will cause the sclerotica to be blue, but not to the same intensity as the cutis. I have frequently seen the sclerotica nearly of the colour of things that some people wear to preserve their eyes, called *preservers*. It will also blacken the tongue or fauces. It is to be remembered that a large dose is not required in order to induce this effect; that a small dose, if it be continued for some time, will lead to the same unpleasant results. It does not so much depend on the quantity as on the time that the medicine is given, and on this account I think you should be cautious in giving it in private practice above a month; and, as I do not think a month sufficient to produce any beneficial effects, I seldom use it. If it be not given for a long time, you will not do good; and if it be given for a long time, you run the chance of blackening the patient. In the case of young ladies it should never be given.

The preparations of copper, cuprum am

moniatum, and sulphate of copper, I think still more useful than the nitrate of silver—little use as all of them are. I have seen benefit result from them. Respecting the dose of these, it is best to give the fraction of a grain, and increase it gradually. In cases where a large quantity is borne, you will not find it exceed one, two, or three grains a day, and very frequently by no means so much. They occasion sickness and gastrodynia.

Iron has been proposed in this disease, but I cannot say that I ever saw it do good. I have no doubt, when a person has been lowered improperly, that it will do a certain amount of good as a tonic; but as to a specific power in the disease, I believe it has none. I had a patient under my care who had been bled and starved, who had had issues, setons, moxæ, and every thing that could be imagined; he went through the operation of a large number of things, and was much debilitated. He then went to some gentleman who gave him iron, and he told me that it cured him. I have no doubt but that he had been reduced too low, and that iron did him good as a tonic; but six months afterwards he appled to me again as bad as ever.

As to lead, you will find that Dr. Rush, of America, states that the acetate of lead has very great power over the disease. It is a fact, that in large quantities, it will sometimes cause the disease: where persons have been poisoned by lead, from taking a large quantity into the stomach, or have been much exposed to its exhalations, epilepsy has been produced. Of course that is no argument against its moderate use, but I cannot say that I ever saw any good arise from it.

The sulphate of zinc has been much praised, as well as the oxide. I have given it in St. Vitus's dance: you may exhibit it in large quantities (sometimes 20 or 24 grains), but I never saw it do good in epilepsy. The oxide of tin has been much praised, and so has arsenic; but I have seen persons, from taking the latter, become epileptic. I do not believe these things are to be depended upon.

Narcotics have been praised (especially stramonium), but I am not aware that they deserve any great recommendation.

Cold affusion is certainly of use as a tonic, because it does not excite the patient. There are many tonics which excite the patient at the same time that they increase his strength; but cold affusion does not. A cold shower-bath is useful in the disease, for it strengthens the constitution without excitement; and it may knock down excitement by its antiphlogistic effects. When you employ these remedies you brace the body, and do not excite it.

The oil of turpentine is occasionally useful, but far less so than in hysteria. In hysteria it is an excellent remedy, but if there be worms, in epilepsy, you cannot use a better medicine than oil of turpentine. Dr. Pritchard thinks that if the intestinal canal be diseased it may do good. In amenorrhœa it may be serviceable; not by exciting the menses, but by removing the state which induces the affection; and so in the case of worms. If it remove intestinal affection, then we cannot say that it is good in epilepsy in general, but it removes the cause in those particular cases. Some contend that it is useful in epilepsy combined with insanity. I believe it has a particular effect on the nervous system; and where it has been said to be beneficial in epilepsy, I should suppose it was where there was some other disease. It has been given in two ways: in small and repeated doses, and in large and less repeated doses. Twenty drops have been given two or three times a day, or an ounce every two or three days. Some have given a drachm once or twice a day; but I do not think that, in general, much good is to be expected from it.

Now all these things may fail, entirely through our not attending to antiphlogistic regimen. It is possible that cases happen now and then that would yield to some of these remedies, but we neglect to lower the patient. I am quite sure that remedies are frequently prevented from doing good because we do not remove a plethoric state of the system. In some local inflammations, and in many cases of various diseases, it is necessary to lower the system to a certain point, and then remedies which would not otherwise be useful become so.

The reason that the disease is so generally intractable—the reason that so many remedies are so uncertain and so unsatisfactory—is very evident. This is a disease which arises from every sort of irritation in every part of the body; and the irritation may be structural, may be slow inflammation, or something we cannot remove. If it arose from one cause, it would be a different thing; but it will arise from any cause whatever, physical or mental, organic or inorganic, and situated in any part of the body. You will see, therefore, not only that it must be usually an incurable disease, but you will see that there can be no one remedy for it. As to any one remedy being a remedy for epilepsy, I should think a little reflection would shew that it is quite impossible.

THE PROVINCE

OF

FORENSIC MEDICINE DEFINED;

BEING AN

INTRODUCTORY LECTURE

Delivered at the Medical School, Aldersgate-street,

On Tuesday, Jan. 29, 1833,

By William Cummin, M. D.

I shall avail myself of the large and mixed audience which I have the pleasure of seeing assembled before me, to offer some general remarks on the subject of these lectures.

Such of you as are not familiar with the manifold division of labour which medical science comprises, may probably be unacquainted with the extent and import of a course like the present. The impression, I have reason to suspect, which popularly prevails with regard to Forensic medicine is, that it is something *new* in the medical world; but that doubtless it is something very serious and important, as it has a connexion with criminal trials and coroners' inquests: while, on the other hand, some few among the members of the profession itself, may be disposed to look upon it as a sort of innovation, and one, perhaps, by no means indispensable. It shall be my endeavour, therefore, in the present address, to remove what is erroneous in these notions, and to state something positive respecting the real nature and object of that which is to occupy the attention of my pupils for some few months to come.

Forensic medicine, as its name implies, includes the whole range of medical science which is suited to the forum, or court of justice. It is also denominated medical jurisprudence,—a name for it which I am disposed to consider as contrary to all analogy, and to the constructive genius of our language; such a name, in fact, strictly denoting the knowledge of law as it applies to medicine, whereas what it would seem intended to imply should be directly the reverse. The misnomer has not escaped the observation of the continental jurists; it has excited the critical severity of more than one distinguished author in the foreign schools. It is to be feared, however, that censure alone will effect no change in this case—the inappropriate appellation is fixed in this country by a royal endowment; and although a Roman emperor complained that it was beyond his power to enact a new word for the use of his subjects, yet his wish might probably have been gratified if he had fixed that new word upon some invaluable commodity, and endowed a succession of learned men to uphold its propriety and correctness. In this way, medical jurisprudence may come to mean what at present, correctly, it does not; it may become naturalized at last, chiefly through the merits of its supporters.

When I state that forensic medicine is the medical knowledge which is available in courts of justice, I would have you to consider it so in the largest sense. There is no court of justice, however high or however humble, that does not frequently need the assistance of medical elucidation—where difficulties do not arise that can only be removed by the light of medical testimony. The Germans have a term of very comprehensive import — *Staatsarzneikunde*, which embraces both legal and public medicine, and is used to denote the whole circle of medical knowledge which is employed for the benefit of the community. But the introduction of such a generic name seems to me to be altogether superfluous; the title by which I denominate the present course is all-sufficient, and scarcely less comprehensive than State-medicine. If we only remember that the field of the medico-legal practitioner may be any one or all of four several courts,—the criminal, the civil, the ecclesiastical, or the high court of Parliament,—it will be perceived that this extensive application of the term is perfectly justifiable.

Let me entreat your indulgence for this rather abrupt excursion into verbal criticism, which might appear to have no other object than the fixing of a name; but you will please to observe that we have not been stationary during the explanation. I have said that there is no court, however exalted or humble, that does not frequently require the aid of medical knowledge. Need I refer you, for examples of this, to the investigations of the legislature regarding quarantine—regarding the provision of subjects for the schools of anatomy—regarding the painful question which recently engaged, and no doubt will presently again occupy, the attention of Parliament, the question of the proper adjustment of labour in our factories, on which depends the continuance, or the abolition, of the most horrible species of permitted cruelty that ever disgraced a civilized nation—cruelty practised on system, and augmented beyond the powers of human endurance. In the settlement of such questions as these, of vital importance to the commonwealth, need I remind you of the use which has been made of medical testimony?

This might suffice to prove that forensic medicine is essentially no new thing amongst us, however it may have been unknown or undistinguished by name; but a few more instances may serve to shew

that it has even in some degree been cultivated in this country; or that, at least, we have adopted from other quarters the fruits of its cultivation. Has the nature of a wound been professionally examined, and, from that examination, has the animus of the inflicter been deduced? Has the skill of the medical witness interfered propitiously, upon any occasion, to save an innocent mother from the charge of the murder of her offspring? Has the homicidal lunatic been preserved, through professional evidence, from an ignominious death—from judicial murder? Have the peace and property of families been protected through the testimony of the medical attendant, where suicide has been committed? In short, has the age of miracles gone by?—have witchcraft, and the superstitions of preternatural cures, been exploded?—have the gross deceptions of various impostors been revealed?—has right reason, on innumerable occasions of medico-legal inquiry, been vindicated? To forensic medicine in all these instances is the honour due; and where it is due, let it be awarded.

But it may be objected that the testimony through which all, or the greater part, of those fortunate decisions have been arrived at, was simply medical, not medico-legal evidence; that many of the ablest witnesses of the professsion never studied forensic medicine; that it was not taught in the schools in their time; and that their general knowledge alone carried them through with triumph.

The same argument might be adduced to prove medicine itself superfluous. Diseases were cured, no doubt, before medicine was a profession: but how many were *not* cured?—how many lives were lost through empirical ignorance? So, I would ask, how often has justice halted through the incompetency of the medical referee?—What loss of property, liberty, and life, has been sustained, through the errors and ignorance of men, illustrious perhaps in their generation, eminent probably in the art of healing, but profoundly incompetent in the topics of legal medicine? It were weakness to dwell longer on so obvious an absurdity—of which, too, examples are unfortunately so abundant. The question is simply this,—Is any particular work as well executed by the general operative, as by him who has peculiarly devoted himself to the cultivation of that particular line? It is a question of the division of labour; and how much a division of labour in the art of medicine has conduced to its present "high and palmy state," none of my audience, I conceive, need to be informed. This, however, I would pray you to bear in mind;—amalgamate the subdivisions and the divisions of medicine as you please—let surgery, and physic, and pharmacy, and whatever other practical branch there may be, be united in one grand compound—and let it constitute the healing art in the most extensive sense; still may not the special department of forensic medicine be comprehended in any such union—under any such denomination. It stands separate, distinct, and independent—a branch of human knowledge infinitely more vast in its application, more magnificent in its end, than mere medicine can ever be proved to be. If mere medicine, or the healing art, has the health, the cure of the individual for its unique object,—forensic medicine has the health of the community, the weal of society *en masse*, confided to its especial care: it applies its resources to the maintenance of the salubrity of nations—it promotes the ends of justice—it extends its saving efficacy, its protection, to the immediate interests of mankind. Medical knowledge, you will then understand, is capable of a twofold application with respect to practice;—first, for the cure, or the alleviation, of disease; and, secondly, for the securing of the health of the community, and promoting the due administration of the laws. And in this latter aspect, as a branch of legislation, and of juridical counsel, how dignified and imposing an attitude does medical science assume! To use the words of a popular author—"Disentangled from the web with which worldly caprice, credulity, and empiricism, are ever seeking to embarrass the more ordinary path of her labours, she at once displays her pride and strength in the number and variety of her resources, and in the extent and importance of their applications: while the professor of our art is thus enabled to support additional claims upon the respect of the learned—the confidence of the oppressed—and the gratitude of the public!"

In the order of time, I need scarcely remind you, that the practice of medicine, considered simply as the healing art, must take precedence. A distinguished professor in this town, a few months ago, excited the special wonder of his audience, by asserting that medicine as a profession did not exist previous to the Reformation. The assertion savours too evidently of paradox, and is founded on the notion that medicine, in a state worthy to be called a science, did not exist till then. To examine whether such a position is a tenable one, and whether the orator did not adopt it for the mere purpose of display, would be rather beside my present business; but so far as this, I have no hesitation in agreeing with him—that what he states to be true of medicine in general, I hold to be strictly true of forensic medicine in particular: it did not exist as a distinct province—the ne-

cessity for its separate existence was not made to appear, till the reign of the emperor Charles V. It is true that the remote antiquity of legal medicine has been attempted to be proved by many eminent writers: it has been apparently traced to the very origin of society; but a short sketch of what has been called the legal medicine of the early ages, will show that it does not deserve the name—that it was almost quite another thing.

A certain degree of acquaintance with the art of healing is unquestionably ancient—and law may be presumed to have originated as soon as human beings began to form themselves into distinct communities. Now the law—even in its simplest, rudest form—can scarcely be supposed to have existed without comprehending various relative considerations regarding man's body; and the just administration of those legal provisions, whatever they were, must necessarily imply a greater or less degree of acquaintance with medical science. Hence it is plausibly inferred, that the guidance of law by the aid of medicine has been coeval with the earliest institutions of civil society. Antiquaries, who are fond of indulging in these speculations, go farther, and attempt to strengthen their position by referring us to some of the oldest codes by which the world has been governed. The Jews certainly—not to mention their various arrangements involving a certain knowledge of medical police—had numerous laws, the questions about the observance or non-observance of which could only be determined by persons more or less skilled in the medical art. The laws to which I allude, you are all aware, comprehend provisions relative to personal injury, such as the infliction of wounds, (which, by the way, are regularly divided, in the Mosaic books, into those which are mortal, and those which are not so,) violences offered to modesty, and the due protection of conjugal privileges. We no where find, however, that a distinct class of medical men were called in for the elucidation of difficulties regarding these matters; they were invariably expedited by the priests, or certain members of the levitical order, who engrossed all the divinity, law, and physic, of those days. The Hindoos, too, it appears, had their medico-legal ordinances, and the Chinese theirs, so far as we have been enabled to obtain any insight into their extraordinary institutions. In short, traces of the existence, and of the appreciation of this description of knowledge, may be discovered in the legislatorial enactments of every people who have any historical documents of legislature to produce.

Yet all this by no means proves the existence of forensic medicine—I mean as a distinct application of medical science—anterior to the sixteenth century. It was then that Charles, in instituting the grand code of the empire (the *constitutio carolina*), ordained that the presence of medical men should be imperative during the investigation of certain cases decided in courts of justice. Hence the origin of this peculiar employment of medical knowledge: thenceforth it was incumbent on medical men specially to prepare themselves for the new duty which they had to perform, and from this era we must evidently date the earliest cultivation of forensic medicine.

And to Germany be the honour duly given of having laboured most strenuously in this extensive field: as it brought forth, so did it long continue to be the nursing-mother of, legal medicine. I believe, too, it will be found, that the earliest work ever written on the subject, was by a native of Gelnhausen, near Franckfort on the Maine, in the year 1573—one Joachim Strüppe, who treated of the several topics laid down for medical illustration in the Caroline code. Fortunatus Fidelis, to whom the paternity of medico-legal authorship is usually attributed, did not write till twenty-five years later. If we were, however, to seek any one man who has deserved so well of the science as to merit being looked upon as its founder and its father, we should unquestionably find him in the eminent Roman physician Zacchias. The Questiones Medico-Legales of this distinguished writer are a fund of most valuable materials for the exercise of the mind in the resolution of difficulties, and though, as might be expected, they contain a large portion of casuistry, and many irrelevant topics, (at least now irrelevant, as they relate to the superstions usages of the unreformed church,) as a medico-legal work it is one of the most comprehensive, curious, and, perhaps I may add, satisfactory as a whole, that has ever yet been written. In Italy, indeed, the work seems to have engrossed all that was to be said on the subject for nearly a century and a half; for I cannot find that any pre-eminently able or systematic production on legal medicine proceeded from the Italian school from the time of Zacchias till the present century, when Tortosa's excellent work appeared. The work of Tortosa, however, is strangely disfigured with whole chapters on the *debitum conjugale*, on the obligations of fasting, and on miracles, and demoniacal possession.

The eighteenth century brings us acquainted with a host of able writers belonging to the German school; among them I shall only stay to specify Valentini, the author of the Pandects and Medico-legal novels, and whom I may introduce to you as the recorder of Sorlisi's case.

of which Sterne made so humorous an application; Teichmeyer, the author of the work which Haller made the text-book of his lectures (for the great Haller lectured on forensic medicine at Göttingen); and Daniel, who first hit upon the comprehensive appellation of State-medicine, to which I have already alluded. I will just add, respecting the Germans, that they have had, and continue to have, several periodicals specially devoted to the subject of this science—the Critical annals of State-medicine, for example, by Knappe and Hecker of Berlin—a similar work by Professor Kopp of Hanau, and Scherf's Beiträge and the Isis. Need I say more to prove their indefatigable industry and zeal?

Among the French, the earliest medical jurist was that extraordinary man Ambrose Paré—a man so singularly in advance of his age in so many respects; his reports are still in good repute. But Louis was the first who taught the subject publicly, and by whose influence medical assessors were first appointed in France in the criminal courts. To the labours of Louis, and his admirable mode of solving medico-legal questions, I shall have occasion to refer in future lectures, particularly when I come to treat of the signs of death by drowning and strangulation. After Louis came the celebrated names of Chaussier, Mahon, and Foderé—the latter indeed still living; and with Mare, Ballard, Capuron, and Orfila, forming a constellation of talent—of medico-legal talent—not to be surpassed in any other country. It is scarcely necessary, I presume, to add that the French have their special periodicals for *Médecine legale*, as well as their German neighbours.

If, after this rapid glance at the rise and progress of forensic medicine on the Continent during the last three centuries, we now turn our eyes to what has been doing in this country during the same period, we cannot fail to be struck with the contrast. A distinguished foreign writer, in noticing our extraordinary backwardness, imputes it to that characteristic obstinacy (*opiniatreté*) with which we adhere to all old customs, in preference to new ones, however advantageous and profitable. Whether this be true or not, certain it is, that, with the exception of a few monographs, such as Dr. W. Hunter's tract on infanticide, Mr. Dease's pamphlet, and some parts of Percival's Medical Ethics, we had not had a single work on the general subject, deserving of the least notice, till the little epitome of Dr. Male, of Birmingham, appeared in 1816. And it is not a little curious to find this gentleman apologizing for having ventured on such a performance, and attributing his boldness to irrepressible indignation. His indignation, so well-timed and so efficacious in rescuing British medicine from reproach, was owing, no doubt, to the frequent examples which he witnessed of ignorant and corrupt evidence given upon coroners' inquests.

From that time to this there has been no lack of books (of some sort) upon the subject; nor do the volumes of Paris and Fonblanque, or those of Gordon Smith, or the condensed elements of the American Dr. Beck, naturalized by a pair of English editors, require any particular description. Fortunately, however, our vindication from the charge of recent remissness, does not rest on the publishing of elementary treatises or compilations such as these. We can now boast of a work on toxicology—I mean, of course, Dr. Christison's—which is not to be surpassed in any country. Our periodicals have latterly teemed with medico-legal contributions; and if we take into account the papers of Mr. Brodie in the Philosophical Transactions, on the operation of poisons; several valuable disquisitions, also, in the Med.-Chirurgical Transactions; and the highly-interesting papers with which the pages of the Edinburgh Journal have been enriched by various contributors, we shall perhaps be satisfied that we have no great reason to blush, on comparing our present resources with those of our continental brethren.

But let us not deceive ourselves. The proceedings of our brethren on the continent are attended by a sanction of which our's are unfortunately destitute. A chair of legal medicine is found in every continental school; that of Paris, for example, is filled by the celebrated Orfila—that of Strasburgh by the illustrious Foderé; and instruction in this department of knowledge is reckoned as essential as clinical instruction itself: it is among the chief courses attended by the aspirant to the doctorate, and constitutes the subject of one of his final examinations. Now how stands the subject with us? A single professorship in a Scottish university has been endowed—the royal fiat was obtained for the founding of a chair, about thirty years ago, in the university of Edinburgh, and for thirty years that chair has remained, what it seems originally to have been intended for, a transition-place, whence the occupant has regularly stepped into some more lucrative appointment. Let it not be thought that I mean any, the least, disparagement of those who have filled the chair, since it was first established; the names of Duncan, Alison, and Christison, are safe from any such presumptuous imputation. But what I mean is this: these distinguished teachers have been indebted to that chair for little more than the means of attaining to

something better. What stronger proof of this fact need I alledge than one which is found in the report of the late royal Scottish commission, by which it appears that, on an average of the seven years, from 1822 to 1829 (and nothing could be ascertained concerning an earlier period,) the fees taken by the professor did not amount to above £18 *per annum*, while the salary is no more than a hundred a year!

But the day fast approaches when so capital a defect will be remedied: it has already dawned. The colleges of surgeons of Ireland, and of Edinburgh, have inserted this among the courses requisite for their diploma. The Society of the Apothecaries of London have followed their example. Let, then, the *elèves* of the other corporations, the Universities, and the London College of Surgeons, look to it! They may chance to encounter in their career a race of young practitioners with whom they may be ill-prepared to compete—a race just issued from the schools, qualified to entertain the intricate but incessantly recurring questions of legal medicine. In a country like this, singularly noted for the frequency of its coroner's inquests, a competent body will henceforth be at hand, legally qualified, and, from a proud consciousness of that fact, so much the more competent to assist in those inquisitions, and to remove from us the ridicule and reproach to which we have been but too long exposed.

Of all the subjects which claim the attention of the student, preparing himself for the practice of his profession, there is not one which, while it presents him with numerous and never-failing topics of interest, calls for the exercise of a larger share of judgment, or a greater extent of acquirements. In the investigations with which he shall be familiar as a medical jurist, he will find that he must bring to his aid, not only all his natural powers of sagacity, but all his accumulated stores of information: all will be available here; for his duty consists in the application of the whole circle of his knowledge. What branch of knowledge, may we ask, can be useless or unprofitable to him who is engaged in medico-legal inquiries? I have heard forensic medicine flippantly styled a branch of medical science. It is no such thing. It is no branch: it is the whole tree—the tree of medical science, bearing fruit, too, on all its branches; and I will speedily, with your permission, show how each individual branch lends its tributary aid to the enlargement, the adornment, and the grandeur of this goodly tree.

That the student of forensic medicine ought to be well grounded in the several divisions of medical science, and that his success as a medical jurist will be proportionate to the amount of his professional knowledge, I conceive I need not waste your time in proceeding to prove; but of the possible advantages which may result from a perfect acquaintance with each individual branch, I shall give you a few examples. The charge of infanticide is one of awful import, and its proof generally depends upon the possibility of ascertaining whether the infant was born alive or still-born. Various devices, founded on anatomical and physiological principles, have from time to time been suggested, and some of them have enjoyed a high character for their reputed sufficiency. Perfect conviction, however, could not be conscientiously arrived at without the consentient evidence of a number of the tests combined. But a mode of judging on an unerring principle has now within a few years been discovered, and that principle rests on a minute, but easily appreciable anatomical fact—a distinct change of structure. A bloodvessel—the arterial duct—peculiar to the fœtus and the very young infant, is found to undergo a change of form, and a comparative diminution in size, from the effect of breathing but for a second or two. Such a test had long been a desideratum: the merit of its discovery is due to Dr. Bernt, of Vienna.

From among the numerous contributions afforded by pathology to the province of the medical jurist, I shall select one—it is the method, founded upon some late experiments at Edinburgh, of distinguishing, in cases of apparent burning to death, whether death has really been effected in this way, or whether murder has not been committed previous to the burning. And certainly we now possess means of exact diagnosis, which will ever henceforth, when competent testimony is employed, obviate the possibility of a judicial murder. It is melancholy to reflect at what an expense of human life knowledge of this description is purchased: we know not how many lives may have been lost before the inquiry was suggested by which the means of correct deduction are at length established. Of two cases of this kind I shall just mention the leading circumstances. A man, of the name of Gilchrist, a few years since, was condemned and executed at Glasgow. He and his wife lived in an irregular rambling sort of way, getting drunk sometimes for days together. On one occasion, after their return home in the evening, the people who lived on the floor above them, heard a noise like that of two persons struggling, and soon afterwards a rattling or gurgling, and moaning, as of one choaking or bleeding to death. They so strongly suspected that all was not right, that they called down to Gilchrist, through the floor, that they

were afraid he was killing his wife. In no long time they were alarmed by the smell of fire, and the filling of the house with smoke; upon which they went down to Gilchrist's apartment and demanded admission. After some delay he admitted them, and in doing so, appeared to them to have come out of an inner room, where he said he had been asleep in bed. On letting them in, he stumbled over the body of his wife who lay in the outer apartment quite dead, kneeling before a chair and very much burnt. The prisoner was accused of having murdered her, and burnt the body to conceal the manner of her death: he, on the other hand, alledged, that he had gone to bed tired, and knew nothing of what had befallen her, until he was awakened; and that he presumed her clothes had caught fire while she was intoxicated, and that she was thus burnt to death. The circumstantial evidence was strongly against the prisoner, and the medical testimony was totally defective; it was merely reported, that the body was so much burnt that nothing could be learnt from it as to the cause of death. The man was hanged, to the last vehemently and solemnly denying that he was guilty.

The other case is still more remarkable. The prisoner and his wife had lived on bad terms: on the night of her death she had returned home at a late hour, after having lighted a candle and got some whisky at a neighbour's house. At this time certainly the husband was in bed; but, some time afterwards, there was heard a considerable noise, like that of struggling, and of chairs pushed up and down the room. Not very long after, the neighbours were alarmed by a strong smell of fire proceeding from the prisoner's apartments. They therefore knocked at his door for admission, but in vain; all the noise they could make did not bring him to the door. At last a man forced his way in, by breaking the window of the outer room, and, on entering, found the room full of smoke, and observed something burning red in a corner, over which he instantly threw a pitcher of water:—it was the body of the woman burning on the hearth. Several persons now entered the inner room, where they found the prisoner either asleep or feigning to be so. On being roused and told of his wife's death, he expressed neither surprise nor sorrow, but coolly demanded by what authority the people had broken into his house. The presumptions were strong against him: but his life was saved in consequence of the highly curious and valuable examination of the dead body, instituted by the late Dr. Duncan. This gentleman closely examined those parts which were not burnt to a cinder—the face and extremities. "Here," says he, "we found what we were unanimous in considering to be incontestible proof that the woman had been burnt to death—that she had been set fire to while alive, and had died in consequence of the burning. There was every mark of vital reaction; some spots merely red and inflamed, others scorched to a hard transparent crust, but surrounded with distinct redness, and a great many blisters filled with lymph, perfectly different from those produced on the dead body, which are not filled with a fluid, but with air or vapour. In short, we found appearances exactly similar to those of fire on a living body; and therefore we reported, as our unanimous opinion, that the deceased was burnt to death." This inquiry, as I mentioned, has been since followed up by a series of the most interesting experiments; the result of which is, that whether it is the living or the dead body that has been burnt, can now be determined with indubitable precision.

But enough of this. Let me prove, by an example or two more, that the perfecting of each and every branch of medical science materially contributes to the advance of forensic medicine. Need I point out the resources which are afforded us by the successive improvements in the art of observing symptoms?—or how chemistry and its advancement tend to the perfection of our art? But the fullest proof of all this is afforded us by the surprising progress of toxicology. Here we have the corner-stone of modern medico-legal science; or, if I may use another metaphor, this it is which deserves to be considered as the very right hand of forensic medicine. It is certain that the toxicological is that department of the science which has recently undergone the most marked improvements; owing, no doubt, to the superior degree of attention which has been bestowed upon it by inquirers of talent and ability. An obvious proof of what I now say, presents itself in regard to poisoning with arsenic. I almost hesitate at stating to my unprofessional hearers, the astonishingly minute quantity in which this poison can now be detected: but I shall break it to them by degrees. From documents, dated about the year 1774, we learn that it was then the practice to decide, as to the existence or non-existence of arsenic in the contents of the stomach, simply by the odour of the dry residuum when burnt. Nay, a respectable author of the same period has said, that, in the event of other means failing, good evidence might be procured by burning the whole body, and observing the smell which arises! Let us now see what we can contrast with this. Hahnemann, an eminent authority on the subject of arsenic, on which he wrote some

thirty years ago (he is, by the way, still living, the founder of the celebrated homœopathic medicine)—this toxicologist was supposed to have achieved a great feat by operating on ten grains in the way of reduction. Reduction, you are aware, is the producing the metal from the oxide. Now Hahnemann's process was by taking a quantity of the white powder, the poison, not less than ten grains, and subliming it in a retort. Dr. Black, the eminent chemist of Edinburgh, greatly improved upon this; and, by employing a small glass tube, which he coated with clay and heated in a chafing dish, was enabled to operate on a single grain. But mark the recent rapid progress that has been made. Dr. Christison, a few years ago, surprised the toxicologists of the day, by shewing that he could detect the 1-16th of a grain by reduction; and, more lately, how so minute a quantity as the $\frac{1}{100}$th part of a grain might be subjected to this test. Had we it not upon the authority of Dr. Christison himself, I should hesitate to add that Berzelius has said that the 100th part of a grain is more than sufficient to yield a good crust of the metal. I find, however, that we may probably not have to stop even here. If the recent experiments of Professor Davy, of Dublin, be borne out, we shall have ample means of identifying the poison, even though it do not exceed the $\frac{1}{2500}$th of a grain in weight—and that by an ingenious and very simple contrivance of the Galvanic circuit.

I believe I have now said quite enough to shew how the several branches of medical science are rendered available in promoting the objects of forensic medicine. I might go farther, and point out to you how various other branches of natural science are tributary to the same end; how a knowledge of physics, properly so called, is necessary: as, for example, in judging of the effects of the collision of bodies, of the errors to which the senses of sight and hearing are subject; how a knowledge of natural history is important to the medico-legal inquirer; and along with all these, that he should have a competent acquaintance with the civil and criminal laws of his country. In short, it is difficult to say where the sources of the acquirements which he may find useful to him may not be found: it would seem that he should not only know all that has been determined in the field of knowledge, but that he should ever be among the earliest of those who are acquainted with the newest improvements; in short, that he should ever be in advance of the current of natural and moral science. What Fodere has said on this subject is so appropriate, that I cannot deny myself the pleasure of repeating it to you:—

"Legal medicine," says he, "has no other limits than those of the human mind: it is the philosophy of medicine, the very ocean of science; for as streams go to swell the rivers, and the rivers disembogue themselves into the ocean, whence again arise the dews and showers which reanimate and refresh the whole face of nature, so do the several sciences (the moral, the physical, and especially the medical) contribute, by their union, to one vast reservoir, whence the medical jurist draws them successively, to render them available for his purpose."

It is in consequence of this vast multiplicity and variety of topics, that much difficulty has been commonly experienced in laying down a good classification of the objects of forensic medicine; or at least an unexceptionable order in which they should be discussed. Some have given it up in despair, and treated the several questions that arise, promiscuously; others make light of the necessity of pursuing any systematic order, and accordingly take up the subject in the form of detached essays.

Mahon seems to have been the first who struck out the simple and satisfactory plan of following the progress of the life of the individual from infancy to old age—from the cradle to the grave. It is this plan, with some slight modifications, which it is intended in the present course to adopt.

After a preliminary lecture or two on the subject of medical evidence generally, we proceed to treat the various considerations relating to age, and the several periods of human life; we then pass to the independent individual, and notice what it is that constitutes his identity in a medico-legal sense. We next consider the acts that lead to the reproduction of the species; taking first a view of the possible interferences which may be offered to the legitimate mode: this will introduce the subject of violation, and perhaps other outrages. We then advance from marriage and the qualifications essential to that state, to the natural consequences—pregnancy and parturition. Having thus completed our view of the relations which depend on the generative principle, we return once more to the independent being, and the occurrences that may befal him as a member of society. Feigned diseases, and diseases of the mind, real and imputed, shall then be discussed. Then injuries of various sorts, wounds, and the several kinds of death; reserving for the last division of the course, the toxicological part—the medico-legal discussion of the poisons.

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STATISTICAL REMARKS

ON THE

EFFECTS OF CHOLERA IN FRANCE,

During the Epidemic of 1832.

By A. Moreau de Jonnes.

An Unpublished Paper, communicated by Sir David Barry.

1st, The duration of the eruption of cholera in France extended from 15th March to 31st December, 1832, a period of 291 days, or nine months and a half. At the end of that period the disease still existed in 12 departments, notwithstanding the diminished temperature.

2d, The departments in which the cholera continued, from the beginning to the end of that long irruption, are those of the *Pas de Calais* and *Seine*.

3d, The disease attacked 50 departments successively, viz.—

In March	3	In July	1
April	21	Aug.	7
May	7	Sept.	5
June	6		

4th, The entire surface of these 50 departments is 16,267 square leagues, which leaves 10,783 for the 36 departments not attacked by cholera in 1832.

5th, But, in marking the degree of the infection, the area overrun by the cholera must be limited.

19 departments, containing 5,840 square leagues, were entirely overrun.

21 departments, containing 7,228 square leagues, had not a third of their population infected.

40 departments, then, containing - - - - 13,068 square leagues, suffered severely from the disease.

10 other departments, containing 3,199 square leagues, suffered but slightly.

6th, Leaving out these departments, we may conclude generally, that the cholera, in nine months and a half of 1832, has spread over half the surface of France.

7th, The disease spread by contiguity as in the other parts of Europe, following lines, of which Paris was the centre, ramifying with the communications through the country.

8th, In each department the time of the eruption was sooner or later after that of Paris, in proportion to the distance from, and the frequency and rapidity of the communications with, the capital. Thus, the departments of the east became infected on the following dates, viz.—

Seine, - - - -	24th March.
Seine and Marne,	2d April.
Marne, - - - -	11th do.
Meuse, - - - -	16th do.
Moselle, - - - -	27th do.
Meurthe, - - -	4th May.
Vosgez, - - - -	13th do.
Haute Saône, - -	16th June.

In the western departments the disease broke out as follows:—

Seine, - - - -	24th March.
Seine and Oise, -	28th do.
Eure and Loire, -	8th April.
Indre and Loire,	19th do.
Deux Sevres, - -	25th do.
Vendée, - - -	10th July.
Charente Inferieure,	4th August.
Charente, - - -	30th do.

The cholera which got into the departments of the south by the navigation of the Rhone, did not appear there before the end of August, or in the course of September, one hundred days after Paris had been attacked.

9th, The mortality produced by cholera divides the infected departments into three series, viz.—

The first comprehends those where the deaths were above 1000.

The second, those where the deaths were from 100 to 1000.

The third, those in which the official returns give under 100 deaths.

[Recapitulation of these series omitted, § 10th and 11th.]

12th, The degree of rapidity with which the disease spread in different directions, is as follows:—

Cholera appeared in Calais on the 15th March, 1832, and broke out at Arlis on the 17th September following, having thus, in 186 days, traversed 200 leagues,—forming the great diameter of France, from north to south.

The disease was recognized in Paris, the centre of the kingdom, on the 24th March. On the 27th April following, it had spread, by contiguity, to the department of the Moselle, and on the 11th of May to that of Finisterre; taking 35 days to reach the eastern, and 50 days to arrive at the western frontier of France, having traversed on the one side 70 leagues, and on the other 120.

Thus the cholera has traversed the territory of the kingdom, from north to south, at the rate of one league in 24 hours; whilst, from east to west, it required but 85 days to travel a distance of 190 leagues, which gives a rapidity of spread greater by one-half.

13th, The progress and the decline of the disease, made out at the end of each month, are as follows:—

	Persons attacked.	Deaths.
April,	38,005	16,607
May,	31,388	11,599
June,	47,916	19,110
July,	48,119	18,632
August,	33,041	13,321
September,	19,859	9,049
October,	8,410	9,689
November,	4,225	1,727
December,	1,270	602
	229,533	94,666

Thus the cholera attained the maximum of its effects during the fourth month of its invasion. Its power of propagation afterwards diminished, from month to month, with the diminution of the temperature.

14th, Still the violence of the disease was not diminished by any atmospheric influence; for, during the tenth month of its irruption, as at the time of its first appearance, one-half of those attacked perished. The official documents give a total of three deaths in seven attacks. But it is notorious that, in many cases, deaths from cholera were set down to ordinary diseases. For example, in Paris, the deaths caused by cholera, or its immediate consequences, during 160 days, were diminished by 1708, or nearly one-tenth of the whole.

15th, Admitting these corrections, and some others, the minimum of the mortality from cholera in France may be estimated at 110,000 deaths, or more than a 300dth of the population.

The mortality from cholera in the different countries of Europe that have suffered from the disease has been in the following proportions, viz.

In Russia (two irruptions)	one 20th
Austria (do.)	one 30th
Poland	one 32d
Prussia (two irruptions)	one 100th
Belgium	one 120th
Great Britain and Ireland,	one 131th
Holland	one 141th
Germany (in the infected parts)	one 700th

16th, The average of the ordinary mortality in France, during 1829 and 1830, having been 821,934, the effects of the cholera will have augmented that of 1832 by one-eighth, and during this last year the population will have had scarcely any increase by the excess of births over deaths. That excess in Paris, in 1830, having been only 1121, it will take twenty years to repair the loss of 20,300 individuals carried off by cholera in the space of 283 days.

CASE OF TETANUS, following a Punctured Wound in the Foot,

Cured by Division of the Posterior Tibial Nerve.

By John Murray, M.D.
Assist. Surg., Hon. E. I. C. Service.

I was a passenger in the ship "James Pattison," from England to Calcutta, when, in the channel, three days after leaving Portsmouth, at 10 o'clock A.M. on the 15th August last, the surgeon of the vessel (Mr. D. Leslie) came and reported to me that Mr. Wm. Pile, one of the midshipmen, æt. 15, had trod upon a rusty nail the preceding evening about 9 o'clock, which penetrated the left foot, between the metatarsal bones of the great toe and the adjoining one, and that symptoms of locked jaw had made their appearance. The patient had kept his watch after the accident during the night, which was cold, and the wound had been very painful. When he was seen in the morning at 8 A.M. he complained of a stiffness about his jaws and throat, which had increased very much since that time. His countenance was anxious, and his lips appeared swollen and rather livid. A poultice to the wound was the only treatment that had been employed. On consultation, the following draught was agreed to be given:—

℞ Pulv. Camphor. ℈ss. Tinct. Opii, ℥lxx. Syrup. Simpl. ℥j. M. s.s.

And as the jaws were nearly closed, and great difficulty found to get them opened to the extent of a quarter of an inch, a piece of wood of this thickness was inserted between the teeth. Half an hour after taking the draught he was visited again, but no beneficial effect had resulted from the opiate. The tetanic symptoms were rather increased, the spasms had partially extended to the

muscles of the neck, and the piece of wood was deeply indented by the teeth. The limb was cold, and he said "it was dead, excepting at the site of the wound, which was painful, and that he had little power of moving it." His pulse was 120, and what may be called irritable; and his situation seemed to be one of great danger. He was ordered to be carried to one of the best cabins; and after considering all the different modes of treatment that have usually been recommended and employed in tetanus, and finding how undecidedly they were all spoken of as to affording hopes of cure, I proposed to Mr. Leslie the division of the posterior tibial nerve (by which the injured part was supplied) as a remedy that held out a good prospect of success, from its cutting off the communication between the source of irritation and the brain, at the same time that it was an operation easily performed, and unattended with danger or deformity. I proposed, also, that the original wound should be dilated and cauterized.

My proposals being agreed to, as soon as the necessary preparations could be made, the operation was performed. A straight incision, an inch and a half in length, was made through the integuments and the aponeurotic fascia, about an inch posteriorly to the malleolus internus, which laid bare the sheath of the vessels; and on dissecting deeper, I easily found the nerve in its usual position. By an aneurism needle I separated and raised the nerve, so that I might divide it with greater facility and expedition. When brought thus into view, it appeared to be so remarkably large, (being nearly twice the usual size) though of the natural colour, that a doubt was expressed by Mr. Leslie about its really being the nerve. To satisfy him on this point, I requested the patient to extend his foot, which he did with difficulty and in an imperfect manner, as he said he had nearly lost the power of moving it; but he did it sufficiently to shew the difference between the nerve and a tendon, as it did not become tense in this action. The nerve was then rapidly divided by a single cut of the scalpel, which gave acute pain; and although he could not articulate distinctly before, on account of the closed state of his jaws, *he immediately opened his mouth with an exclamation;* and, on looking at his countenance, I was astonished at the striking improvement in it. I asked him how he felt, and he said "he was already much better, and that his leg had come to life again." He expressed at the same time a great inclination to go to stool. There was scarcely any hæmorrhage from the wound, which was then simply dressed by bringing the edges together by adhesive plaister, with lint, and a bandage over it. We next dilated the original wound made by the rusty nail, which also gave (rather unexpectedly) great pain, but did not cauterize it as proposed, as the symptoms had already yielded. A poultice, sprinkled with laudanum, was applied over it. His bowels were then copiously moved; and on being placed in bed, without any additional opiate, he fell into a sound sleep, which lasted without interruption for four hours, and he awoke very much relieved from all his former disagreeable symptoms. His jaws still, however, felt rather stiff, but by a strong exertion he could open them nearly to the full extent. The excessive pain in the original wound, of which he complained previously to the operation, had now entirely ceased, and the motion of the limb was quite restored. It was found, on examination, that the heel and sole of the foot were quite benumbed, but the sense of feeling in the upper part of the foot was not affected. At night he got the following powder:—

℞ Pulv. Opii, gr. ji. Pulv. Camphoræ, ℈j. M.

Aug. 16th.—Slept indifferently during the night; complained still of the stiffness of the jaws and neck, and to a greater degree than the preceding evening. He also had pain and tightness across the chest, with headache. I was very sea-sick, and in bed by this time, and unable to make more minute inquiries about the symptoms, but I recommended venesection and another opiate to be given. He was bled accordingly to the extent of twelve ounces, which induced syncope, and gave great relief; and he got the same opiate as last night, after which he slept a good deal during the day. His bowels were naturally opened, and the same opiate was repeated at bed-time.

17th.—The opiate of last night appeared to produce considerable excitement for some time after it was administered, but this was followed by sound

sleep. The stiffness of the jaws and neck, and tightness across the chest, have nearly altogether disappeared. He complains of a great deal of numbness in the leg and foot. Pulse 80, and natural; tongue clean; bowels regular.

Rep. Pulv. h. s.

18th.—The tetanic symptoms have entirely disappeared; the numbness of the leg is gone off, and he complains of pain in it, extending from the knee downwards. The parts in the site of the operation are very tender, and extremely painful on pressure. The original wound continues to be poulticed, and looks healthy. The opiate powder to be continued in half the former quantity.

From this date no unfavourable symptoms occurred. The wound in the sole of the foot healed in a few days; that of the operation did not unite by the first intention, and did not heal till about a fortnight after. The sense of feeling began to return in the sole of the foot on the third day after the operation, and is now natural in most places; but there is still, up to this date, an entire want of sensation in the little toe and heel. He complained for some time of not being able to perform the action of separating the toes so easily as formerly, but that no longer exists. He finds no inconvenience in walking, or in the performance of all his regular duties: in fact, he is quite well.

Remarks.—I have thought the above case worthy of notice, from the result of the usual modes of treatment pursued in this disease (as given by our best authors) having been so generally unsuccessful. Hennen, whose experience in it must have been great during the Peninsular war, says, "Happy should I be if I could afford any thing satisfactory on this complaint; but in truth, my observations have tended more to shew me what I could not trust to, than what I could place the smallest reliance on, when the disease was once fully formed." And he further adds — "I have never been fortunate enough to cure a case of acute symptomatic tetanus." I think it important to notice that he mentions, that in one case he found, on dissection, the nerve connected with the injury *thickened*. Seeing this appearance so remarkable in the instance I have recited, the lengthened account of tetanus in Cooper's Surgical Dictionary, which I consulted at the time, rather bewildered me as to the treatment to be followed, and only shewed the great difficulty to ascertain, amongst numerous discordant accounts, what practice seemed to be attended with the least ill success. "Nothing," as he says, "is a more certain proof of our not being acquainted with any effectual method of treating a disease than the multiplicity of remedies recommended, which are as opposite as possible in their effects." I decided upon following the indication which seemed to me the most rational, and not to adopt any plan or to use any remedies proposed on empirical principles, seeing how unavailing they had mostly all been. I am only aware of one instance in which the communication was cut off between the wounded part and the sensorium, *by a suitable division of the nerve supplying the part*. It is one adduced by Baron Larrey; and, as in that case the operation was followed by a similar result to the present, I am surprised that the hint never was taken from it and followed up by others. Amputation has frequently been performed with the same view, but has seldom succeeded, probably from its having been too long delayed; and I would ask why such a severe and *maiming* operation should ever be thought of, or persisted in, when the same object can be so much more readily and scientifically attained by a simple incision?

We are told that when the disease invades very quickly, the danger is always greater than when it comes on at a more distant period from the receipt of the injury. In this case its attack was very early, and the progress of the symptoms rapid; and I have no doubt that it would soon have run its course to a fatal termination, if it had been left to the sanative powers of nature alone, or treated in the usual manner; but very little time was lost in having recourse to the operation that proved a remedy of immediate and effectual power, after the disease had decidedly formed; and I think it may have been of the greatest consequence that it was resorted to so soon after trismus appeared.

Cape of Good Hope,
Oct. 24, 1832.

COLLEGE OF PHYSICIANS.

MAXILLA TO VESTIBULUS.

February 2, 1833.

My dear Friend,

That publicity was not always deprecated in our College proceedings, here is the proof, extracted from the first page of your "Goodall."

"Librum hunc, cui Titulus. The Royal College of Physicians of London, founded and established by law, &c. dignum censemus qui typis mandetur.

D. Whistler, Præses.
Tho. Witherley,
Johan. Atfield,
Edvardus Browne,
Tho. Alvey,
} Censores.

Whence the change? How is it that we now rather shrink from, than court, the public eye; that in asserting the rights with which we have been entrusted for the public good, we are timid, hesitating, slow to be moved? Our Charter, you have seen, is a tower of strength: why is it in abeyance? Because it finds no support, nay, is undermined by the "Ordinances." The College is placed, through its Bye-laws, in what the soldiers term a false position: it can neither advance or recede, and yet it will not be allowed to stay where it is. Who will save it? He who, by extricating it from the Bye-laws, secures its retreat upon the Charter. *There* we are not only safe, but *strong*. Now, as to these same Bye-laws, what is their working effect upon the College and on the great body of London physicians, whom it is supposed to represent? I allude especially to the Bye-laws regulating the admission to the College Fellowship. What is the difference between the Licentiate Fellow and the Licentiate not a Fellow? for both, I need not tell you, are alike Licentiates. In the right of *practice* there is no difference: so far the "Licentiates," commonly so called, have no reason to complain; neither have the Public, who are not deprived by the College of any man's professional services, because that man may happen to be a Catholic, a Unitarian, a Quaker, or a Scotchman. The College suffers all these varieties of the genus Physician as practitioners in all varieties of disease, *quam diu bene se gesserint;* it recognizes them formally under its license, as good men and true—as physicians honest, chaste, sober, trustworthy—or of course it would not introduce them to the sleeping-rooms of private families. The College license qualifies him who holds it, for entrée to the Dispensary, the Hospital, the King's kitchen, or the King's back-stairs; it is available in the boudoir of the Duchess, as in the library of the Cabinet Minister. To all these places the Licentiate, through his license, is introduced by the College. Enough! you will say; where else can he wish to go?—for is not the license a passport to every house in London? To every house but one; and that is the one from which it first issued. It prevails every where excepting at the College of Physicians. There, and there only, the "Licentiate," in his capacity of Physician, as a "man of the Faculty of London," has no privilege of entry. He is not a member of the College, and has no business there, unless he be invited under favour, or summoned by authority to the Censor's Board. The only *right* of admittance within the walls of the College on which the Licentiate physician can insist, is that exercised by him when he first applies, under the statute, for his license; and, subsequently, during the examination on which it is made to depend. When, having been declared competent to discharge all its difficult and delicate trusts, he has been admitted to the College license, then, by tenure of that same license, is he dismissed from the College; under sentence of exclusion for at least seven years, and probably for his whole life, from its precincts. I do not mean that he may not occasionally be admitted to a tea-party there held *en soirée*—to a sight of the pictures, or to a peep at the preparations, as one of the Public, that is—but not as a "man of the Faculty of London." It is very well for "Licentiates" of the College, in their hospital advertisements, or on the title page of their books, to style themselves "Members of the Royal College of Physicians," (a great weakness, in my opinion, on their part,) but "Members" they are not, under the present Bye-laws; and the Bye-laws, by *some* lawyers, have been declared good Statute Law of the realm. The Licentiates (how foolish of them to mince the matter—how inconsistent such squeamishness with their true profes-

sional rank and interests), *under the Bye-laws*, are neither "Commonalty," "Fellows," or "Members" of the College. They have nothing whatever to do with the College, excepting to practise under its license, to observe its statutes, and to pay its fines when levied on them for disobedience or bad behaviour. If, on such a footing as this, they like to designate themselves members of the College, it would, indeed, be most uncourteous to cavil at a title neither "furious" or "sonorous," and with such a decided nothingness of signification. Mind, I beg of you, that I am speaking *not* of the *Charter*, but of certain of the Bye-laws, contradicting it both in spirit and in letter. Under the CHARTER, (need I refer to the proofs?) "all men of the Faculty in London" have to do with the College, for all are *equally eligible* to its Fellowship. What is it, then, I again ask of you, that establishes, in the cognizance of the College, this difference between its Licentiate "Fellow," admitted as such to all its offices and privileges—to the *run of the house* in Pall-Mall East—and its "Licentiate" *not* a Fellow, whose license has turned him from its doors? Both, remember, are *Libertines* under the *Charter*; both are PHYSICIANS by education and by degree; both must have resided, for at least two years, within the precincts of an University, previously to obtaining such degree. Their age is the same, for they must both have completed their twenty-sixth year previous to their application for the College license. On what ground of preference is one of the applicants at once recognized by the College as a "Candidate" for their Fellowship, while the other is not deemed worthy of being admitted within the pale of *eligibility* to the same honours? Surely their case is not prejudged. They are both "men of the Faculty in London;" both are applying for a London license (a provincial *Fellow*, let me tell you, by the way, is an absurdity—there is no such thing under the Charter). How, I say, by what instinct, even before their examination for the license, is the College enabled to recognize an embryo Fellow in *one* of the applicants, while it does not hesitate to exclude the other by anticipation, not only from *election*, but from *eligibility* to its corporate privileges? Their case is prejudged. One of the applicants is thus preferred, because he has graduated at Oxford or at Cambridge; where, mark me, he could *not* have graduated had he refused his adherence to any one of the thirty-nine Articles—Articles 8, 9, 13, 17, 18, 37, the Athanasian Creed, and all the Homilies included. The other applicant, on the very face of his diploma, before a question has been asked of him, is determined by the College to be unfit for admission into its class of "Candidates,"—as unfit even to *begin* to be a "candidate," (let us not, however, meddle with the anomalous order of inceptor-candidates)—because his diploma, though British, may not have proceeded from Oxfordshire or Cambridgeshire. I am supposing hitherto, that the attainments of both applicants, moral and scientific, are the same; and even this parallel offends me. But the Oxford or Cambridge Doctor may chance to be a very dull fellow—nay, an ill-bred fellow (both bad, but the last, you know, the worst of all in our aristocratic district); he may have swallowed every test and every article proposed to him by his tutor, *unhesitatingly* because *unconsciously*, for his sense is not fine in these matters. He may not be a "man of the Faculty in London;" he may never have resided in London. All his professional knowledge, Anatomical, Pathological, or Medical, may have been acquired far away from Oxford or Cambridge, in some other British University—we will say in that of Edinburgh—and in the same class-rooms in which his fellow-applicant was educated: he may have come up from school by the mail of the night preceding the day on which he applies for his license; he may have no intention of becoming at any future time a "man of the Faculty in London." All this may strictly hold; and yet this same dull, unrefined Glasgow-Oxford, or Cambridge-Edinburgh, physician, of easy religion and no science, shall and does aspire confidently to the Fellowship, as following by usage, in course, on his election into the class of Candidates, and within fifteen months of his first examination for his license.

On this routine of College advancement he may fully presume, provided only that he does not forget to bring his Oxford or Cambridge diploma with him in his pocket from the last "finishing school" in which he may have happened to sojourn. Is this right? is it consis-

tent with the charter? is it for the interest of the College? On the other hand, the physician *not* of Oxford or Cambridge, applying, like the other, for the London license, may be a man of the highest attainments, medical and literary—of the most refined manners—a gentleman—a man of business—a man of the world—in every respect qualified for "the oversight, scrutiny, and government of the London faculty;" and yet, by the very diploma which enables him to present himself for examination to practise, he is declared unfit to become a candidate for the Fellowship to which these offices of trust belong. He may not have graduated at Oxford or at Cambridge, because his family happened to reside in Edinburgh, and he wished to be near his family; he may not have taken an English degree, because he could not, *in his conscience*, adhere to the religious tests, without which an English degree cannot be obtained; he may be, as his fathers were before him, a Catholic or a Quaker—nay, he may have completed his education at Oxford or at Cambridge, and may still have refused the crowning honours of a degree from a conscientious disinclination, then first entertained, to *certain* of the religious tests, or Articles proposed to him on oath, as introductory to such degree. The Physician thus admitted to the license, but disqualified, under the Bye-laws, for the Fellowship, might be great as Harvey himself. Residing constantly in London—illustrious as the chief in talent of its Faculty—directly interested at all times in the honour and well-being of Medicine and Medical Men—sought, courted everywhere, excepting in the College under whose license he practised, and to which every day he was adding fame—he, for a period of at least ten years, could have no voice in the government of the Profession, in its oversight, correction, and scrutiny. One generation after another of "Candidates," and of "Ineeptor Candidates," would, in the meantime, present themselves for examination at the College, until the very lads from school, grown up into Oxford and Cambridge Doctors since the date of our Licentiate's admission to practise, would take precedence of him in the London Catalogue of Physicians, before it would be possible for the College, however sensible of his merits, to admit him to the honours of its Fellowship!

You may exclaim, "an extreme case," "fanciful," &c.; yet, believe me, in the *present* state of Physic, and of the public mind, it is not at all unlikely. There are young men now at work in Great Britain, who will be *great Physicians* in the real sense of the phrase—who will be known *early* as Physiologists—who will found and discover. The triumph of Physic is to come, for the Science of Life is new. Its hero may or may not be a "University-man:" let us, at all events, welcome him to London, whether he approach from the east or the west.

Were I so inclined, I might paint the "Licentiates'" case in much harsher colours; but let it rest!—What are the Bye-laws that produce this state of things? When were they enacted? I will tell you in my next Letter. They are, in their *full* effect, comparatively of recent date. Their object was a political one. The repeal of the Test and Corporation Acts involves *their* repeal at no distant period. Get a copy of Willcock's Laws, &c. and you will read all that I can tell you about them. *En attendant*, just let me inform you, that the Fellow of 1833 is quite another description of personage, even as described by the College, from the Fellow of the *Charter*, or of a period long subsequent to its promulgation. In Charles the Second's time; the College defeated one of their Licentiates, (a Dr. Goddard,) in a law-suit, by a declaration in open Court, confirmed from the Bench, that he and all members of the commonalty were Socii; that the Fellows, so called in the College, "were only chosen for *convenience* and consultation;" that the President, Censors, and Elect, "were not *only* choseable out of the select body of the *College* Socii," but, as an inference, from the *general body* of the *commonalty*. Again, in Letch's case, tried in the King's Bench in 1767, Judge Aston (always on the liberal side, this same Judge) is reported to have said, that, in his opinion, "the makers of the act 14-15 Henry VIII., looked upon those of the Faculty who reside in London to be *Members* of the College." Justice Yates, in the same year, declares, in Askew's case, that Licentiates are NOT Members of the College. Thus, you see, our privileges are not incontrovertible, as some are willing to assume. Again, as you read, you will observe, and I hope with a true *Fellow*-feeling, that the London College was not always so disposed to "play

second" to Oxford and Cambridge as it has been of late years.—See cases of Levett and West; also the sketch of Dr. Owen's Life, in Goodall.

But I am breaking bounds.—You see that I am earnest in this matter: and why?—because I have an interest in it. I have a great idea, as you know, of Physicians, and of the College of Physicians, and I cannot bear to think that the most is not to be made of both for the good of all. Forgive me, if I am wrong, for I do not *mean* to be so; and believe me, right or wrong, your's ever,

MAXILLA.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se hue à allonger ce que le lecteur se hue à abréger."—D'ALEMBERT.

The History of the Glasgow Royal Infirmary. By M. S. BUCHANAN, M.D. Surgeon to the Infirmary, &c.

THE history of an hospital is rather a novelty in medical literature; for though writers in general may not be unwilling to furnish short sketches of the more prominent events passing daily within its walls, there are few who could be tempted to enter at length on an analysis of the dry chronological details of such an institution. Selecting the more laborious field, however, Dr. Buchanan has given, in the volume before us, a history of the Glasgow Infirmary, both as regards its internal and external management, from the date of its being opened, in 1794, to 1832. The work is accompanied by engravings which afford views of the Infirmary, and of the new Fever Hospital standing near it, in their ground-plans as well as their elevations. The letterpress begins with a medico-statistical sketch of the state of Glasgow before and at the period when the Infirmary was first projected, and it is continued in connexion with the progress of the Infirmary. This sketch contains explanatory notices of the original constitution of the Infirmary, as set forth in its charter and bye-laws, and the various modifications which it has undergone since. Ample room was thus afforded for critical remark, and Dr. Buchanan, in attempting to fill it up, has been niggard of neither his time nor his opinions. Copious tables are also furnished of almost every thing relating to the revenues and expenditure of the Infirmary; and there are tables shewing the number of patients admitted during a period of thirty-seven years, the diseases under which they suffered, the results of their cases, the operations performed, &c. &c.; forming a store of information which is likely to prove exceedingly useful to medical men connected with other hospitals, as the means of instituting a comparison with the results of experience elsewhere. An appendix is added, containing a copy of the Infirmary charter, and copies of the regulations promulgated by the directors. Through these documents we are made fully acquainted with the qualifications required of the various office-bearers, from the doctor and physician down to the porter and nurse, and the several duties which they are expected to perform.

For laying before the public the numerous facts contained in the "History of the Glasgow Infirmary," our best thanks are due to Dr. Buchanan, and his example, in this respect, should be imitated by the gentlemen connected with every hospital of note throughout the country. But we confess we should like the work much better were it written with that ease and calmness of manner so becoming a labourer in the walks of science. Certain epithets, indicative of political and personal feeling, ought, we think, to have been sedulously avoided.

The mode of conducting the professional business of the Glasgow Infirmary has had many admirers, who bestow upon it their warmest commendations: we shall probably, therefore, at another time, when our space and leisure are less limited, offer a few observations on its merits.

MEDICAL GAZETTE.

Saturday, February 9, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

COLLEGE OF PHYSICIANS—FELLOWS AND LICENTIATES.

THE extraordinary succession of law-suits which at various times has taken

place between the College of Physicians and those claiming admission to its Fellowship, would seem to shew that there exists either a want of explicitness as to its corporate powers, or a want of confidence in the fairness and impartiality of their administration. These questions are once again exciting a high and daily increasing interest, and therefore demand attention in the pages of this journal. There are two parties to be dealt with; and we believe, without being very uncharitable, we may say that both exhibit the usual characters of party spirit—the principle of those in possession being to keep all they have, and in doing so to entrench themselves behind legal technicalities rather than venture upon an open contest on the grounds of abstract justice or public expediency—the object again of the excluded being to procure the unconditional surrender of what is withheld, without being always very candid in their view of the dispute, or over impartial in the estimate they form of their own pretensions.

As Uncle Toby very sagaciously remarks, "a great deal may be said on both sides;" assuming, therefore, the undoubted privilege of journalists, to shew that all men but themselves are fallible, we shall take leave, on the faith of this our ancient prerogative, to point out some of the circumstances which ought to induce the Fellows to concede more, and the Licentiates to demand less, than they seem respectively disposed to do.

And first for the Fellows: we cannot, indeed, do less than give them the precedence which they claim—it is their right as they stand at present in the College, and their due in this discussion as the first and greatest culprits. The chief mistake then, as it appears to us, which is committed by these members of the College of Physicians, is that of supposing the institution to be one intended for the maintenance of their own private and individual advantages as English graduates, and not for the promotion of any object of a public nature. Most of them, of course, will deny the validity of our position, but those who can divest themselves sufficiently of party feelings to exercise an impartial judgment, must admit that such has been, for a considerable period, the practical bearing and effect of their policy. Some admit the fact, and defend the College, on the ground that it is for the honour and dignity of the profession, and thus indirectly for the advantage of the public, that it should be so. They hold that the pursuits and discipline of an English university fit the mind in an especial manner for turning to profitable account those opportunities of acquiring medical knowledge which all who purpose to become Fellows of the London College have ample time and means of possessing; that physicians are destined to move in the higher walks of life, and ought, therefore, to be educated at the same seminaries, and so far as regards their general accomplishments, in the same manner as those who are afterwards to be at once their associates and their patients, when they mutually enter upon the world. Nor will any candid man deny to these arguments a considerable degree of strength: indeed, had the system been pushed no farther than to the establishment of a precaution that the standard of acquirement should be raised as high for the Scotch as for the English physician, we do not see that any reasonable objection could have been urged against it. But when we find it extended, so as to become a virtual prohibition instead of a salutary check to the too easy admission to the Fellowship, then we must be excused for some slight misgivings as to the absolute disinterestedness of the parties concerned, and for our inability wholly to divest our

minds of the suspicion that the advantages of the monopoly to the College lead them to overrate not a little the benefit which is conferred upon the public by this arrangement.

But again, it is said that it is an "English" College, and that it is but fair, that as such, it should be composed of the graduates of "English" universities. Here, too, is an idea which at first appears plausible, but which has its very foundation in the assumed expediency of monopoly, and which, in fact, implies that it were more fitting that the College of Physicians should consist exclusively of English graduates in medicine, than that others should be admitted, though they might be, in the words of the charter, even more "sad and discreet" than the Fellows themselves. If this inference be granted, we shall not cavil about the premises, but content ourselves with urging the propriety of calling things by their proper names, and henceforth designating the corporation in Pall-Mall East "the Oxford and Cambridge Medical Club." Had the London College of Physicians been an institution intended to prescribe, conduct, and afford a professional education—or been, *ab origine*, an offset of the universities—a College common to both—and granting diplomas in conjunction with either parent, then in such case would it have been a rational measure to limit their members to those who chose to be educated where, as well as how, *they* were pleased to appoint. But the College was instituted for purposes totally different—not to afford the means of education, but to judge of acquirement and fitness to practise; and this so little in connexion with the English universities that no kind of allusion was made to them either at its first establishment, or for many years afterwards.

There is another professional College in London—the College of Surgeons—which has not been regarded as absolutely liberal in all its enactments. Now it too is an "English" College as much as the other, and yet, though regulating the nature and extent of education required of its members, it never, even when most bitterly condemned for its monopolizing spirit, ventured to proscribe the Scotch and Irish schools. Yet we confess ourselves unable to perceive the difference, or why, due care being taken that adequate opportunities had been enjoyed, and a certain period had been spent in the acquisition of general and professional knowledge, and that the acquirements actually attained were the same, all should not have been admitted by the London College of Physicians on equal terms. Besides this, however, the idea of its being necessary to keep up the purity of the English breed, is at variance with the practice of admitting Dublin graduates on their becoming incorporated at Oxford or Cambridge; another regulation by which the College seems to have become subservient to the Universities. But what is more to the point than all,—"it is not in the bond." The charter was not given in any manner, direct or indirect, for the benefit of English graduates; so much otherwise, that, of the six physicians named in the original document, three had foreign diplomas—Linacre, Chambre, and de Vietoria, being graduates of Padua. But it is unnecessary to go back to so remote a period, for the obnoxious limitation is, in fact, a comparatively modern innovation. The first step towards narrowing the collegiate circle, was the exclusion of foreign graduates; which appears to have been done, or at least is indirectly expressed in a bye-law made in 1637, when it was ordained "that no person should be admitted a Fellow until he had performed all his exercises and disputations in one of the 'British Universities,' without dispensation*:" and a similar form of expression was again used in a bye-

* Willcock's Laws relating to the Medical Profession, p. 47.

aw made in 1737. Soon after this ltime, complaints were made of the "swarms of Scotch and Leyden physicians" who made their appearance in London; and as the latter had been previously excluded, so now the former were also included in the ban, and the words "British Universities," by a bold stroke of collegiate *leger-de-main*, received a novel and ingenious interpretation—a bye-law of 1752, informing us that it was "clearly intended that no one should be admitted into the order of candidates who was not a Doctor of Physic of either the University of Oxford or Cambridge, *although not set down in these very words**."

It was in reference to this bar to the admission of all but English graduates, that Lord Mansfield held the bye-law in question to be illegal; and as the licentiates subsequently attached much importance to his opinion, and, in truth, were led by it into much and profitless litigation, we think it right to introduce his words in this place:—

"The College," says his lordship, "are bound to admit every person, whom, upon examination, they think fit to be admitted within the description of the charter, and the act of parliament which confirms it. The person who comes within that description has a right to be admitted into the Fellowship; he has a claim to several exemptions, privileges, and advantages, attendant upon admission into the Fellowship; and not only the candidate himself, if found fit, has a personal right, but the public has also a right to his service, and that not only as a physician, but as a censor, as an elect, as an officer in the offices to which he will, upon admission, become eligible." And again, proceeds his lordship, "It has been said that there are many among the Licentiates who would do honour to the College, or any society of which they should be members, by their skill and learning, as well as other valuable and amiable qualities, and that the College themselves, as well as every body else, are sensible that this is in fact true and undeniable. If this be so, how can any bye-laws which exclude the possibility of admitting such persons into the College, stand with the trust reposed in them of admitting all that are fit? If their bye-laws interfere with their exercising their own judgment, or prevent them from receiving into their body persons known, or thought by them, to be really fit and qualified, such bye-laws require regulation. I think that every person of proper education, requisite learning and skill, possessed of all other due qualifications, is entitled to have a license, and I think that he ought, if he desires it, to be admitted into the College*."

An opinion so strong as this, coming from such a quarter, was not lost upon the College, and they guarded themselves against the consequences of suffering their bye-laws to "interfere with their exercising their own judgment," or of putting it in the power of counsel to shew that they, by their statutes, excluded any one of whom it might be said "the public has a right to his services." They framed new bye-laws, suited to the exigencies of the case, and had them signed by three of the judges. What those bye-laws were, we shall presently state; but meantime we would observe, that whatever may be said of these proceedings, on the score of liberality or justice, we caution the licentiates against being led into the belief that they are illegal. Large sums of money, on the faith of Lord Mansfield's opinion, have been expended by them already, in endeavouring to gain admission into the College (including half-a-guinea to a blacksmith for breaking open the door), and we should be sorry to see more so hopelessly expended. Law is a thing of parchment and precedent. Since the bye-law was altered, Lord Kenyon, and five or six other judges, have *ruled* in favour of the College on this point, and he should

* Ferris' General View of the Establishment of Physic as a Science in England, &c. &c.

* Stanger's "Justification," &c. pp. 440-1.

be a bold chief-justice who would fly in the face of such authorities. Lord Kenyon's words are,

"If, in deciding this case, it were necessary for us to answer all the arguments that have been urged at the bar, I should have desired further time to consider of the subject; but as the grounds on which I am warranted in determining the case lie in a very narrow compass, and as I have formed my opinion upon it, I wish to put the question at rest now. * * *

"We have, however, been pressed with the authority of those who have preceded us here. No person can have a greater veneration for those characters than I have; *and, if this point had been decided by them, I should have thought myself bound by their decision.* But the cases are unlike. The principal ground on which it was said in Burrow, that the bye-laws of the College were bad, was, that they interfered with their exercising their own judgment, and prevented them from receiving into their body persons known or thought by them to be really fit and qualified; and if I had found that that objection existed in this case, I should have thought it fatal. But, in the very sentence in which Lord Mansfield expressed himself as above, he added, 'such of them, indeed, as only require a proper education; and a sufficient degree of skill and qualification may be still retained.'"

And again, in reference to the College possessing the power of proposing licentiates, under certain restrictions, to the Fellowship, subjecting them, however, to an examination, he argued that the question was, whether this was a fit method of ascertaining their eligibility, and added—

"I think that this is a reasonable test. Therefore, on this short ground, without entering into any of the other topics that have been argued, I am of opinion that these are good and reasonable bye-laws, and that we are bound to refuse the writ."

Our object is to shew the parties their exact position, and not to mislead them into the expectation of forcing a passage into the College of Physicians by any proceedings at law. There still remain several important points to be alluded to, connected with the terms on which Scotch graduates were supposed to have a path opened to the Fellowship, but our space will not admit of our doing so this week. We are also compelled to postpone some remarks which we have to make regarding the pretensions of the licentiates: meantime we address this caution to them:—There are marplots among them;—men who, in the blindness of their hatred against the College, lose sight of their own best interests; who would associate the cause of reform in our profession with those of the radicals in politics. It has been contemplated by some most wise and skilful tacticians to place the case in the hands of an Irish gentleman, as the only member of the medical profession who has a seat in parliament! The proposers of such a plan are fools, or traitors. Were those whose interests are opposed to all change, to be allowed to select the channel through which any application against them should be made, we do believe they would desire none other than this: but assuredly all who have the smallest share of common sense—the slightest penetration into the feelings and motives which guide men's actions—would laugh to scorn the idea of such a choice. Of the gentleman in question, as a legislator, we know nothing whatever but this—that he was one of the first minority of the reformed parliament—the memorable *thirty-one!*—and, for our present purpose, this is quite enough. The politician who votes with O'Connell, Hume, and Cobbett, on such an occasion, is not the most likely man in the world to secure favourable attention to any measure introduced under his auspices. By publicly exposing the absurdity, we doubt not we shall crush it in the embryo. *Lord Althorpe has already given notice of a motion for inquiring into all the Corporations of England;* then will be the time for redressing every real abuse;—if, indeed, redress comes not before.

DEATH FROM A SINGLE LEECH-BITE.

A stout country lad, in the neighbourhood of Paris, was seized with colic, for which a dozen leeches were applied to the pit of his stomach. When they had done their office, some burnt rag was put to the part, and the patient was left alone for the remainder of the day. On being visited at the end of that period, his bed was found full of blood, and the bleeding went on in spite of every effort to stop it. Three and twenty hours after the leeches were applied, the patient was carried to La Charité. The abdomen was covered with one enormous clot; and it was discovered that the hæmorrhage proceeded from a single leech-bite, situate about four lines above the navel. The blood was arterial. Nitrate of silver, as a styptic, was tried in vain; and the actual cautery was had recourse to only when it was unfortunately too late; the extremities were cold, the pulse scarcely perceptible, and the voice extinct. The patient expired in two hours after he entered the hospital.

Upon examination of the body, there was nothing remarkable observed, except the absence of blood from the heart and all the tissues. M. Bricheteau calculates that the quantity of blood lost in this case must have amounted to three pounds at least; but this seems much short of the actual quantity. His mode, however, of arriving at the conclusion is simple and ingenious. He collected the blood that flowed from a leech-bite on the thigh, and which was suffered to flow for some hours. In ten minutes he obtained three drachms, which gives above two ounces for the hour; whence he inferred the whole quantity lost in twenty-four hours to be above three pounds.—*Gazette des Hôpitaux.*

CLINICAL OBSERVATIONS ON LUXATIONS OF THE HUMERUS,

By a New Method.

By M. Dupuytren.

From his "Leçons Orales," published in Paris under his superintendence.

A celebrated author, in speaking of dislocations of the shoulder, has affirmed that there are few maladies, the history of which is more advanced, and in the treatment of which the surgeon approaches more to our idea of perfection. In the course of this article, however, it will be easily seen how unfounded this assertion was, especially at the period when it was made. In fact, many questions of great practical importance were then either scarcely agitated or as yet undecided. Modern authors agree thus far—they admit that these luxations take place primitively in three directions, the most frequent of which is that downwards, and beneath the glenoid cavity. The experience of M. Dupuytren has confirmed this view. Again, it was an established principle, that in orbicular articulations the dislocation was invariably complete: many facts, however, prove, that in the shoulder-joint, the luxation is sometimes incomplete. The distinguishing symptoms of dislocation and fracture of the superior extremity of the humerus were also considered obscure, but in a recent case the characteristic marks of these lesions have been exhibited by the Professor with such precision, that error in this respect for the future will depend on ignorance alone. In numerous cases, too, of old dislocations, the ordinary methods of reduction were insufficient even in the hands of the ablest surgeons. A mode, however, hitherto but little used, has been tried in the Hotel Dieu, and with the most signal advantage. Lastly, the important question of determining the latest period for the reduction of luxations in general, and of this one in particular, has hitherto been almost untouched, except in the clinical lectures of M. Dupuytren*.

Case 1.—A female beggar, aged 41, at the Hotel Dieu on the 5th of last August, stated, that on the 9th of the preceding month she had been roughly treated, near the Champ de Mars, by some individuals, who threw her down and struck her. On getting up she declared that her arm was out of joint. Some days afterwards, having been brought to St. Lazarre, the medical attendants of that institution thought she had luxation of the humerus, and made four different attempts at the reduction, which only served to increase the torture of the patient. A month elapsed before she came to the Hôtel Dieu, and she then presented the following symptoms:—projection of the acromion, flattening of the deltoid, the elbow separated from the trunk and incapable of being brought close to it, incapability of raising the arm towards the head, and, lastly, a bony projection in the axilla. This set of symptoms was strongly characteristic of luxation, but it equally belonged to fracture. It is

* We request it to be observed that this remark is not ours: it is purely French.—E. G.

true that crepitation and mobility of bony fragments, especially belonging to the latter, were not present; but the period since the accident was sufficient to have caused a cessation of these phenomena, if they had existed before. Besides, fracture might have been produced by the blows as well as luxation of the limb by the patient's fall. Lastly, the bony prominence in the axilla did not resemble at all the regular roundness of the head of the humerus.

You thus perceive, gentlemen, said M. Dupuytren, that if you only consult the rational symptoms given at present by all authors, without exception, as affording characteristic differences between fracture and dislocation, it would be impossible to form a satisfactory opinion *à priori* on the nature of the case before us. An attempt at reduction was nevertheless decided on, care being taken to avoid the injury the patient might sustain, if the case was really a fracture. For we must not forget that where a fracture is mistaken for dislocation, it may, it is true, be reduced; but when the parts are left to themselves, the muscles gradually reproduce the displacement. If, on the contrary, a luxation is taken for fracture, the reduction is scarcely ever complete; and in these cases the patient remains more or less maimed.

Before proceeding to the operation, the patient was prepared, as is customary with me in all old dislocations, by venesection, the application of poultices around the articulation, by baths, and moderate doses of the watery extract of opium. On the day appointed, the reduction was attempted in the manner presently to be described. At the first efforts to make extension the patient uttered loud cries. To divert her attention, she was charged with having been engaged in a thieving excursion on the night of the accident, a reproach which succeeded in calling forth an animated defence, but failed in facilitating the reduction. Several other attempts were equally unsuccessful. The deltoid, however, seemed to be less flattened, a circumstance which, coupled with the ineffectual efforts at reduction, gave additional probability to the idea of fracture, for the diminished flattening of the deltoid might result from a slight displacement of the yet tender callus. In order to increase this tendency, a large pad was placed between the arm and the trunk, and the elbow bound as close as possible to the side by means of a bandage. At the end of four days, however, this treatment had produced no effect.

The facts, just related, continued M. Dupuytren, give rise to three different questions, of which it is important to find the solution:—1st, The symptoms described being completely inadequate, by what means can we arrive at a correct and certain diagnosis? 2d, Supposing the case was dislocation and fracture; the mode of reduction we constantly employ with success having been tried in vain, by what proceeding could we succeed? 3rd, Does the interval which has elapsed since the accident forbid the operation? or, in general terms, Up to what period is it possible to reduce a dislocation?

In consequence of the difficulties I met with, it became imperative on me to examine very minutely the disposition of the parts in this patient. At the same time, Dr. Malgaigne, a young surgeon, had the goodness to impart to me the ideas which the case suggested to him. I received them with eagerness, since they seemed to me to be extremely just. The following are the results of this investigation:—In the first place, there was a considerable elongation of the injured limb; but in fractures of the long bones, if there be no displacement, the limb preserves its natural length, and if there be displacement it is attended with shortening. In this female, the limb, measured from the projection of the acromion to that of the olecranon, or to one of the condyles of the humerus, was longer by half an inch than the arm on the other side. This single symptom I consider irrefragable proof of the existence of dislocation. But, besides this, M. Malgaigne pointed out others, to which I proceed to allude. The first (which is, indeed, an effect of what I have just described) consists in an augmentation in the depth of the anterior wall of the axilla; and, in the present instance, when measured from the inferior edge of the clavicle to the free anterior edge of the axilla, the axillary wall of the affected side was larger by half an inch than that of the opposite side. Secondly, according to this gentleman, the head of the dislocated bone should necessarily form a projection in the spot where the subclavicular hollow is usually situated. The difference of aspect thus produced is especially apparent in thin people, and in the case under discussion was very marked. Lastly, M. Malgaigne asserts, that on pressing with the fingers immediately under the acromion, the deltoid muscle is readily depressed in a case of luxation; and this was precisely what we observed in this woman. These four signs, always present in dislocation, always absent in fracture, each dependent on the other, and, even if isolated, sufficiently conclusive, were demonstrated in the amphitheatre.

The nature of the injury being thus ascertained, it was essential to learn whether or not the long period since the accident contra-indicated the reduction. Experience and numerous facts having long ago

convinced me, that injuries of this kind, even though of much longer standing, may be safely submitted to operation, I did not hesitate in my decision. The next point was, the choice of the plan to be adopted, in place of that which had failed at St. Lazarre and the Hotel Dieu, and M. Malgaigne availed himself of the opportunity to propose a method hitherto untried in in France. It consists in making extension, the arm being forcibly lifted up, and consequently shortened, instead of having the limb extended in a depressed and elongated position.

You will be able to judge of the value of this method, said M. Dupuytren, by the application which we are about to make of it to the present patient. We must not think too unfavourably of it if it fails, as it has resisted ordinary means; but if it succeed, some advantage must be accorded to it over the other.

After suitable preparation, the operation was performed on the 14th of August by Dr. Malgaigne. The patient having been placed in the recumbent posture, a folded sheet was placed over the acromion, its two ends brought towards the feet, and held at first by assistants, but afterwards secured in a ring fixed in the wall. The loop for making extension being arranged as usual, was entrusted to two assistants, and the dislocated arm lifted up as high as possible, so as to render it almost parallel with the axis of the trunk. Extension was now practised; the forearm having been pronated, in order to substitute a straight lever for the bent lever represented by the limb in a state of supination. The first extensions only appeared to cause inconsiderable pain. The head of the bone appeared perfectly in the hollow of the axilla, which it filled up. Gradually it elevated itself towards the cavity whither the extension drew it, and the two borders of the axilla, previously effaced, now began to disclose the cavity which separates them in the ordinary state. Meanwhile pressure was made with the fingers and palm of the hand on the head of the humerus, in order to assist it in regaining its cavity, to the level of which it had apparently reached. Twice, in this expectation, the arm was brought towards the trunk, but twice did it refuse to enter. M. Dupuytren now undertook the operation, and extension having again been repeated, the hand was pressed vigorously on the dislocated head of the humerus; the assistants then depressed the arm, and brought it close to the trunk, still persevering in the extension. A first trial failed, but the second completely succeeded, and the bone returned to its socket *without any noise*. The shoulder had now regained its roundness; the elbow readily approached the trunk; the movements of the articulation were performed with facility; and, finally, the projection of the axilla disappeared. On repeating the measurement of the arm, it still remained longer than the other, and the projection of the head of the humerus below the acromion process seemed a little flatter than natural. It is to be remarked, that M. Dupuytren introduced a modification which doubtless contributed to the success; for the head of the bone was pressed from below upwards, with unusual vigour, during the time that the efforts at extension were being made.

This patient did well, the arm remaining still a little longer than natural. Here, then, is the first success, publicly obtained at the Hotel Dieu, in a difficult case, and by the new method. But how did it happen that when the reduction was effected, the arm did not regain its natural length? Could it be (asked the professor) that a portion of the capsule got entangled in the glenoid cavity; or did there exist any enlargement of the cartilages? The latter presumption is not perhaps unfounded. Two causes indeed may determine the enlargement or swelling of the cartilages of an articular cavity after a luxation. In the first place, the cause which occasioned the original displacement must necessarily have operated with more or less violence on the cavity, by the interposition of the head of the bone. Here is a source of irritation — of inflammation even — the effects of which you know to be the increase of the density and thickness of the parts it affects. Besides, experience has repeatedly shewn that articular cavities, after the separation of the bone which originally occupied them, tend continually to close, and, indeed, become totally obliterated after longer or shorter time. Nevertheless, the explanation afforded by M. Malgaigne is equally satisfactory. "In recent luxations, the supra and infra spinous muscles are applied against the glenoid cavity; the subscapular muscle forms a kind of cap over the dislocated head. Is it not, therefore, likely that the time elapsed has permitted the formation of adhesions, which would, moreover, have been favoured by the irritation produced in the numerous ineffectual efforts at reduction? Sometimes there have been found, on the dissection of such old dislocations, false membranes approaching even to the cartilaginous state. Besides, the swelling in the vicinity of the articulation could not, of course, cease instantaneously on the reduction; and, doubtless, the swelling is not less at the superior part than at the other sides of the joint. As to the rest, this elongation after the operation only appears extraordinary because not previously noticed by authors."

M. Dupuytren had been inclined to believe that the elongation was an attribute only of the dislocation downwards below the glenoid cavity; while M. Malgaigne, on the contrary, thought that the head of the humerus occupying the cavity of a vault formed by the acromion, the coracoid process and the uniting ligament should manifestly be on an inferior level when it is pushed beneath either of the pillars of this vault. An appeal was made to experiment, in order to decide the question. With the dry bones it was evident the dislocation under the acromion induced the elongation of the arm; but in the case of luxation under the coracoid process the matter still remained doubtful. This luxation was then produced on an articulation newly prepared, with its ligaments entire, and all accurately measured; when elongation to the extent of half an inch was found to have been occasioned. As to the dislocation downwards, the experiment was made with the same articulation. All the muscles having been removed, it was nevertheless impossible to effect the displacement, but it was easily done when the ligamentous fibres which unite the capsule to the acromion and coracoid apophysis, were divided with a bistoury; and elongation to the enormous extent of an inch and a half was now produced – an extent greater than has yet been noticed in any recorded cases.

The extent to which we have treated of the subject, sufficiently shews the many interesting questions which the study of such luxations still presents for our examination. Since this case two others have presented themselves, the reduction of which was accomplished by the new method.

Case II.—The first of these was a washerwoman, ætat. 67, of low stature, thin, and spare. She had fallen down the stairs of a cellar. The accident occurred at eight A. M. on the 27th last October, and she immediately came to the Hotel Dieu, where it was ascertained that she presented a luxation downwards and forwards, *i. e.* a subcoracoid luxation. The reduction was immediately proceeded with. An assistant seized the hand of the dislocated limb, lifted it up parallel to the axis of the body, and drew it directly upwards. A second assistant pressed on the scapula, in order to produce counter-extension, while M. Dupuytren directed the head of the humerus with both his thumbs. At the first effort of extension the reduction took place without difficulty, and with scarcely any pain. The arm was then brought down cautiously close to the trunk, to which it was secured by a bandage. In twelve days the patient was well.

This method consisting, as it were, in lifting up the patient by the dislocated arm, extension cannot be practised in the sitting posture if the patient be of high stature. In such case the patient must be laid in the horizontal attitude, or the assistant, who makes the extension, must be mounted on a table.

Case III.—The morning after the preceding operation, a female, aged 45, of spare muscle, but of high stature, came to the consultation, presenting also a subcoracoid luxation. She was placed on her back, a cloth, folded like a cravat, was passed over the shoulder, both ends turned over and brought downwards towards the trunk on the opposite side, and confided to two assistants, in order to practise the necessary counter-extension. Two other assistants lifted up the arm parallel to the axis of the trunk, and made extension, while the head of the humerus was pushed from below upwards with both thumbs, by M. Dupuytren. At the first effort the luxation was reduced without pain, and the patient immediately began to laugh. She did not remain in the hospital.

In these two cases the circumstances were very favourable. We had to do with luxations which were quite recent, in emaciated women, feeble from age, and without muscular energy. The ordinary method obtains in such cases an equal degree of success; nevertheless, it may be remarked, that we had not here to take any precaution, nor to fix the patient to the ring in order to make extension, and that the reduction was effected without any difficulty, and with remarkable promptitude. We have thus, gentlemen, described at some length a method which was new to you, and of which you have had an opportunity of judging in the applications which have been made of it. I purpose adopting this plan in other cases when they present themselves.

REPORTS OF CASES OCCURRING AT PUBLIC INSTITUTIONS.

ST. BARTHOLOMEW'S HOSPITAL.

Case I.—*Dislocation of the lower end of the Tibia, without Fracture of the Fibula.*

Rebecca Chopin, aged 50, was brought to the hospital on the 27th of December, soon after midnight, under the impression that she had sprained her ankle a few minutes previously by slipping from the curb-stone. On the stocking being removed, the following were the appearances presented. The heel was considerably lengthened, the toes pointed slightly downwards; the lower end of the tibia formed a considerable prominence in front, and particularly its external part, giving the appearance of its fibular articulating surface being twisted round and thrown forwards; the internal lateral ligament was

exceedingly tense, forming a very apparent line, the fibula remaining in its situation, and *unbroken*. The reduction was effected with great facility by making slight extension of the whole foot, at the same time depressing the heel and raising the toes.

Feb. 5.—The woman leaves the hospital to-day, but still complains of some pain in the articulation when she stands upon that leg.

CASE II.—*Dislocation of the Patella outwards, with Introversion of the Bone.*

Elizabeth Williams, aged 29, of a very strumous appearance, was brought to the hospital on Monday evening, the 28th of January, with dislocation of the patella outwards.

On the stocking being removed, the limb presented very great deformity, partly from the nature of the accident, and partly from the circumstance of her having been the subject in early life of such disease in the bones as rendered her what is familiarly termed knock-kneed.

The first impression on seeing the limb was, that the prominence formed by the patella was produced by an oblique fracture of the femur at its lower part; but on finding this bone unbroken, and on examining more particularly the situation of the patella, it was found to be vacant. On re-examining the prominence, I was convinced that it was formed by the patella from its rounded shape, and from being able to trace the tendon of the rectus to its insertion in the upper margin. The twisted state of the tendon, and the shape which the surface presented, led me to the conclusion that the bone was not simply dislocated outwards, but that it was also turned round, its external margin resting upon the external condyle of the femur, and its posterior surface looking forwards and rather inwards. The patella, which in the extended state of the limb was quite fixed, admitted of very slight motion when the femur was forcibly flexed upon the body.

The reduction was effected with tolerable ease, in the following manner. The patient was placed erect in bed. Mr. Vincent, raising the leg, forcibly flexed the thigh upon the pelvis, giving, at the same time, a jerking motion to the joint. This measure appeared to be of great service in the reduction; at the same time the patella was turned round by an assistant, who placed his thumbs on the inner condyle of the femur and hooked his fingers around the most projecting part of the patella, thus being enabled to use considerable force.

CASE III.—*Dislocation of the Femur—Head of the bone in the Ischiatic Notch.*

John Bourne, aged 27, was brought in to the hospital at an early hour, on Sunday morning, the 27th of December, in a state of inebriety. It appears from his own statement, as well as that of his friends, who were also rather intoxicated, that whilst walking along the street he slipped down, separating his legs very widely. On being raised, he was unable to stand, and was brought to the hospital in a coach. On his clothes being removed, the limb presented the following appearances. The patient lying on his back, the knee was rather flexed, and with the foot turned inwards and separated some distance from the opposite limb. The shortening was about half an inch, and the motion very confined. When I placed my hand upon the hip, I distinctly felt the head of the bone in the ischiatic notch. The patient having been bled, &c. the pullies were fixed as usual, extension was made in the direction of the displacement, the upper third of the bone was raised by a strap placed around it and the neck of an assistant, who stood astride the patient upon the table. As soon as Mr. Vincent, who was endeavouring to raise and direct the head of the bone, found it to be upon the margin of the acetabulum, he desired that the toes should be quickly, and rather forcibly, rotated outwards, in order that the motion might be communicated to the head, and thus assist in lifting it into its cavity. The reduction was effected in about three minutes.

The first and second cases I think more particularly deserving of attention, as I am not aware that any similar have as yet been described. In dislocations of the tibia forwards, complete or incomplete, the fibula is said to be always broken; and, as some may be rather inclined to doubt its integrity in this case, I am happy in being able to add to my own opinion, that of my friend and colleague Mr. Quin, and my friend Mr. Bullar, both of whom, after a careful examination, agreed with me in the opinion, that there was no fracture.

In the second case, the testimony of Mr. Vincent as to the nature of the accident must be perfectly satisfactory. This case is of peculiar interest to those who are conversant with the writings of the highest authorities on this branch of surgery, and more particularly with those of the justly celebrated Boyer, who writes thus:—"Des chirurgiens ont cru que cet os pouvait se luxer en tournant à moitié sur lui-même, et se plaçant *de champ* dans la poulie articulaire du fémur; mais on ne conçoit pas comment le tendon des muscles extenseurs de la jambe, et le ligament de la rotule, pourraient se prêter à une pareille rotation de l'os sur lui-même; on conçoit encore moins comment ces parties pourraient permettre un renversement total, sens devant

derrière comme on pretend que cela à été observé."

After reading the opinion of Boyer, and other great authorities, on this subject, we may, I think, fairly conclude, that this accident has never been observed; and, from the fact of its not having been noticed, and from the natural form of the articulation, we may still further conclude, that it could not occur unless in a subject where similar deformity to the present existed; or that, perhaps, described by Roche and Sanson, "an unnatural deficiency in the external or internal side of the trochlea of the femur."

With respect to the dislocation sur le champ of the patella, the possibility of which Boyer seems to doubt, this accident has, I believe, been twice observed by Mr. Vincent, and reduction has been effected with tolerable facility. A similar case has been related by Dr. Wolfe, in Rust's Magazine, in which the patella was found to be half turned on its axis, so as to be placed with its external and internal margins one forwards and the other backwards, the inner edge of the patella was resting upon the outer edge of the trochlea of the femur. In this case reduction could not be effected, although the extensor tendon was divided at its insertion into the patella. The joint was unfortunately opened and suppurated; the patient died in eleven months.

ROYAL INSTITUTION.

February 1, 1833.

Dr. Faraday on the identity of Electricity derived from various sources.

It is well known to the lovers of science that Dr. Faraday has been latterly much engaged in tracing the analogies between the powers of the galvanic circle, the magnet, and the electrical machine: a paper of his on the subject was recently read before the Royal Society; and some illustrations of the proofs adduced in that paper were selected for the business of this evening. After some preliminary remarks on the advantages of reducing the properties which appear in nature to a few general principles, Dr. Faraday proceeded to shew that this could be done, with respect to phenomena of various kinds, which he should prove were identical with those of electricity. He did not except from this position even the properties of the gymnotus electricus, notwithstanding the able remarks to the contrary stated by Sir Humphry Davy in the last scientific paper he ever wrote, or the observations which were made on the same subject by Dr. John Davy. Dr. Wollaston held that there was but one kind of electricity: he failed, however, in one part of the proof, and it should be his (Dr. F.'s) endeavour to supply the deficiency. He then performed various experiments with the admirable apparatus of the Institution. From the plate machine, by three turns of the handle, there were drawn fourteen sparks of great brilliancy, and above three inches long; yet fourteen of these sparks conducted to a leyden jar, and then discharged, exhibited but one small spark, not half an inch in length. Now the voltaic battery only carried this principle to a much greater extent, showing that the more condensed the power, the less visibly conspicuous it was. In the voltaic battery the spark was, as it were, continuous, and produced its wonderful effects by reason of that continuous action. But similar effects could be produced from the machine, by condensing its energies through the Leyden battery (Mr. Brande's arrangement;) and this Dr. F. proved by deflagrating with one discharge two iron wires, silvered, and each ten inches long: the marks of the oxydized silver alone remained. With one and the other source of power—the voltaic and the leyden battery—the able experimenter produced various similar effects: by both he acted upon the gold leaves of the electrometer, and deflagrated them. He showed how both effected the decomposition of water: how the decomposition of the hydriodate of potass was accomplished by both; and this last, on account of the distinctly visible disengagement of the iodine, was exhibited very beautifully. A most striking and satisfactory experiment performed by Dr. Faraday, was that of the operation of the machine on the pointing of the magnetic needle. Colladon, of Geneva, is said (by himself) to have effected this; but his statement has not been authenticated by the testimony of others. Dr. Faraday, in conclusion, explained how he was enabled to controul the action of the electric fluid derived from the machine, by employing a wet string in the circuit: and in proof of this took through his tongue the powerful discharge of the Leyden battery, previously charged by thirty turns of the handle: the sensation, he describes, as being precisely similar to, and nothing more than, that produced by the galvanic circuit. He promises to resume the subject on a future evening.

We have scarcely ever seen the theatre more crowded than it was this evening; and as for the library, it was almost impossible to elbow one's way to the tables to examine the attractive novelties with which, no doubt, they were covered.

LEEDS ANTI-ANATOMICAL BANNER.

To the Editor of the Medical Gazette.

Leeds, January 29, 1833.

SIR,

YOUR number for January 5th has just come into my hands, and I am surprised to find in it a violent attack upon a part of the profession in Leeds, evidently dictated by party spirit. From the display of envy and uncharitableness in the paragraph alluded to, I fancy it would not be very difficult to guess at the author. However, allow me to give you a different statement of the matter. It happens that a considerable number of medical men in this town are attached (conscientiously, no doubt) to conservative principles, and, of course, thought it their duty to give their support to the conservative candidate, Mr. Sadler: are they to blame because a number of operatives, with whom they had not the slightest connexion, and over whom they could not exercise the slightest influence, chose to carry a banner in Mr. Sadler's procession, reflecting on the Anatomy Bill and its supporters? The fact is, that a representation was made to Mr. Sadler's committee, relative to the offensive nature of the banner, but without effect. Indeed, Mr. Sadler being supported by several totally independent parties, it could not reasonably be expected that one should dictate to the other what banners should be carried in the processsion. The anti-anatomical banner was not carried in support of Mr. Sadler, but in opposition to Mr. Macauley. I think, when you reconsider the affair, you will not think it so very horrible a business as you appear to have done.

You say you "forbear (in charity, I suppose) to publish the names of the parties" so offending. You are very welcome to publish mine, which I now subjoin, candidly subscribing myself one of those degraders of their profession who followed in the wake of the Leeds anti-anatomical banner.

W. A. JACKSON, M.R.C.S.

[The preceding letter, instead of affording any refutation of our remarks, confirms them in every particular. It admits that certain medical conservatives at Leeds did march in a procession, having "an anti-anatomical banner;" and that though the parties knew the proceeding to be so "offensive" that they made a representation against it, yet such representation being contemned, these accommodating gentlemen pocketed the affront, having sense enough to know that they were doing wrong, but not courage enough to do what was right.

What may be meant by "the anti-anatomical banner not being carried in support of Mr. Sadler, but in opposition to Mr. Macauley," we really do not pretend to understand, any more than to discern proofs of "envy and uncharitableness," in denouncing so unprofessional a proceeding as that alluded to.

PAUPERISM IN PARIS.

FROM an official return of the state of the French metropolis for 1832, it appears, that, of the whole population (770,286), 68,986 are maintained at the public expense. But this number includes only the known poor: it is calculated that there are just as many struggling with poverty in secret; whence it follows that a seventh part of the population of Paris is dependent upon charity.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb. 5, 1833.*

Age and Debility	53	Heart, diseased	2
Apoplexy	11	Hooping-Cough	23
Asthma	30	Inflammation	43
Cancer	2	Bowels & Stomach	1
Childbirth	6	Brain	4
Consumption	74	Lungs and Pleura	3
Constipation of the Bowels	1	Insanity	6
Convulsions	35	Liver, Diseased	3
Croup	4	Measles	10
Dentition or Teething	6	Paralysis	2
Dropsy	15	Small-Pox	15
Dropsy on the Brain	14	Sore Throat and Quinsey	2
Dropsy on the Chest	1	Spasms	2
Erysipelas	3	Stone and Gravel	1
Fever	12		
Fever, Scarlet	3	Stil born	13
Fever, Typhus	3		

Decrease of Burials, as compared with the preceding week . . . 65

METEOROLOGICAL JOURNAL.

January 1833.	THERMOMETER.		BAROMETER.	
Thursday . 31	from 25 to 36		29·68 to 29·46	
February.				
Friday . . . 1	27	37	29·34	29·56
Saturday . 2	28	47	29·46	29·30
Sunday . . 3	35	47	29·44	29·55
Monday . . 4	35	53	29·60	29·78
Tuesday . 5	45	52	29·79	29·84
Wednesday 6	40	53	29·93	29·94

Prevailing wind S.W.

Generally cloudy, with frequent rain; a little snow in the afternoon of the 31st ultimo.

Rain fallen, .8 of an inch.

CHARLES HENRY ADAMS.

DELIVERY OF THE GAZETTE.

SEVERAL correspondents in London have complained that they do not receive the Medical Gazette till Saturday afternoon. We have to state that the journal is *invariably* published at Nine o'clock on Saturday morning.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 16, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

BY DR. ELLIOTSON.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

HYSTERIA.

TO-DAY, gentlemen, I shall speak of Hysteria.

Symptoms.—In this disease there are fits of general convulsions and insensibility, like epilepsy; but not a continuance of the insensibility after the convulsions are over. For the most part the convulsions are renewed in the midst of the insensibility. There are also sobbing, crying, laughing, and shrieking in the fit; but particularly before and after it. Sometimes, not always, there is a regular collection of sobbing, crying, laughing, and shrieking, in the midst of the convulsions. You will generally find the insensibility is incomplete; the patient has some knowledge of what is going on around, or if she have not all the time, yet she has more or less of the time. There is also experienced a sense of choaking, as if there were a ball in the throat which they can neither get down nor bring up, together with irregular breathing, so that you observe them panting, and the breasts heaving up and down. Frequently you have hiccup. Sometimes there is a rumbling noise in the belly, and they experience a sensation as if a ball were rolling to and fro, till at last it comes to the epigastrium, and from thence rises to the throat, where it sticks, and then the convulsions begin, and down goes the patient. The belly seems to swell, and no doubt it does so. In a few minutes, sometimes, a woman will be filled with wind. There is frequently also a great secretion of limpid urine, and this unfortunately is sometimes discharged. There is also violent palpitation, just as in epilepsy.

Now these fits will come and go in rapid succession: there is not merely one systematic fit and all is over, but there is a succession of these fits; and, as I have frequently observed with regard to nervous diseases, one side is often more convulsed than the other. Occasionally you find extreme tenderness, not during the fit simply, but during the time that women are subject to these fits, and it extends over the whole of the surface. If you press ever so lightly on the chest and abdomen, you find them complain, and the same is felt more or less in the extremities; but it is particularly the case with the trunk, and this has often been mistaken, and no doubt still is, for inflammation. Occasionally there are other symptoms than these—there is delirium. Patients, when they are seized with hysteria, are sometimes violently delirious, so that a stranger would imagine there was phrenitis which required active treatment; but you observe that it comes on suddenly, and there are other hysterical symptoms. You may generally satisfy yourselves that it is merely hysterical. Sometimes patients have locked jaw, the mouth being closed, and sometimes they have other tetanic symptoms; but that is the general one. Sometimes, from the violent affection of the voluntary muscles, they have a sensation of extreme pain fixed in some part, called *clavus hystericus*—a sensation as if a nail were driven in; and I have no doubt that it is the same as the generally diffused morbid sensibility of the surface, only that, instead of being diffused, it is collected in one spot, and is therefore more acute than when diffused. Sometimes there is catalepsy, of which I shall presently speak. There are all kinds of movements of the

body, and all kinds of noises made. Sometimes they will bark like dogs, or imitate various animals. Hysterical women make most extraordinary noises.

More frequent in females than males.—Now this is a disease which occurs much more frequently in females than males, and in females particularly during their sexual period, if I may so call it; that is to say, during the thirty years in which they are in their prime, in which they have the chief character of their sex, namely, from about fifteen to forty-five in this country. It must vary in different countries, but in England women menstruate from fifteen to forty-five. If the disease appear at other periods, it is more frequently earlier than later: you more frequently see girls who have not menstruated hysterical, than old women who have done menstruating. But, although this is a disease usually seen in females, it is certainly not altogether confined to them; for it will sometimes be observed in boys and men of very violent emotion. You will recollect the passage in King Lear:—

"O how this mother swells up towards my heart,
Hysterica passio, down thou climbing sorrow;
Thy element's below."

Causes.—Any woman may have hysteria, if she can have but emotion of mind strong enough. Epilepsy is a disease which only occurs in certain individuals, as it would appear, from a certain degree of predisposition; but any mental emotion will cause more or less hysteria in almost any woman. Anger or grief, especially grief from ungratified desire, or, to use a more elegant expression, "disappointed love," is the most common cause. I presume it is quite as frequent from disappointed lust, in which desire is the only ingredient, as from pure, simple, unrequited love.

It occurs particularly during the uterine period of life—during these thirty years—on several accounts. *First*, because derangements of the uterus are a very common source of the disease, and of course the uterus is not deranged particularly except at that period during which it performs its functions. Women do not suffer much in the uterus till it performs its functions, and very little after they have ceased, except in cases of organic disease. It is during the period of its activity that it suffers particular derangement, and, therefore, during that period, it will suffer particular sensations. *Secondly*, it is during the period of menstruation that women fall in love and have their attachments strongest. Sorrows of all sorts, whether real or imaginary, take place with the greatest severity during that particular period. *Thirdly*, it is during that period of life that all the feelings of women are most active. A woman's character becomes altogether developed when she begins to menstruate, and after the period of menstruation all her feelings become more or less obtuse. We all dry up in the decline of life: I suppose all our feelings dry up, and we are less susceptible of all emotion. I should suppose there is scarcely a woman who has not had hysteria in some slight degree, such as a choaking in the throat; but it is generally a temporary disease and by no means dangerous. Sometimes it is dangerous, but very rarely so, and for the most part it is only temporary. Epilepsy is so obstinate a disease as to be an *opprobrium medicorum*, but hysteria generally at last ceases, although it may continue for a long time. When we consider that a slight cause is sufficient to produce hysteria in women, we shall see that it must be a temporary affection and cannot be dangerous. Emotion of mind, costiveness, plethora of the head, suppression of menstruation, or any thing of that kind, will excite it.

Treatment.

During the fit.—In regard to the treatment during the fit, it should be the same as that for epilepsy. You must set the patient up, loosen any thing about the bosom and neck, and if you find plethora, so that there is a danger of apoplexy, you would of course bleed her. The best thing, however, and one that does not answer so good a purpose in apoplexy, is to souce the patient well. If you get a pail of water, or a large wash-hand basin full, and throw it strongly upon them, they are almost sure to come to. The water requires to be thrown with considerable force, and you should not spare it. It is in hysteria that filling the mouth with salt answers the best purpose: you generally see them come round if you fill the mouth with salt.

General Treatment.—In treating the disease at large, however, we should follow exactly the same rule as in epilepsy. We must, in the first place, look out for any exciting cause, and if we can find it, remove it if possible. In the next place, we must adopt antiphlogistic treatment, provided there be signs of congestion of the head. Many cases of hysteria are cured rapidly by bleeding and purging. There is so continually mere fulness of the head in this disease, and so continually does costiveness produce it, that bleeding and purging very speedily in general get rid of the disease, or mitigate it considerably. Women, you know, are much more subject to costiveness than men; they are not so particular in these matters as men, and their pelvis being large, it will hold a great deal, and therefore you continually have women

tell you that they have not had a motion for a week. At charitable institutions, particularly dispensaries, where patients attend in great numbers, we find costiveness occurs far more frequently among women than men, and the hysteria will cease by unloading the bowels.

It is necessary, in the treatment of this disease, always to inquire into the state of the womb. It was supposed formerly always to arise from the condition of the womb, and the name of the disease, *hysteria*, comes from υστερα, the womb. Hippocrates says that it occurs only in females, and the idea of its dependence on the womb is shewn by the name which common people give it—" the fits of the mother." The swelling of the belly, and the rumbling noise ascending up the throat, was thought to be occasioned by the rising of the womb, and therefore attacks of hysteria were called formerly " fits of the mother." The doctors formerly endeavoured to get rid of the fit by attracting the womb, and also by driving it downwards, by putting assafœtida, garlic, and all sorts of stinking things into the mouth, to warn the womb to descend out of the way, and putting roses and posies below, to attract it downwards. This was the practice formerly, from the idea that the affection arose in consequence of the ascending of the womb, and therefore they endeavoured to coax it downwards by roses and posies, and drive it downwards by assafœtida.

Although the disease frequently does arise from the state of the womb, yet very frequently it does not, and therefore, in all cases, we should examine into the state of the womb. If we find amenorrhœa, we should endeavour to remove it by cupping the loins, and when we have done that, provided the state of the patient will allow it, we should stimulate the womb by oil of turpentine and injections of ammonia thrown into the vagina, and, if possible, we should recommend marriage, which is by far the most effectual mode of curing amenorrhœa, in many ladies. But I believe that where it does arise from something connected with sexual desire, the cause is for the most part situated in the head. It is astonishing how many young women, with good full bodies, have pain of the head and cerebellum. You have only to ask the question, and you find that the pain is situated there, and I know that if you cup that part well and purge them thoroughly, you may frequently get rid of a number of cases of hysteria without attending to the womb. It does frequently arise from the state of the womb, but this is only one cause among a number of others.

It has been said that the disease can never occur in men, because it is hysteria; but you might as well say that the Edinburgh Medical and Surgical Journal is not a journal, because it is not published every day. You must not attend to the etymology of a word, but to the meaning. A journal is a periodical, whether it be published once a quarter, once a week, or daily; and so it is with regard to hysteria. The name was given to the disease from its having been supposed to arise from the womb; but the collection of symptoms called hysteria will sometimes occur in males—in boys and young men whose constitution approaches to that of females, and who are susceptible of violent mental emotion.

Besides removing any exciting cause that you can discover, removing a plethoric state of the whole body by bleeding, low diet, and purging, you will find it necessary in other cases to do just the reverse, precisely as I mentioned in epilepsy; but these form only a very small number of cases. You may find it necessary to give tonics, and I think iron is the best, together with cold affusion and cold bathing. I think the cold bath answers better than any thing else. Occupation is essentially necessary, and, if possible, a good regulation of the mind. For certain symptoms various remedies are useful. For faintness and choaking, you will find the fœtid gums, although they have been given on a strange hypothesis, very useful. Assafœtida by the mouth and anus are very proper. Camphor and musk are more or less serviceable for the wind following the spasms. Stimulants of various descriptions are often required. For the extreme languor the patient feels, and the extreme sinking of which she complains at the epigastrium—(some patients complain of experiencing a sensation as if they had no inside)—you find stimulants absolutely proper, particularly that preparation of iron called ferrum ammoniacum. All the tonic medicines that I recommended in epilepsy are useful, and frequently they will cure the disease. I am sure that the best way is to remove any exciting cause that may exist; to get the womb into good order, to prevent all fulness, and if there be debility, to remove it: let the patient be in the open air and occupied, attend to regular exercise, and use the shower-bath frequently.

Pathology.—I should suppose there can be no doubt that regular hysteria is situated in the head; the cause may be anywhere, but the disease must be in the head. If you see a patient partially convulsed, it may arise from an affection of the spinal marrow; but in hysteria, muscles are affected that arise above the spinal marrow, in addition to which there is insensibility, which I should suppose shews that the seat

is in the head. You see patients laughing, sobbing, crying, and then they are in high spirits again all at once, so that it certainly must be an affection of the head. I suppose it must be an affection of the brain, just as is the case in epilepsy, only that it arises from a variety of causes situated in a variety of parts.

The treatment of this disease is for the most part very successful, because there is scarcely a predisposition required for it, and the slightest exciting cause is sufficient to produce it. This is not an *opprobrium medicorum*, but, on the contrary, medical men gain the greatest credit in treating it. Although it would cease spontaneously, you may expedite the cure. It very rarely arises from an organic affection in the head, as epilepsy does. As to the other affections, the palpitation, the faintness, and all these things, they only shew the extent of the affection; but the chief source of the symptoms, the particular characteristics of the disease, I presume, must be situated in the head.

Particular Symptoms.—To speak of particular symptoms which sometimes attend it. The trismus I mentioned may in general be got the better of by a good dose of oil of turpentine. You may throw up two or three ounces by the rectum, or give it the patient to swallow; but the latter is not an easy matter. The jaw generally opens as soon as the turpentine reaches the intestines; and I have never seen it fail in effecting a cure. Sometimes it has instantly removed the affection, but in other cases not for a few hours.

The disease sometimes produces paralysis. I have seen paralysis of the whole of one side—hemiplegia; but it went away. I recollect particularly one case of a young girl who was seized at church. It is very common for them to be seized at church. I suppose they get excited by the discourse, excited by the heat, and sometimes they see persons whom they like very much; but true it is that young ladies are very fond of going into hysterics at church, and they shriek out, disturb the congregation, and put a stop to the service for a time. Now this young woman did so; but there was no pretence in it, and afterwards she was in a complete state of hemiplegia. By dosing her well with oil of turpentine and bleeding her copiously, she got completely well very speedily. I have seen several of these cases, and they have all done very well. The paralysis is not of a permanent nature, but depends on a temporary state, and by free bleeding and purging, and especially by the exhibition of oil of turpentine, I have seen it go away. I do not know a better remedy for a great number of cases of hysteria than this, and to illustrate the use of it in cases of this sort, I may mention that I remember the case of a kitchen-maid who was seized with violent convulsions (supposed to be hysterical) and comparative insensibility. She had continued in that state all the day in which she was seized, all the night, and all the following morning. I took thirty ounces of blood from her, and purged her with salts and senna, but she still remained insensible, and I then had her brought to the hospital. I ordered her two ounces of oil of turpentine, and in half an hour she was perfectly well. It had no purgative effect whatever; but after being insensible for two days and one night, notwithstanding she had been freely bled and purged, a full dose of oil of turpentine restored her completely. The symptoms of insensibility, of trismus, and of paralysis, will give way much better to this than to any thing else; but it is right in many cases to bleed, in consequence of the state of the head. The turpentine took no purgative effect till a dose of castor oil was given, and then it went to work directly. After this she had an attack of paraplegia, but from that she perfectly recovered. I believe, therefore, that in trismus, in hemiplegia, in delirium, and in continual stupor, provided you have a proper recourse to bleeding and purging, the best remedy is oil of turpentine. In common hysteria it is one of the best things you can employ. In the same class of medicines are the fœtid gums, and wherever you think proper to employ them, you may employ the oil of turpentine to the same advantage. It has the property of a strong purgative, though it requires to be set off by something else. You may give one ounce first, to see if that will do, and then follow it up by castor oil.

You frequently see nervous women in a state of what they call *the fidgets*. They cannot sit still a minute, and the state is exceedingly distressing. You sometimes see this removed by the warm bath, but it is best combatted by mild narcotics. Sometimes I have given opium, and, now and then, I have known prussic acid tranquillize them when nothing else would; but, in other cases, you will find other things do good. You find the shower-bath, if you can get them to use it, of great service. Besides this state of morbid irritability of mind and body, they are very perverse, and get great discredit by their bad temper; but I am satisfied it is a morbid state. They are very sulky. I have known them correct the medical attendant, scold, and even swear, and do all sorts of malicious things, pretending to be worse than they are. I have seen this so frequently, that I have no doubt whatever it is all a morbid state of mind. Some of these attacks will come on periodically, particularly at the menstrual

period; and when they fall into this extraordinary state, it can only be treated on the same general principles as common hysteria, removing fulness if there be any, and getting them to use the shower-bath.

You will find the pain of which I spoke, the morbid sensibility, a very remarkable circumstance, and you may frequently be deceived by it. I confess, that I knew nothing about it for many years. Females, with some slight hysterical symptoms, will say, they are so tender they cannot bear pressure; and such appears to be the fact. The least pressure gives them agony. If you press the integuments, or if you rub them, you find them instinctively turn away, shewing that it is situated in the skin. Sometimes it extends over the whole body even to the extremities, and sometimes it is confined to the abdomen. There is no pretence in all this, I am quite satisfied. I saw one young woman who had been in bed three months in this state. She had been blistered, and leeched, but without any benefit whatever. I saw one young lady, about nineteen, only to-day, who was lying in bed in this condition. The uterus, I understand, was disturbed, so that she menstruated scantily, and there was fluor albus. Her bowels were constantly costive, so as to require medicine. There was constant pain of the head, and much tenderness of the abdomen, so that any one would, without care, have thought it was inflammatory. She could not bear the least pressure, and yet there could be no inflammation, for the pulse was only 58, and the tongue was clean; and although there was much pain in the head and eyes, there was no drowsiness, no intolerance of light, and I had no hesitation in considering it a variety of hysteria. About two years ago I had a woman, 40 years of age, in the hospital, who, when I touched her, cried out as if I were going to murder her.

I have treated these cases on the same principle as neuralgia, supposing them to be an affection of the nerves, — viz. with iron, — and they have all done well. I have not found it so in that particular state called *clavus hystericus*, where the pain is all felt in one spot; but, where the pain is diffused, it is one of the best medicines that can be employed. As to hysteria at large I do not believe that iron has any power over it; it is only in those cases where there is debility that it is of use, and then it is not serviceable, I presume, from any specific power over the disease, but as being the best tonic which we have.

CATALEPSY.

There is a disease which is spoken of separately, but which, I cannot help thinking, is merely a variety of hysteria;—it is called *catalepsy*.

Symptoms.—In this form of the affection, the voluntary muscles will take on any state that you think proper to give them, and so they will remain. You may mould the body into any form you choose. If you take an arm, it is so limpid that you may mould it the same as a joint of meat. In this state consciousness and perception are sometimes entirely destroyed, and sometimes only partially so. Frequently the person is not aware of her existence, or of what is going on around; consciousness and perception are generally both absent. Dr. Gregory used to speak of the case of a lady who had undergone great mental anguish. Her history, he said, was like that of Isabella, in the tragedy of the Fatal Marriage, and she was seized with catalepsy. When she appeared unconscious, if her child were presented to her she gave signs of knowing it, but that was the only proof she exhibited of the least consciousness.

It is a disease which occurs more frequently in women than men, just as hysteria does; but, like hysteria, it sometimes occurs in males. There is a case mentioned by Bonet, of a deserter who was captured, and when taken shrieked violently, and then entirely lost his voice from the violent mental emotion. He was a man of no great courage. He became immoveable and unconscious, and then fell into catalepsy; so that you could mould him into any thing. This man neither ate nor drank, nor did he discharge his fæces or urine for twenty days, at the end of which time he sunk. Occasionally the affection has been periodical. Dr. Heberden mentions, in his Commentaries, that he once saw a case at St. Thomas's Hospital, which he visited from curiosity. The woman was thirty-six years of age, and had a paroxysm of catalepsy morning and evening. It usually continued from one to three hours, but on one occasion it lasted twelve hours. The fits came on without any warning; and during them, he says, the pulse and the breathing were natural; the eye was fixed, as if she were looking attentively on some object; the arm continued as it was placed for twenty minutes together, and once for a whole hour, and he was told that it would sustain a weight of seven pounds in any posture in which it was placed. The jaws were closed; but if the nostrils were closed, then the mouth opened for the purpose of breathing. A slight winking was noticed on approaching the finger to the eye—a little contraction of the iris. There was a case in the hospital a few months ago, but it was not under my care. It came on in paroxysms at one certain period; but I did not see the case.

It occurred, as hysteria so often does, in a girl.

The symptoms of the disease are not always regular: it is sometimes impossible to mould patients; they are perfectly rigid, and you can lay them out like corpses.

This is a disease not necessarily dangerous any more than hysteria, but it appears now and then to have proved fatal; or, at least, that state of the system in which it has occurred has proved fatal. You will find such a case mentioned by Dr. Gooch, and which has been published in the Transactions of the College of Physicians.

Diagnosis.—It is necessary in this disease, just as in hysteria and epilepsy, to ascertain whether the case is real. We are told that John Hunter discovered that a case of this disease was feigned, by putting a string round the wrist of a patient after the arm was extended, and appending a weight to it. The string was suddenly cut, and the man having no weight to support, the arm was immediately raised. It appeared to John Hunter, that the man had sustained the weight by the exertion of his muscles, and the string being cut, he instantly threw up his hand. Another device has been, to throw a person labouring under the disease into a cistern of cold water. If the disease be genuine it is supposed they will go to the bottom, but if not they will make an effort not to be drowned, and will struggle about. I should not, however, consider this any proof, because nothing is so good in hysteria as throwing a woman into cold water. You therefore see, that, in catalepsy, plunging the party in cold water is likely to stop the paroxysm; and, if the paroxysm be stopped, then the person may struggle about, and yet not be an impostor.

There was, however, it is said, a very ingenious mode of discovering whether the disease was feigned or not, put in practice by a physician, or at least by a practitioner, in the East. Pocock, in his travels, mentions, that a case of this disease occurred in one of the favourites of a celebrated caliph, or, at least, that one of his favourite damsels pretended that she was in this condition. Pocock says, that there was general sorrow throughout the palace; the women all sobbed, the eunuchs all groaned, and the Dey was distracted. He sent for all the royal physicians, ordinary and extraordinary, who used stimulants to soften the limb, and warm fomentations, but all in vain; when a man, who had cured the grand vizier, the prime minister, of some secret disease, was recommended to the Dey. This man was named Gabriel; and, having cured the grand vizier, he obtained a promise, that no offence should be taken at whatever plan he adopted to cure the lady. Being thus himself secure, the lady was brought into the presence of the court, with all the women around her, being covered with a fine muslin robe, flowing down to her feet. Gabriel ran up to the lady boldly, seized the hem of her garment, and endeavoured to raise it up, and expose her person. The lady modestly put down her hand to prevent the insult, when he immediately turned round to the caliph, and said, "Oh, defender of the faithful! so and so is cured." Here was a case of complete deception from the beginning to the end, and the poor man devised this ingenious means for detecting the cheat.

Treatment.—With regard to the treatment of the disease when it is real, I believe the best mode is to adopt exactly the same plan as in hysteria. In the paroxysm you should dash cold water on the patient, and give her oil of turpentine either by the mouth or the rectum. You should purge the patient well, and, if possible, remove any source of irritation that may be present. There are cases which, I have no doubt, will be best remedied by antiphlogistic measures, and the removal of plethora. On the other hand, there are cases which will be best treated by tonics. The general principles will be the same as in hysteria. I have never had to treat a case; but from what I have seen in other instances bordering upon it, I have no doubt but that the same treatment would answer very well.

TRANCE.

One of the curious forms of hysteria is long-continued insensibility, which is called a *trance*.

Sometimes there is continued insensibility for a few days or weeks, and sometimes for many weeks. Sometimes they will eat, if food be put into their mouths, and sometimes not. Sometimes they will wake for a few hours, or do certain things, shew some power over volition, and then fall into the same state again. Some will open their eyes, and then fall asleep again. Some, in this state, are perfectly conscious of what is going on around them, but cannot make the least effort. There is an instance mentioned of a female—these strange things generally occur in females—who was presumed to be dead. Her pulse could not be felt, and she was put into a coffin, and as the coffin lid was being closed they observed a sweat break out, and thus saw that she was alive. Of course she was not interred; and ultimately she perfectly recovered, and then stated, that she had been unable to give any signs of life whatever—that she was conscious of all that was going on around her—that she heard every thing—and when she found the coffin lid going to be put on, the agony was dreadful

beyond all description, so that it produced the sweat seen by the attendants. I have seen a case of this extraordinary insensibility—trance, as it is called—where the patient continued two or three weeks, with the exception of short intervals, in a state of insensibility, though not without signs of life, because the heart was still beating; and sometimes she did, in this state, certain voluntary things, and would afterwards be conscious of it. Sometimes she would be unable to do any thing, and yet retain her consciousness, so as to mention it afterwards.

Hysteria may prove fatal.—Hysteria, in these irregular forms, although for the most part a disease without danger, may become dangerous. I never saw a patient die of the disease till last year, and I then saw one young lady die after regular hysteria, and another die after a trance. In fact, two sisters were affected in the same way, one of whom died before I saw her, and I went to see the other. Although she was well supported every hour, as she lay apparently a corpse, yet I believe she sank at last. The other was a case of regular hysteria, and I concluded the patient would do well by ordinary treatment; but all at once she sank. Swelling of the hands came on, the pulse became weak, and she died; but why I cannot tell, for I could not obtain leave to open the body.

Stiffness of the Joints supervening on Hysteria.—It is a curious circumstance, but you will find it mentioned by Mr. Brodie, that hysterical women sometimes, when the hysterics are over, have an affection of the joints—evanescent stiffness of the joints, heat, and pain. In the young woman seized with hysteria at church, which ended in hemiplegia after she got rid of the hysterics, one knee was stiff, notwithstanding applications were resorted to for a month. Mr. Brodie, in one of his lectures published in the *Medical Gazette*, mentions the occurrence in the wrist, but, in my practice, I have seen it in various parts of the body. It is usually an evanescent state; but still it is sufficient to prevent the patient from using the parts.

At the next Lecture, I shall proceed to those diseases which are characterised by a want of motion.

OF THE ORGANS OF THE HUMAN VOICE.

By Sir Charles Bell,
K.G.H. F.R.S.L. & E. &c.

[Condensed from the Philosophical Transactions.]

In reviewing the writings of physiologists we observe defects which are obviously to be ascribed to the great complexity in the organization, and the real difficulty of the subject: but there are others which arise from the habit of resting contented with assigning one use for a part in the animal frame; whereas there is nothing which should more excite our admiration than the variety of offices destined to be performed by the same organ. It is in contemplating the extent of combination established among the parts of the human body, that we become sensible of its perfection above all comparison with things artificial; and this is especially true with regard to the organs of the voice. They are remarkable for their union or co-operation in function; they all perform more than one office, and are interwoven and associated with parts which serve a double or even a treble function. But we ought not to be surprised at the intricacy of structure in the human organs of voice, when we find them capable of imitating every sound of bird or beast, excelling all instruments of music in clearness and expression, and capable of making those infinite changes on articulate sounds which form the languages of the different nations of the earth.

Although there be one subject, articulate language—on which I shall principally comment, as being that in which the treatises on the voice are altogether defective; yet, as there are lesser points in which I think authors are in fault, I shall take the subject consecutively or systematically.

It will be convenient to divide the inquiry into three heads:—the *Trachea*, the *Larynx*, and the *Pharynx*.

Under the head of *Trachea*, and through the whole investigation, it is necessary to keep the different functions of the part in mind; or we shall be appropriating to the voice structures which have reference to other functions. We read that the trachea is formed of imperfect hoops of cartilages, joined by membranes, and that it is flat on the back part, for these reasons: that it may be a rigid and free tube for respiring the air—that it may accommodate itself to the motions of the head and neck—and that it may yield, in the act of swallowing, to the distended œsophagus, and permit the morsel to descend. This is perfectly correct; but there is a grand omission. Whilst all admit that a copious secretion is poured into this passage, it is not shown how the mucus is thrown off.

There is a fine and very regular layer of muscular fibres on the back part of the trachea, exterior to the mucous coat, and which runs from the extremities of the cartilages of one side to those of the other. This transverse muscle is beautifully distinct in the horse. When a portion of the trachea is taken out, and every thing is dissected off but this muscle, the cartilages are preserved in their natural state; but the moment that the muscular fibres are cut across, the cartilages fly open. This muscle, then, is opposed to the elasticity of the cartilages of the trachea. By its action it diminishes the calibre of the tube, and by its relaxation the canal widens without the operation of an opponent muscle.

The whole extent of the air-passages opens or expands during inspiration; and then the trachea is also more free; but in expiration, and especially in forcible expectoration and coughing, the trachea is diminished in width. The effect of this simple expedient is to free the passage of the accumulated secretion; which, without this, would be drawn in and gravitate towards the lungs. When the air is inspired, the trachea is wide, and the mucus is not urged downwards; when the air is expelled, the transverse muscle is in action, the calibre of the tube is diminished, the mucus occupies a larger proportion of the canal, the air is sent forth with a greater impetus than that with which it was inhaled, and the consequence is a gradual tendency of the sputa towards the top of the trachea. In the larynx, the same principle holds; for as the opening of the glottis enlarges in inspiration, and is straitened in expiration, the sensible glottis, by inducing coughing, gets rid of its incumbrance. Without this change of the calibre of the trachea, the secretions could not reach the upper end of the passage, but would fall back upon the lungs.

Experiments have been formerly made, which, although no such view as I now present was in contemplation, prove how the action of the transverse muscle tends to expel foreign bodies. The trachea of a large dog being opened, it was attempted to thrust different substances into it during inspiration; but these were always sent out with impetus, and could not be retained. Why the dog could not be thus suffocated is apparent; the tube is furnished with this most salutary provision to secure the ready expulsion of all bodies accidentally inhaled; the air passes inwards, by the side of the foreign body; but in its passage outwards, the circumstances are changed by the diminished calibre of the canal, and the body, like a pellet filling up a tube, must be expelled by the breath.

Looking on the form and muscular structure of the trachea in man, as providing for expectoration of the secretions poured into the tube, what shall we think of the tracheæ of birds, which are formed by cartilages of complete circles, and which have no compressing muscles? Does it explain the peculiarity, that all the air-tubes of birds are dry; that their lungs are motionless; and that in the air respired by them there is no moisture?

These are the reasons why I must reject the opinion of Portal, that the transverse muscle of the trachea is to give force to the breath in speaking.

The trachea, and all that portion of the windpipe which extends from the larynx to the lungs, may be considered as the porte-vent, or tube which conveys the air from the bellows to the reed of the organ-pipe; and it has even less influence on the quality of sound than the porte-vent. If this portion of the air-tube were to vibrate and give out sound, it would interfere with, and confuse those which proceed from the glottis. The imperfect circle formed by the cartilages of the trachea, and their isolation from each other, are ill suited to convey sound. But I am now to notice a more particular provision against the propagation of sound downwards by this passage.

If on inspecting a musical instrument we should find a spongy body of the consistence of firm flesh in contact with a cord or tube, and an apparatus by which this body might be pressed against the vibrating part, we would not hesitate to conclude that it damped or limited the vibration. The thyroid gland is a vascular, but firm substance, which, like a cushion, lies across the upper part of the trachea. Four flat muscles, like ribbons, arise from the sternum, first rib, and clavicle, and run up to the thyroid cartilage and os hyoides, over the surface of this glandular body. These muscles are capable of bracing it to the trachea. If it be admitted that the vibration of the trachea would only produce a conti-

nued drone, rising over the inflections of the voice and adding nothing to its distinctness, we may perceive in the adjustment of the thyroid gland to the trachea the most suitable means of suffocating or stopping the vibrations from descending along the sides of the tube.

Comparative anatomy is often a test of the correctness of our inferences drawn from the human body. I reflected that if I were right in my idea of this being one of the uses of the thyroid gland, there should be no such body, so placed, in birds: and that, following up the inquiry, if we were not likely to discover the function of that gland, we might nevertheless learn why it is so singularly placed. In birds the sounding apparatus is at the lower part of the trachea; the larynx being, in a manner, divided in its office. At the upper opening there is the structure, and action, and sensibility, constituting it a guard against foreign matter; but the proper organ of sound is formed on the lower extremity of the trachea and in the chest. Hence, in birds, there is this remarkable difference, that the sound must ascend along the trachea. Directed by this consideration, it is not without interest that we notice the absence of the thyroid gland in them; that the trachea itself is a firm tube with cartilages of entire circles; and that there is nothing to suffocate the rising vibrations. In no animal is the thyroid gland of the same relative magnitude as in man.

But it is easy to prove that the trachea has no influence upon the voice. Both in the open pipe or flute, and the pipe stopped at the bottom, as the syrinx, the length determines the note,—lengthening the tube depresses the note, and shortening it makes the sound more acute. A similar effect should result from the elongation and shortening of the trachea, if the changes of the voice depended upon it: but, on the contrary, the trachea is lengthened during the high note, while it is shortened as the voice descends, and the notes become graver. I have no ear to determine what harmonic sounds attend the human voice; but supposing that sounds proceed from the trachea, which is shortening, at the same time that they proceed from the upper part of the tube, which is lengthening, it is clear to demonstration that the two portions of the tube can never consent or keep any proportion in their vibrations.

For these reasons I apprehend that in the structure and condition of the trachea, the design manifestly is to suffocate the vibrations of sound, and so to impede the motions originating in the larynx from being propagated downwards.

Pursuing our inquiry into the organs of the voice independently of articulation, and looking more particularly to the larynx, we shall find that the common opinion is confirmed by experiment and every analogy, that the glottis is the primary seat of sound—the source of the vibrations communicated to the air as it is breathed. But to consider the motions of the glottis, and even the modulations of the air in the larynx, as the sole source of sound, would be incorrect. Ferrein described the edge of the glottis as being like the strings of the violin, and the air brushing over it like the bow. But even in that supposition, though the vibration of the string of the violin is necessary to the production of sound, yet that sound receives modification through the form and condition of the instrument. As the same chord, vibrating in the same time, will produce a sound the quality of which varies in different instruments, so will the sound of the chordæ vocales be influenced in the pharynx. As a tuning-fork, or a moveable musical instrument, will have the quality and power of the tone changed by its position and the material with which it is in contact, so will the vibrations of the human glottis be affected by the parts above and against which the sound is directed.

The breath, which plays inaudibly in respiration, becomes vocalized when the ligaments of the glottis, or chordæ vocales, are braced so as to cause the edges of the glottis to vibrate in the stream of air. In a wind instrument the air must be impelled with a force to make the sides of the tube vibrate; so, in the production of sound from the human organs, there must be a certain pressure of the column of air. But in the organs of the voice there is this superiority, that there are not only the means of regulating the pressure of the column of air, but of adjusting the vocal chords, so as to suit them to the most delicate issue of the breath. The metal tongue in the organ-pipe is, by lengthening or shortening it, accommodated so as to vibrate in time with the air contained in the tube. So is the edge of the glottis regulated; but with an apparatus for adjustment the most perfect.

Besides the adjustment of the vocal

chords, there is a very superior provision in the motions of the chest which supply the air, to that of any musical instrument. Although the organ has allotted to each note a separate pipe, whose relative dimensions are proportioned with mathematical precision, yet the air propelled through the pipes can never be so regulated as it is by the combination which exists betwixt the motions of the chest and the glottis. The church organ could not be made to approach the precision of adjustment in the human organs, were there as many pairs of bellows as there are pipes, and each adjusted by a weight or spring, to accommodate the pressure of air to the dimensions of the pipes.

Referring to the plates for the anatomy, I may continue my comment on the form and uses of the parts. The thyro-arytenoid ligaments, or chordæ vocales of Ferrein, are the lower ligaments of the glottis; they form the chink of the true glottis. These ligaments do not stand distinct from the sides of the tube, but the fine lining membrane is reflected over them. This membrane, sinking between the inferior and superior ligaments, forms there the sacculus or ventriculus laryngis. Another reflexion passes from the extreme point of the appendix of the arytenoid cartilage to the base of the epiglottis. These inflexions of the membrane of the glottis produce a considerable intricacy in the passage of the larynx. Nevertheless, when this piece of anatomy is fully displayed, the number of muscles inserted into the arytenoid cartilages, and the effect of their motions on the lower ligaments, point to these as the chief parts, and to the others as subordinate, in producing sound.

There are, however, circumstances which lead to the belief that the sacculus or lateral cavity of the larynx has much influence on sound. We perceive that one effect of this cavity is to hold off the inferior ligament from the side of the tube, and to give freedom to its vibrations. But the varieties in its size and form, exhibited by comparative anatomy, and the influence which some of the muscles of the arytenoid cartilages must have upon it, point it out as an essential part of the organ of sound; and the ear-piercing cries which belong to such animals as the Beelzebub ape, in which this cell is large, confirm the notion.

The seat of the vibrations which produce the voice is so fairly indicated by the whole anatomy, and confirmed by observation, that there is hardly an excuse for those experiments which have exhibited the motions of the chink of the glottis in living animals. It is, on the whole, better to wait our opportunity of inspecting these parts in action in man In consequence of wounds of the throat, I have had repeated occasions to witness the motions of the glottis in man, both during simple breathing and in speaking. On every inspiration the glottis is dilated. Upon asking the patient to speak, and encouraging him, when no sound proceeded, by saying that I could understand him by the motion of his lips, I have seen that in the attempt at utterance, the glottis moved as well as the lips. Although these occasions be too painful to admit of protracted experiment, I could not omit observing that there is a motion of the glottis in correspondence with the efforts of the other organs of voice.

Of the Pharynx, and of the formation of Articulate Sounds.—We come now to a division of our subject, which, notwithstanding its higher interest, has been imperfectly treated by authors, and where the actions essential to articulate language have been altogether omitted.

Tracing the volume of simple sound in its ascent from the glottis, we see how well the epiglottis is calculated to direct it on the passages above. Immediately over the epiglottis hangs the velum palati; this curtain is formed by certain muscular fibres, which draw down the mucous membrane from the back part of the bony palate into a great fold; whilst other muscles, their opponents, furl it up. This velum forms a partition which divides the mouth from the posterior cavity, arrière-bouche, or pharynx; and the velum, uvula, and arches of the palate vary their condition during the production of simple sounds.

When the parts are displayed, so that we may look on the outside and posterior aspect of the great bag of the pharynx, we see how well it is adapted for the office which I shall assign to it in the formation of the human voice. It presents to our view a flat expanded web, of a fleshy or muscular texture, and it extends from the base of the skull to the extremities of the horns of the os hyoides and those of the thyroid cartilage, between which it is stretched and held out. Behind, its connexions are loose; and as it forms a principal

boundary of the bag of the pharynx, the great cavity of that bag is directly in front of it. If we trace the pharynx upwards from the closed extremity of the œsophagus, we perceive the glottis opening into it below; whilst above, it is terminated by the posterior nostrils, and anteriorly by the mouth.

Considering the passage for the voice as one irregular cavity, extending from the glottis to the lips and nostrils, we shall find it subject to great changes, and powerful in its influence on the voice. For although the breath is vocalized by the larynx, both the musical notes in singing and the vowels in speech, are affected by the form and dimensions of this cavity.

Notwithstanding the ingenuity displayed in experiments on animals, to show that their cries proceed from the larynx, we have no authority to disregard the fact, that when a person who has divided the pharynx, and exposed the top of the windpipe, attempts to speak, no sound issues from the larynx. By great effort he may produce a noise; but any thing like the common effort of speaking is attended with no audible sounds. From this we must infer that the delicate vibrations, necessary to articulate language, are influenced not merely by the action in the glottis, but by the condition of the walls of the pharynx; the cavity into which the sound is thrown.

In this part of the air-passage we shall find an exact correspondence with the flute or pipe, in as far as it is lengthened during the grave sounds, and shortened in the acute. Even if it were proved that the note is made to rise and fall by the contractions of the glottis, the great apparatus employed to move the pharynx cannot be useless. We are countenanced in concluding, that as the tube of the organ is adjusted to the reed, so is the condition of the pharynx made to correspond with these contractions of the glottis. It is impossible to see a singer running up the notes to the highest, without admitting that there must be a powerful influence produced through the alternate shortening and elongation of the pharynx and mouth. To allow the cavity to be shortened in the greatest degree, the larynx is raised, and the lips retracted; on the contrary, the trachea descends, and the lips are protruded, to lengthen the cavities, and to give out the lower or graver notes.

Of Articulation.—In pronouncing the simple continued sounds, the vowels, and the diphthongs, which are the combinations of open sounds, the pharynx, at all times irregular, varies its form or dimensions, without interrupting or cutting the sounds. These sounds are universal and expressive. What we have now to consider are more conventional, and form the constituents of articulate language.

It has been imagined that the vocalized breath ascending into the mouth is there divided, and articulated by the tongue, teeth, and lips; and that this comprehends the whole act of speech. Such a description implies a very imperfect acquaintance with the actions which produce articulate language.

It is now my purpose to show, that in articulating, or forming the consonants, the pharynx is a very principal agent; and that this smaller cavity is substituted for the larger cavity of the chest, to the great relief of the speaker, and the incalculable saving of muscular exertion.

The late Dr. Young made a comparison of the power employed by a glass-blower, in propelling the air through his tube by the force of his cheeks, and in propelling it by the force of his lungs; and calculating the ease with which the lesser cavity is compressed in comparison with the greater,—that is, the cavity of the mouth compressed by the muscles of the cheeks, compared with the whole extent of the chest compressed by the muscles of respiration,—he concluded, that the weight of four pounds would produce an operation through the lesser cavity, equal to seventy pounds weighing on the larger cavity.

The quality of fluids, by which they transmit pressure equally in all directions, is the cause of this and of some other results which appear paradoxical. It is a property too nearly allied to mechanical power, and too important to be left out of the scheme of animal structure.

When a forcing-pump is let into a reservoir, it produces surprising effects. The piston of the hydraulic press being loaded with a weight of one pound, the same degree of pressure will be transmitted to every part of the surface of the reservoir, equal in magnitude to the base of the piston. And on the contrary, supposing the power to be employed on the reservoir for the purpose of raising

the piston, it would require the weight of a pound on every portion of the superficies of the reservoir, equal in extent to the base of the piston, to raise the piston with a force of one pound.

We cannot fail to notice the effect of this law on the cavities of the animal body, in diminishing the power of muscular bags in proportion to their increased capacity.

Elastic fluids are subject to a similar influence, from the pressure extending in every direction, and the resistance always being equal to the pressure. A man standing on the hydraulic bellows, raises himself by blowing into the tube; and contrariwise, the weight of his body does not produce from that tube a blast of air superior to the force of contraction of his cheeks. A very slight pressure against the nozzle of the common bellows will resist the compression by the handles; and by blowing into the nozzle, we may raise a great weight placed on the boards. To reconcile us to the influence of this principle, as applicable to the animal economy, we shall take an example before applying it to our present subject.

A sailor leaning his breast over a yard-arm, and exerting every muscle on the rigging, gives a direction to the whole muscular system, and applies the muscles of respiration to the motions of the trunk and arms, through the influence of a small muscle that is not capable of raising a thousandth part of the weight of his body. He raises himself by the powerful combination of the muscles of the abdomen, chest, and arms; but these muscles are controuled and directed by the action of a muscle which does not weigh five grains. The explanation is this;—a man preparing for exertion, draws his breath and expands his chest. But how is this dilatation to be maintained? If the muscles which expand the chest are to continue in exertion to preserve it so, there must be a great expenditure of vital force; besides, these muscles are now wanted for another office. The small muscle that closes the chink of the glottis suffices. It contracts on the extremity of the windpipe; and here, acting so as to confine the column of air, it is superior to the united power of all the muscles of the chest and trunk of the body which act upon the cavity of the thorax. However powerful the muscles of expiration may be in compressing the chest, their influence is very small on the column of air in the windpipe, the pressure there being no more than on any part of the walls of the chest, which is of the same diameter as the base of the tube. The closing of the glottis by this small muscle, throws all the muscles of the chest and abdomen, which are otherwise muscles of respiration, free to act as muscles of the trunk and arms.

But if any defect of the windpipe, or of the muscle which closes it, permit the air to escape, the muscles of the chest and abdomen sink with the falling of the chest; they become muscles of expiration, and lose their power as muscles of volition; consequently all powerful efforts cease in the instant. When an unhappy suicide thinks to perpetrate self-destruction by dividing his windpipe, his sensations of sudden and total failure of strength announce the accomplishment of the act; but he is deceived. In the moment of lunatic excitement, his energies are wound up, and his breath is drawn and confined; but now the trachea being divided, in the instant he is seized with feebleness; for the compressed air is let loose, the chest subsides, and the whole muscles of the trunk and arms are lost to the actions of volition. He feels as if struck with the sudden influence of death; his actual death depends on other circumstances.

Thus we perceive that the muscle of the glottis, not weighing a thousandth part of the muscles of the trunk of the body, controuls them all; changing them from muscles of respiration to muscles of volition; and this it is enabled to do on the principle of the hydraulic press.

We are by these instances prepared to understand the great importance in the animal economy, of power being employed on the lesser cavity in preference to the larger*; and how much will be saved if the appulse necessary in articulation be given by the pharynx in-

* The principle is as important in its application to pathology, as to the natural functions. It explains the weak pulse which attends the dilated heart; how the contractions of the uterus become more powerful in the progress of labour; and why the distended bladder acts with diminished power in the expulsion of the urine through the urethra. On the same grounds we understand how a slight spasm in the canal of the urethra will resist the most powerful contractions of an enlarged and thickened bladder, aided by the pressure of the abdominal muscles.

stead of by the greater cavity of the thorax.

In a person whom I had the pain of attending for a long time after the bones of the upper part of the face were lost, and in whom I could look down behind the palate, I saw the operation of the velum palati. During speech it was in continual motion; and when this person pronounced the explosive letters, the velum rose convex, so as to interrupt the ascent of the breath in that direction; and as the lips parted, or the tongue separated from the teeth or palate, the velum recoiled forcibly.

These facts lead us to the further contemplation of the pharynx. We see it to be a large cavity behind the palate, formed by a dilatable bag, and acted on by many muscles. We have seen that the volume of sound issues into it from the glottis below; and that although it opens into the nose above, yet this passage is closed, whenever the velum is raised, like a valve, in the manner just described; at such a time, if the mouth be also shut, the bag will be closed on all sides, and may then suffer distention by the vocalized breath ascending through the glottis.

In speaking, much of the sound, as of the vowels and diphthongs, is the uninterrupted issue of the vocalized breath, modulated by the passages, and differently directed, but not checked or interrupted. The consonants are the same sounds checked by the tongue, lips, or teeth. At the moment of this interruption, the pharynx, being distended, is prepared to give an appulse, by its muscular action, exactly in time with the parting lips.

If we grasp the throat whilst speaking, so that the fingers embrace the bag of the pharynx, we shall feel that each articulate sound is attended with an action of the pharynx; and preceding each explosive letter, we shall be sensible of a distention of the throat. By a close attention to the act of breathing, we shall perceive that whilst the distended chest falls gradually and uniformly, the bag of the pharynx is alternately distended and compressed in correspondence with the articulated sounds.

We can now conceive that if each appulse of the breath in speaking arose from the action of the chest, it would be attended with great and unnecessary exertion; since in proportion to the size of the reservoir, and the smallness of the tube that gives issue, would be the force required on the sides of the reservoir to produce an impulse along the tube. If each consonant and accented syllable required the action of the whole thorax, we should find that a man, in tead of being able to deliver an oration of some hours in length, would be exhausted in a few sentences; like a person who bellows and gives pain by the violence and consequent ungracefulness of his action.

Proofs of the Correctness of the Opinions advanced, drawn from the effects of accident and of disease occurring under the Author's observation.

1. A child having drawn the broken shell of an almond into its windpipe, was in momentary danger of suffocation, and could utter no sound until the shell was extracted by incision*.

2. Owing to disease of the glottis, it was necessary to open the membrane between the thyroid and cricoid cartilages; the voice instantly ceased; and no sound could be produced, while the air passed freely from the wound: "the harsh sawing sound of the air in the contracted glottis immediately ceased, and the air played easily with a siffling sound through the wound."

3. A small pebble having fallen into the glottis of a child, there was a stridulous sound in drawing the breath, but no voice in the expulsion of the breath.

4. When an ulcer had destroyed the margins of the glottis and the sacculi, the patient spoke in a husky whisper, "reedy and very feebly."

5. Thickening of the membrane of the glottis and epiglottis had a similar effect, the person speaking painfully in a whisper.

6. A man died of suffocation from a pustule, which formed on the margin of the false glottis; whilst he breathed, the sound was like the noise of a saw, harsh and loud.

7. The epiglottis being destroyed, and a deep ulcer in the sacculus, "the

* The probe was passed several times into the windpipe, and passed the broken shell without discovering it. It had been caught by the action of the transverse muscle, and the sharp broken edge forced into the mucous membrane; which was the reason that it was not coughed out of the wound.

man attempted to call, but with a husky sound."

8. When the interior of the larynx was coated with coagulable lymph, except the clangour, during coughing, the voice was quite gone.

9. When the suicide has divided the larynx from the tongue, and opened the pharynx, no sound issues from the larynx in his attempt to speak; and it requires a powerful effort to produce any sound at all. When the glottis is thus exposed, it is seen to move in the effort to speak.

10. The loss of the velum pendulum palati was attended with the defect of articulation; the sounds were run together and nasal.

11. When polypus fills the cavities of the face, the voice is deficient in sonorousness and clearness.

12. When a communication is formed between the mouth and nose, the sound is nasal, and the articulation imperfect.

13. The entire removal of the bones of the face deprived the voice of all force, and gave it a sound which we should have called nasal, had any part belonging to the nose remained.

14. The defect of nervous influence in depriving the muscles of the velum and pharynx of due tension (as in apoplexy) produces stertor or snoring. That this depends in a great measure on the relaxation of the velum, appears from this,—that changing the position of the head, so that the velum shall not hang against the back part of the pharynx, removes the distressing sound.

15. In extreme weakness, as from wounds and loss of blood even to insensibility, groaning proceeds from the condition of the glottis; as if the call for sympathy and assistance were intended to be the last effort of life.

By these facts it appears; 1st, That the trachea gives out no sound of itself; 2d, That when the passage of the trachea is much encroached upon, the column of air is not sufficient to move the cords of the glottis; 3d, That whatever interferes directly with the motion of the glottis, reduces the voice to a whisper; 4th, That when the larynx is separated from the pharynx, delicate sounds are not produced; and therefore an influence of the pharynx upon the stream of air is necessary to the production of such sounds; 5th, That any permanent opening or defect of the velum, which shall prevent the distention of the pharynx and the closing of the passage to the nose, renders articulation defective; 6th, That the removal of the cells of the face, equally with their obstruction, deprives the voice of its body and clearness; 7th, In nervous relaxation of the muscles of the throat, there is sound, but its nature evinces how much the proper action of the muscles is necessary to the voice.

A MEMOIR
ON
VESICAL LITHOCENOSIS*;
OR THE
Art of bringing away from the Bladder the
FRAGMENTS OF STONE
PRODUCED BY THE ACTION OF THE
Lithotriptic Instruments.

By C. A. S. Heurteloup, M.D.

Lithotripsy presents two principal problems for the surgeon to solve. The first is to break down the calculus, and the second to bring away the broken particles.

The efforts of surgeons hitherto have been exclusively directed to the solution of the first problem, which naturally demanded the more immediate attention.

It was always of the greatest importance to bring away the detritus in cases where the contractile power of the bladder was not sufficient to expel them, for if the fragments remain in the organ, the comminution of the stone would of course be useless.

There are many patients too, who, from a morbid or perverted sensibility, or from natural or acquired anomalies in the conformation of the parts, prevent the stone, when reduced, from being ejected. In such cases the hope of recovery is slight. Many instances might be given of patients being unable to void the fragments on account of the neck of the bladder being obstructed by fungous prominences or swollen veins. Others from an enlargement of the prostate gland compressing the neck of the bladder, and just allowing the urine to escape without any prosilient force. The same effect may be produced by the

* λιθος lapis, κενωσις evacuatio.

tumefaction of the third lobe of the same gland; and, finally, in other instances, the free issue of the detritus is prevented by an irregularity in the irritability of the bladder, causing the muscles of retention, and those of expulsion, to contract at the same time, and thus obstruct the flow of urine, which can only be full and strong when the contractile agents proceed with a synchronous action. In fact, to support such a stream of urine as is adequate to carry away the calculous fragments, the muscles of retention must relax, whilst those of expulsion contract.

If we reflect on the numberless causes which may oppose the natural ejection of the broken portions of stone, we must admit the urgent necessity of inventing suitable means for their removal, and may feel surprise that lithotritic surgeons should have considered their art complete whilst such palpable deficiencies existed. Having met with many cases in which the necessity of contrivance for the abstraction of the retained particles was manifested, I have endeavoured to supply such a desideratum. At the commencement of my practice, I was grieved to meet with several patients whose condition, from causes already described, was such as to preclude all hope of recovery or relief. But more recently I have experienced a satisfaction proportionate to my former chagrin, in the successful application of an instrument which seems equal to all the wants that existed.

It may perhaps be advisable to give a general idea of the means which, even before the invention of lithotrity, were employed to bring away gravel, or the fragments produced by the spontaneous division of stones in the bladder. These means were not only feeble, but extremely dangerous in their application.

The first instrument chosen for this purpose was merely a gum-elastic catheter, which was introduced into the bladder, in order that the *débris* should be carried through it with the urine, and that the larger pieces should be extracted by becoming entangled in the eyes or terminal apertures of the canula.

The second instrument was one proposed by myself. It was a metallic catheter, of which the stilette was to facilitate the carrying away of the sabulum, by allowing frequent injections of water. This stilette was also intended to serve in the comminution of such particles as might become entangled in the eyes, and project too much to admit of the withdrawal of the catheter.

It may easily be conceived, that the first of these means afforded very insufficient assistance, and must occasionally have subjected the patient to such serious mishaps as the laceration of the urethra by the spiculæ of the projecting fragments; and that the second, although a little more efficient perhaps, exposed the surgeon in an equal, or even in a greater degree, to the danger of lacerating the urethra. The metallic catheter being larger than the gum-elastic one, and consequently admitting the entanglement of larger pieces of calculus, such as the stilette had not power to break, and being but imperfectly constructed, proved, ultimately, but of little use. When a large piece of stone became fixed in the eye of either of these instruments, it occasionally became impossible to disengage it, and being drawn into the urethra, the surgeon has found himself in the dangerous dilemma, of either forcibly pushing the instrument back into the bladder, which is often impracticable, through the barbed position of the fragment, or, which is sometimes the only alternative, by dragging it out with violence. No wonder can be expressed that laceration of the urethra, and sometimes infiltration of urine, should occur.

Unfortunately I have myself to deplore a similar unfortunate case. An old man of 82 years, upon whom I had operated successfully, was unable to expel the detritus. In order to help him, I employed the metallic catheter just mentioned. At first a considerable quantity of the powder came away, but a fragment having lodged in the eyes, and the instrument being drawn into the urethra, I could not by the most persevering endeavours rid myself of it. The only alternative left was to draw the instrument towards me: notwithstanding all the care and precaution with which I did this, the urethral lining was torn, and an infiltration was the consequence. As several fragments remained in the bladder, this was a state of things which required that lithotomy should be forthwith performed, and this was accordingly done.

Struck from this moment with the fearful consequences of an accident arising from the inability of certain patients to evacuate the reduced portions of stone,

I undertook, with the greatest fear and unwillingness, any cases in which I could not foresee almost a certainty of the fragments being readily expelled by the spontaneous efforts of the bladder, and I even declined operating upon several, from these just apprehensions. Amongst these were a considerable number of patients advanced in years, and whom I considered unfit for lithotripsy, from their possessing, in addition to some of the usual causes which impede the expulsion of the urine, so little contractile power of bladder, as to render their recovery tedious or hopeless.

The only way in which the beneficial effects of this important operation could be extended to old men as well as to adults, under these unfavourable circumstances, was to construct an instrument presenting large openings, and a capacious tube for the easy passage of the fragments, and possessing the indispensable property of preventing in every case the laceration of the urethra, whilst it invests the surgeon with absolute power over the fragments.

Such are the properties possessed by the *evacuating catheter*, which constitutes the subject of this paper. This instrument is composed of two different parts, the tube through which the fragments are to be expelled, and that part which serves to comminute those pieces of stone which are too large to pass through the tube.

The first is simply a steel catheter, varying in size according to the capacity of the urethra, it being a point exactly to fill that canal. It presents nearly the same curve as the common sound, and may be distinguished into a vesical and extra-vesical extremity. At the vesical extremity is a sort of cap, about *five* or *six* lines long. It is screwed to the body of the catheter, and forms its term; at an inch from the end are placed two large oval apertures, or eyes with smooth round edges. These openings are exactly opposite each other.

The extra-vesical extremity is quite straight. On this is fixed a stopcock, communicating with which is a cavity lined with cork, for the purpose of receiving the pipe of the syringe with which the bladder is injected. Opposed to the stopcock is a ring for the more secure holding of the instrument.

The other part of the instrument which I have called *stilette brisé*, or pointed stilette, is a solid piece of steel, presenting also a vesical and extra-vesical extremity. The former is composed of a succession of pieces of steel, so hinged together as to combine flexibility and strength. It also forms a definite curve, corresponding to the curve of the canula. At the extra-vesical extremity there is a large flattened portion, which may be grasped readily and firmly.

It may easily be conceived, that when this instrument is passed into the bladder, and an injection of water made, all the small particles are washed away by the returning stream; but fragments three or four lines in diameter less frequently pass through the catheter, and generally lodge in the eyes, which, being of considerable size, and placed precisely opposite each other, are well adapted to entangle them. This circumstance, which was embarrassing when occurring during the employment of the instruments first invented, may be considered favourable, now that we possess the means of turning it to advantage.

When a fragment of considerable dimensions has fixed itself in the eyes of the catheter, and the flexible stilette just described is introduced, it is prevented from reaching the end of the tube by the fragment, which is broken by an impulse communicated to the stilette. The resulting particles are either repelled into the bladder, or carried into that part of the cavity of the catheter which is situated beyond the eyes—a part about an inch in length, and which has been named the "magazin." This process of catching and reducing the larger fragments may be carried on until the whole of the "magazin" is filled.

When this is done, the instrument is withdrawn, the top unscrewed, and the *debris* set at liberty. If necessary, the catheter may again be conveniently introduced. These fragments, which may have fallen from the eyes into the bladder, will easily be washed away by the injected water.

There is nothing to be feared, even if the canula with a piece entangled be drawn into the urethra, for the fragments would be immediately broken and the tube withdrawn, leaving the fractured particles in the urethral canal to be washed away with the first discharge of urine. This circumstance of a fragment being drawn into the urethra, certainly the most disadvantageous

that can occur, is unattended with danger, and can indeed hardly ever happen, because the "eyes" being opposite to each other, the arrest of the fragment is indicated to the surgeon by a stoppage in the stream of water the moment these apertures are drawn to the neck of the bladder, and as it is at this spot the fragments enter the holes, it is never necessary to retract the instrument further into the urethra, and the possibility of laceration is avoided.

Thus the evacuating catheter is not only adapted to bring away the calculous fragments, but also to their comminution, a property which entitles it to the appellation of lithotriptic.

The instrument may be straight or curved, according to circumstances; for there are cases in which sometimes one form, and sometimes the other, is objectionable. When the straight tube can be employed, it affords the surgeon the advantage of turning it on its own axis, and thus varying the position of the eyes, and directing them to different parts of the bladder. This advantage is important, and I have observed in general, that a larger quantity of detritus is more quickly obtained with this form when it is applicable; but it is more irritating and difficult of application.

A MEMOIR ON URETHRAL LITHOCENOSIS;

Or the Art of bringing away from the Urethra the Fragments of Stone produced by the action of Lithotriptic Instruments.

In the preceding memoir I have endeavoured to shew that this part of lithotripsy, though secondary, is of sufficient importance to merit the attention of the profession. It is quite clear, however perfect the instruments may be which serve to comminute the stone, that if a patient be unable to expel the broken portions by his own efforts, or if the surgeon possess not the means of removing them, little progress can be made towards recovery. Many patients evacuate the detritus with facility, but many others are totally unable to do so, or do so only with extreme difficulty. In the first case, the surgeon should acquire a power over them whilst in the interior of the bladder; and in the second case, he ought to facilitate their progress through the urethra. I have already described the "*sonde evacuatrice*," which I first laid before the Academie Royal, and with which the first of these indications may be accomplished. I shall now proceed to demonstrate the means by which the second object may be attained.

It is obvious at first sight how important is a sound and healthy state of the urethral canal; a fragment entangled in it doubly endangers this passage; for being sometimes of considerable size, and frequently hard and angular, it may prove injurious by the irritation which its mere presence occasions, or by lacerating the delicate lining of the urethra in our attempts to extract it. In this way a fragment may occasion the indefinite postponement of the lithotripsic operation, or its total abandonment.

The instruments that have hitherto been used for extracting calculi, or fragments of calculi, from the urethra, are Hunter's forceps, Sir A. Cooper's forceps, and the three-branched forceps of Leroy. This last instrument, it has been said, has even been employed to perform *urethral lithotrity*.

For a long time I had recourse to these three instruments, but I regret to state that, except in cases of very small fragments, the most cautious attempts were attended with increase of pain and irritation, and by inflammation, without obtaining the desired result of removing the fragment. These unfavourable issues were of the more importance, as they became obstacles to the safe completion of operations; for, besides an increase of sensibility, tumefaction, and even permanent contraction of this canal, were the consequences.

It appeared to me, therefore, a matter of necessity to ascertain on what depended the extreme difficulty of grasping fragments lodged far back in the urethra. The result of my investigation was, that the difficulty arose from, 1st, the rigidity which the suspensary ligament gives to the urethra when it is depressed; 2d, the great contractile power of the posterior portion of the urethra; 3d, the property of dilatation possessed by this canal beyond the triangular ligament, which enables it to receive fragments of calculi too bulky to pass through the fibrous unyielding ring of that ligament; 4th, when the fragments have passed the opening in the triangular ligament, a difficulty occurs at the bulb, which, however, is more due to the instruments resorted to, than to the organization of the part.

From the triangular ligament to the meatus urinarius, the urethra is nearly of a cylindrical shape, its greatest diameter being nearest to the triangular ligament; it is almost entirely free from contractions, and may be reduced to a perfectly straight line, circumstances favourable to the use of good instruments. None of the instruments quoted, however, were adapted to remove from this part the obnoxious portions of stone with sufficient accuracy. Suppose the offending fragment seized, the branches of the instrument, acting by their own elasticity, are not sufficiently under the controul of the surgeon; sometimes the asperities of the foreign body are held by the sides of the urethra, and the operator has no power to loosen or break the fragment, or to dilate the passage. These instruments also are not calculated to lay hold of the anterior projections, or asperities, of the fragment, and draw it along the urethra; they can only act by interposing their branches between the urethra and the retained body. To do this in a majority of cases is impracticable; the lithotripsic operation is consequently impeded or suspended, and the pieces of calculus remaining in the bladder frequently irritate it to such a degree, as to compromise the success of the operation.

Influenced by these considerations, I have endeavoured to establish a few simple and precise rules for my guidance under the circum-tances described, and to invent instruments fitted to surmount the difficulties. Bearing in mind the greater facility with which a fragment may be seized before than behind the triangular ligament, it became necessary to devise a different plan of treatment for each case. The portion of urethra situated behind the triangular ligament presents the appearance of a cone, having its base opening into the bladder. This indicates the propriety of pushing the fragment, when lodged there, back into the bladder; but when placed before the triangular ligament, its immediate extraction is the most plain indication.

I first attempted to repel the fragments into the bladder by introducing a straight or curved metallic sound; but I seldom succeeded in this way, for the spiculæ irritated the urethra to contract and grasp the stone more tightly; and if even the membranous part were passed, the fragment was sure to lodge in the prostatic "cul de sac." I soon discovered that a flexible gum-elastic bougie, *originally bent on the last*, and not by a metallic stilette, always penetrated easily as far as the fragment; and I could in this way ascertain with much accuracy its presence, its situation, and even its form. I also observed, that, when the bladder was empty, the stone or fragment was detained firmly by the sides of the urethra, but when the bladder was full it was easily pushed back into the bladder; and the facility of this was the greater if the bougie were pushed forward at the moment that the patient gave way to a desire to make water. This is caused by a degree of dilatation induced in the prostatic and membranous portions of the urethra, at the moment the bladder contracts.

Upon these two facts I have founded a plan of proceeding which has never deceived my expectations. I have invariably succeeded in relieving these parts of the urethra by driving back the intruding substances into the bladder.

After carefully introducing as far as the fragment, but without pressing against it, the elastic bougie abovementioned, I gently throw an injection into the bladder, until the patient feels a strong inclination to make water. I then compress the urethra on the catheter, which at this moment is plugged up, and I feel that the urethra is distended by being filled with water. A little of the fluid is then allowed to flow out, in order that the first spasmodic contraction should cease; and it is only when the patient ceases to experience so strong a desire to expel the water that the compression of the urethra on the catheter is discontinued, and, at the same moment, the catheter is made to advance into the bladder. By seizing the moment when the urethra is as much dilated as possible, the fragment is found to be less firmly retained, and obeys the impulse of the catheter.

I know it has been proposed, with the perce-pierre, to seize and pulverize, in this part of the urethra, fragments, or even entire calculi. It has been stated that such operations have been performed, not merely in this delicate part, but upon large calculi, and where strictures have existed. Had not these statements been made with such assurance, I should doubt the practicability of such an operation, which has been termed, by its historian, *urethral lithotrity*. In

the natural state, these parts do not allow of the expansion of a three-branched instrument containing a drill, and the fibrous ring of a triangular ligament forms an impediment even more unyielding. We may infer from these facts, that it is possible to be so far deceived as to imagine that we are comminuting calculous bodies in the urethra, whilst we are really working in the bladder. Here, I think, we may lay down a rule: when a calculus, or a part of one, is lodged behind the triangular ligament, we ought, if it be of moderate size, to push it back into the bladder in the way I have described; but if the body be firmly fixed in the prostate gland, and cannot be impelled into the bladder without seriously endangering the tissues, the knife must be had recourse to, and not "*urethral lithotrity*," which, even *if practicable*(?), would be infinitely more perilous.

To remove calculous pieces from the section of the urethra anterior to the triangular ligament, I adopt a somewhat different process. Generally speaking, fragments which escape thus far are not of very large size, having had to pass through the ring of the triangular ligament. It sometimes happens, however, when this ring is naturally large, or from some other accidental circumstance, that bulky pieces of stone get into the bulbous portion. It may immediately be ascertained whether a fragment has reached this part, for, if so situated, it will come in contact with a straight metallic sound when introduced into the urethra and raised to the abdomen before its point reaches the posterior part of of the "cul de sac" of the bulb; a part which exactly corresponds to the opening in the triangular ligament. This mode of exploring is so accurate, that if a sensation of stone is imparted to the sound at the time it reaches the "cul de sac" just mentioned, and is impeded by its soft sides, we may feel assured that the fragment is circumscribed by the aponeurotic circle of the ligament. In this case, it is advisable to wait; for the fragment having been propelled so far, will soon arrive at the bulbous portion, and come more under the control of the surgeon. If the piece of calculus, however, should remain too long in this situation, an injection must be made, as if to repel it into the bladder; but, instead of doing this, the elastic catheter must be quickly withdrawn, as soon as the patient feels a strong desire to make water, and the urethra must be compressed, in order to prevent the escape of the fluid. When you feel the urethra distended with the water, you suddenly cease compressing it, and the fragment, by the force of the current behind it, is propelled from the strait in which it was retained, and rests in the bulbous portion.

The anterior part of the urethra forms an elongated cone, the base of which is at the triangular ligament and the apex at the meatus urinarius: this is a circumstance I have availed myself of in my mode of proceeding.

I have represented the disadvantages of the instruments hitherto designed to remove fragments from the urethra, and occupied myself in devising others better adapted to the purpose. I constructed and tried a great many, and have ultimately arrived at two—the one adapted to seize fragments of a size to be brought two or three inches from the external orifice of the urethra, and the other adapted for the prehension of fragments of such a magnitude as to be detained far back, and which consequently require to be comminuted on the spot. The former operation I perform by the most simple means. The instrument best adapted to this purpose is a pair of *dressing forceps*. The facility with which the branches of this forceps may be opened and closed—the freedom it allows to the hand of the surgeon—the force with which a fragment may be seized—the small size to which the extremities of the blades may be reduced—its power of holding a piece of stone by its anterior part—its not requiring, in order to complete its seizure, to envelop the stone—the possibility of breaking the fragment without having it entirely between the branches of the instrument; were the circumstances which led me to choose this forceps as the basis of the mechanism I have invented for the purposes described.

I was anxious, at first, to unite in the same forceps the power of seizing and drawing a fragment along the urethra, with the power of comminuting it. I soon found, however, these two properties quite inconsistent in the same instrument, for the longer the forceps were made the less was the force it could exercise. It was, therefore, necessary to construct two instruments — the one

adapted to seize, and the other to break down.

The first pincers which are employed to seize fragments situated far back in the urethra, but anteriorly to the triangular ligament, is the longest; it consists of two straight blades, which are articulated in the usual form, and terminate in two rings at the manual extremity. It differs from the common dressing-forceps in having the blades longer, more concave on their internal aspect, narrower, and not in contact at any point of their length. The ends are rounded, polished externally, and serrated on the inner surface by transverse grooves. This forceps may be made to expand sufficiently to grasp a fragment without opening the instrument to a greater extent than the urethra will safely allow. It passes easily as far as the fragment, which may be accurately examined, secured by its anterior part, and gently drawn along the urethra. Should a piece of stone be inconveniently placed, so that its asperities are opposed to the sides of the urethra, with this instrument this canal may be dilated at the proper spot, the fragment may be moved in any direction, its longest diameter made to correspond to the axis of the passage, and, in short, all the manœuvres necessary to bring away the fragments may easily be performed.

The breaking-down is effected with another pair of forceps, which are shorter, thicker, and consequently stronger. This instrument resembles the last described, except that the blades are short, and of which the extremities come near enough to hold a fragment, but not so near as to pinch the sides of the urethra. As soon as the fragment is seized by this instrument, it yields immediately under the pressure of the branches, and the broken portions are voided without difficulty. Since the adoption of these two instruments, I have not had to deplore a single case in which the success of the operation has been prevented, or even retarded, by the entanglement of calculous fragments in this urinary canal. These I have, in a few instances, observed to accumulate in the urethra, the one behind the other, in such a manner as to resemble a small elongated pouch. By a recourse to the means above described, such unfavourable occurrences have been obviated with considerable ease.

I have before remarked that large fragments sometimes get into the membranous and prostate portions of the urethra, and during a great dilatation, from whatever cause, of these parts, are propelled through the foramen of the triangular ligament, and remain fixed in the bulbous portion at such a distance from the meatus as to prevent their comminution. This depends on the fragment being too tightly held by the sides of the urethra. Under these circumstances, it may easily be conceived that more refined means must be resorted to if we wish to preserve the urethra uninjured. To draw such a fragment along would expose the urethral lining to inevitable laceration. In such cases, the only manner of overcoming the difficulty is to comminute the portion of calculus in its resting place; but before breaking it, it must be secured; and, unfortunately, there is no space left between the fragment and the incumbent tunic.

When I commenced practising lithotripsy, the instruments with which I sought to seize and break down fragments so situated were an instrument similar to Hunter's two-branched forceps, and the three-branched forceps divested of its hooked extremities. Both of these instruments carried a drill for perforating the fragment, if the pressure of the branches alone did not suffice to break it down. I soon found these instruments were not suited to the end desired, for I frequently could not, without considerable force, succeed in passing the branches, *all at once*, between the fragments and the sides of the urethra, which was a necessary preliminary step.

My first idea was, that if I could not pass the branches of the instrument between the calculus and the urethral lining, I might perhaps find it possible to bring the fragment between the branches of the instrument expanded and placed before the body to be seized. The expanded forceps dilating the urethra, I thought I might with ease, by means of a secondary instrument, similar to the "pince servante" of the "evideur à forceps," draw the fragment within the grasp of the "pince maîtresse." I thought that I might, without exposing the urethra to injury, render myself master of a fragment which, once seized, would be easily destroyed by an *expanding drill*,

similar to the *perforators* of the "*evideur à forceps.*" When the fragment was thus reduced, the branches of the instrument might be closed, and the detritus of the fragment would be left in the passage, to be expelled by the first flow of urine. Such are the indications which I have fulfilled by the instrument I am now to describe. It consists of a four-branch instrument, similar to the one used to excavate large round calculi; the branches are moveable separately, but are not terminated by hooked extremities, and by a peculiar mechanism, may be simultaneously propelled from the tube which contains them.

It will readily be understood that when this instrument is introduced as far as the fragment, and then expanded, it will dilate the urethra. When this dilatation is obtained, I introduce, through the *principal forceps*, another smaller one, resembling the "*pince servante*," composed of two branches, which seize the fragment, and gently draw it within the funnel-shaped space presented by the four expanded branches of the principal forceps. This being effected, the four branches are drawn together, and the calculous morsel is firmly held, and then broken by the action of an expanding drill, the tongue of which is projected in the interior of the hole first perforated; this completely breaks it up, and leaves in the urethra, instead of a large hard portion of stone, a fine detritus. The branches are, after this, drawn into their tube, and the instrument withdrawn without the slightest risk of injuring the urethra, and the reduced particles are carried away by the first flow of urine. Before attempting to move the fragment, the urethra is carefully dilated, and the action of the drill confined wholly to the fragment, of which no portion can adhere to the forceps, and thus excoriate the urethra.

These mechanical combinations complete the series of means I have devised to remedy one of the most serious difficulties connected with lithotripsy. They also form a complement to the labours I have undertaken with a view to the remedying of calculous disorders without resorting to the knife.

TWO CASES OF NON-CONTRACTION OF THE UTERUS AFTER DELIVERY, *WITHOUT* HÆMORRHAGE.

To the Editor of the London Medical Gazette.

SIR,

THE degree of hæmorrhage from the uterus after delivery is generally considered to be in proportion to the contraction of that organ—at least so it is laid down by writers on midwifery—and daily experience confirms the truth of the observation. I am induced to believe that the exceptions to this rule are more numerous than is generally supposed, though I am quite unable to say on what peculiarity these exceptions depend. The following are the leading facts connected with two cases which seem to bear directly on the point in question.

I was sent for at 6 o'clock in the morning to Mrs. D——, æt. 20, who had been in labour with her first child for nearly three days. I was told that the waters had broken the preceding night; and that at 4 o'clock this morning, while walking about the room, a severe pain came on so suddenly that she had scarcely time to lie down before the child was born. The woman who was with her had attempted to bring away the after-birth, but not being able to succeed, requested my assistance. On arriving, I found her without any symptom of exhaustion, *the bed-clothes were scarcely soiled*, and the placenta, which I had been told was not come away, was lying between her legs, *with the membranes still in the vagina.* On applying my hand to the abdomen, I was surprised to find the uterus uncontracted, with the exception of a small portion, which felt hard and round, and was situated a little below the umbilicus. The degree of force which I thought it safe to employ not being sufficient to withdraw the membranes, and fearing internal hæmorrhage, I determined to introduce my hand. This I did without difficulty, and apparently without causing much pain. I found the uterus divided into two chambers, the upper one being very small, and separated from the lower by a stricture scarcely sufficient to admit the passage of the finger. By this stricture the membranes were retained. Having succeeded in dilating it, and thereby releasing the mem-

branes, I endeavoured, by the movement of the hand within, and the application of cold without, to excite the contraction of the first chamber. This I was unable to accomplish; and as there was no hæmorrhage, either internal or external, I ventured to withdraw my hand. I then applied a bandage tightly round the abdomen, and watched the result. My patient soon fell asleep; no untoward circumstances occurred. During the first twenty-four hours, three cloths only were soiled; and at the end of a week the nurse said the lochial discharge had been scantier than usual, and not a single clot had been discharged.

In the second case the patient's strength had been so reduced by long and severe illness that her friends were of opinion she could not survive, if, indeed, she lived to the time of her labour. Before I arrived the child was born, but the placenta had not come away. There was no hæmorrhage, and the uterus felt large and uncontracted. An hour having elapsed, and the usual means of exciting uterine contraction having been tried without success, I introduced my hand, and found a similar state of things to that described in the last case, but the placenta adhering to the fundus uteri, and inclosed in the upper chamber. Having dilated the stricture, and separated the mass from its attachments, I gradually withdrew my hand from the still uncontracted uterus. The subsequent discharge was not more, in fact hardly so much as usual.

The above cases will be found to have two features in common—*absence of hæmorrhage, and contraction of a small portion only* of the uterine cavity, that portion probably to which the placenta was attached. How far the two are to be viewed in the relation of cause and effect, future experience will probably enable us better to determine. It would not be difficult to enumerate several cases in which the same disproportion seemed to exist; but as their other circumstances were not such as to require the introduction of the hand, the exact state of the uterus could not be ascertained.

The late Dr. Gooch, in a paper on a peculiar form of hæmorrhage, &c. has described a state of things precisely the reverse of this, viz. profuse hæmorrhage from a uterus contracted to the degree which commonly indicates security, and he adds, "I have ventured to do what is seldom justifiable—separate the placenta before the uterus had contracted, without more hæmorrhage than after a common labour." A like practice was adopted in the foregoing instances, and with a like result. The question still remains, what is this circumstance which has so great an influence that its presence can cause a moderately contracted, uterus to bleed profusely, and its absence can cause an uncontracted uterus to bleed scarcely at all?

The experience of some of your valuable correspondents can perhaps supply an answer to this interesting inquiry.

Your obedient servant,

FREDERIC B. GLASSPOOLE, M.D.

Physician-Accoucheur to the Brighton Lying-in Institution.

Brighton, Feb. 4, 1832.

MEDICAL GAZETTE.

Saturday, February 16, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

COLLEGE OF PHYSICIANS—FELLOWS AND LICENTIATES.

LORD MANSFIELD's opinion that the bye-laws of the London College of Physicians "required regulation," as we observed last week, was not lost upon those whom it chiefly concerned, and the bye-laws were "regulated" accordingly, —under the superintendence of skilful lawyers; they were confirmed by all the requisite formalities, and have been acted upon by some of the most authoritative judges who ever sat on the bench. The hope that any flaw exists in them is therefore visionary, and calculated only to lead the Licentiates away from the path by which they may attain whatever in reason and justice they are entitled to. But these same bye-laws call for a few further remarks. The object was, to obviate the legal objection that the College could not "exercise their own judgment;" and they ingeniously devised a mode, by which they proved how unwilling they were to *exceed* in the exercise

of so novel a privilege. The addition to their body of those Licentiates whom they might think worthy of that distinction, was to be made in two ways; first, by the nomination of the President, confirmed by ballot; and, secondly, by a more circuitous proceeding, conducted in the following manner:—A Licentiate having been such for seven years, and having attained the age of thirty-six, if proposed by a Fellow, and the proposal were seconded by another, was entitled to a ballot, to decide whether he should be admitted to an examination for the Fellowship. If this preliminary step were conceded, he was then to be examined by the whole College, at one of their *comitia majora;* after which, of course, another ballot was required to decide whether he should be admitted or not *. This, to be sure, was not opening the door very wide, and abundance of appliances were at hand by which it might still be closed against any Licentiate bold enough to challenge so precarious a contest. Still this might probably be considered as an ordeal which, though severe, was yet not insurmountable; and the obstacles to the Fellowship we might presume were made great, that greater might be the honour of overcoming them. Would that we could allow to the framers of the regulation even this questionable defence; that we could record any solitary instance in which they had shewn the sincerity of their intentions; or that, by any stretch of charity not repugnant to common sense, it were possible to hold them blameless! We look to facts. No Licentiate has ever been admitted on the strength of this bye-law. Dr. James Sims, Dr. Stanger, and Dr. Wells, severally made the attempt, on the faith of it, but all without success, although the last gentleman was proposed by Dr. Pitcairn, and seconded by Dr. Baillie. Indeed, the only instance we are aware of, in which there was any real prospect of its being carried into effect, was in the case of the late Dr. Pearson; and the circumstance of his coveting the distinction at the period he did, while it excites our astonishment, serves at the same time to illustrate the strong and enduring nature of those feelings with which some of the Licentiates contemplate their exclusion from the College. The bye-law in question, then, though made more than half a century ago, has not hitherto accomplished for any aspirant even the preliminary step of an examination, and has therefore proved wholly nugatory as regards the Licentiates, though an useful safety-valve for the College against the charge of working their monopoly under too high a pressure.

As to the other bye-law, which enabled the President to nominate a Licentiate at certain intervals to the Fellowship, it is by far the most skilful move that the College ever made. It has many bearings, and in all its aspects shews in favour of the Fellows. The distinction is felt as a compliment which the party to whom it is offered thinks he cannot well decline; it is paid to those whose situation in society makes them most prominent and conspicuous; the acceptance carries with it a feeling of delicacy, if not a moral obligation, on the part of the Fellow thus selected, to stand by those who have adopted him; while the hope of being chosen in their turn, keeps the rising men among the Licentiates on their good behaviour. Besides this, the relative change effected is, in every instance, in favour of the Fellows as a body, and against the Licentiates; the former acquire a value which the others lose—the weight, importance, and influence of the one body, is increased precisely in the same ratio as the other is diminished. The very spirit of liberality and conciliation which has dictated its adoption, and the unexceptionableness of the se-

* According to one version, three such examinations were required. See Stanger, pp. 131-2.

lections which have been made, add but to the overwhelming nature of the result. It is by far the most effectual method of making the Licentiates a subordinate race of physicians, and of keeping them so, which has ever been adopted.

But while we thus freely express our opinion of the impolitic and unwarrantable extent to which the doors of the London College of Physicians have been closed (with the above solitary exception) against men educated as those were to whom the charter was originally granted, and opened wide to those of whom the charter said nothing, still we cannot forbear from making some remarks equally free and uncompromising on the conduct and pretensions of those who are excluded.

The Licentiates measurelessly overrate the value of the Fellowship. That the Fellows generally succeed better in life, is not because they *are* Fellows, but owing to the circumstances which led to their becoming so. A large majority are Englishmen—many of them natives of London, with family connexions and University associations, which cannot fail to be of service to them in their profession. Most of them, too, are richer men than the Licentiates—who can better afford to wait for practice, and to keep up a shew of business, till the semblance passes, by slow degrees, into the reality. It is said that Dr. Baillie, being consulted by a young English graduate as to the best plan of getting into business in London, advised him to put his name on a door, and then go abroad for ten years; after which he was to come home to learn whether any one had sent for him. Many Fellows might be able to do this, but not one Licentiate in a hundred could. *He* comes to London with his Scotch diploma in his pocket—obtains a license—thinks business must necessarily follow—is disappointed—and then rails in good set terms against the College. This is a great mistake. Were all the Licentiates in London made Fellows to-morrow, it would not gain them admission to a single family, nor put a single fee into their pockets. Till they can change the constitution of society, or, with the Fellowship, obtain that position in other respects which their rival candidates of the College have, their admission into the sanctum of Pall-Mall East would be, as regards their emoluments of practice, but a profitless and empty honour. Let them not, therefore, in their natural and just desire to take that station in the College of Physicians, from which we think it is both unjust and impolitic to exclude them—let them not attach to it an unreal importance, nor expect from it more than, if attained, it could possibly accomplish. But this is not all: we will go farther, and take leave to add another remark—namely, that so long as the College require an University education, of a certain duration, for admission to the Fellowship, the Licentiates have no right to demand that they should be admitted without some equivalent. It would not be difficult to point out Licentiates who have had no University education whatever—who have come to London to take whatever chance or fortune should send them; who have practised as surgeons, or apothecaries, or any thing; and who have either purchased their degree at Aberdeen, or (leaving their patients in the charge of a friend for a day or two) have matriculated in Edinburgh; and, by repeating the same process two or three times, have, on the last occasion, come back from the north full-grown *Doctors*, without having ever been missed from London. The admission of such men is a gross injustice to the respectable part of the Licentiates; and for the Scotch Universities, to grant degrees upon such terms is a crying shame—an indelible blot upon their charters, which not all the learning and talent which some of them have displayed can wholly efface. The

existence of such men among the Licentiates is at once a bar to the College being thrown open, and affords convincing proof of the necessity that exists for more efficient regulations, and especially for demanding a higher and better system of education. Something of this nature, we hear, has been done, and we hail it as an omen of good to come. Truth is, that heretofore the College found themselves pressed by the numbers who sought admission into their body; and, instead of raising the standard of knowledge, they contented themselves with narrowing the sources whence it was to be obtained; and while they feared to open the temple to the crowds of aspirants which beset them from the north, their scruples did not extend so far as to refuse them a license. Thus did the College, professedly exercising, and unquestionably intended to exercise, a protecting influence over the public health, let loose to practise on the lives of his Majesty's lieges, those whom they deemed utterly unworthy of the Fellowship, and of whom the sobriquet of "needy and half-educated adventurers" has been deemed by one of their body an appropriate designation.

The system at present pursued is radically bad, for it leads both to the acceptance and rejection of improper persons. No one ought to be admitted into the College merely because he happens to have an English degree—no one ought to be excluded solely because he has a Scotch one; and we take leave to add, that there are some on the list, both of Fellows and Licentiates, whose names ought not to appear there, had they a diploma from every university in Christendom.

When we allude to the propriety of the Scotch graduate being required to give some equivalent to put him on a par with the Doctor in medicine of the English universities, we assume that the latter has spent a longer period in the acquirement of a liberal education: he has gone out in arts before he graduated in medicine, and he must have attained his twenty-sixth year. The Scotch graduate, on the other hand, need not have taken his degree in arts, and may have obtained his Doctor's diploma at the age of twenty-two. Now it is quite clear that such a man—the Scotch graduate may explain it away as he pleases—does not stand on an equal footing with him of England, and it appears to us perfectly reasonable that he should be required to do so, before he be admitted to the same advantages.

One great step towards this would be secured, if the Scotch universities were compelled, as we trust they will be, to insist upon a preliminary education, certified by a degree in arts, before the higher diploma of the doctorate be granted. The second provision might consist in requiring evidence of a certain period having been spent in the acquisition of professional knowledge. Thus if a student from Edinburgh have graduated at the age of twenty-two, and applied for admission into the London College of Physicians at the earliest period at which he would be admissible—namely, twenty-six, we say it might be fairly and reasonably required that he should have attended hospital practice, and adopted other means of professional improvement, either at home or abroad, during the interval. By this, or some such plan, the Scotch would be placed, at least on an equal footing with the English graduate, in point of the time devoted to his professional studies, and he ought therefore to be admissible at the same age, and on similar terms.

Some measure by which the qualification of those seeking admission to the College should be raised, and the interests of the whole body united under one common and acknowledged head, were a consummation devoutly to be wished, but which can come only from one of two sources—viz. the legislature or the

College. The result of the recent Parliamentary investigation, we doubt not, will lead to some essential improvements in the system of the Scotch University education, making it more on a par with that of England, by which all pretext for the invidious distinction which now exists shall be removed; and we feel assured that the appointment of a Committee of the House of Commons, to inquire into the College of Physicians, would produce some modification of the present plan more suited to the just claims of the Licentiates.

But, as we have said, reform may come from the College itself; and though some treat the idea as quixotic, we still think differently, and believe there are among them many who require only to be convinced of what is right, to do it, without any confined and narrow fears of injuring their own private interests, or mortifying their personal vanities. The applause of their contemporaries, and the respect of posterity, would heighten the reputation, and adorn the memory, of those who should originate some liberal and comprehensive measure, founded not in a spirit of innovation, but in the pure love of rational improvement—such as should remove the bar now placed by the College between knowledge and distinction —such as should shut the door against privileged inferiority, and open a path to scientific and learned ambition.

By the above, or some equally strict but fair regulation, and by the rigid exclusion of those whose qualifications fall short of it, the charge against the College, heretofore but too plausibly alledged, of having enacted bye-laws for their own, rather than for the public good, would be removed — the crowd of "needy half-educated adventurers" would be dissipated—the cause of much professional jealousy would cease—the character of medicine would be raised—the cause of science advanced—and, we do not think we overrate the advantages of some such healing measure when we add, that it would tend to promote some of the best interests of mankind.

QUESTION OF ASSASSINATION.

Much gossip has been expended lately in Paris, relative to a curious occurrence which has befallen M. Tardif, a magistrate there. Four and twenty wounds were inflicted on his body, by night, in bed—by assassins as he himself reports, and as the public were at first inclined to believe, but most probably by his own hand, for some purpose unknown, or perhaps in a fit of dementia. M. Breschet, however, holds that assassination was attempted, and has given a regular report to that effect. The wounds were all on the right side of the chest (with the exception of two on the fore-arm)—all superficial, merely skin-deep, and all directed from right to left. There was no effusion of blood, except about a dozen spots found on the night-shirt; nor were there any bruises, or other marks of violence, on the person. The magistrate's story is briefly this:—Shortly after he went to bed he heard a noise in his chamber, and sitting up, cried—Who's there? Upon which two hands seized him, laid him on his back, and he was presently stunned by a blow on the head. He can remember nothing more of the transaction.

CLINICAL OBSERVATIONS ON ABSCESSES OF THE RIGHT ILIAC FOSSA.

By Baron Dupuytren.

From the "Leçons Orales," published, periodically, under the Baron's superintendence.

It is now some time, said M. Dupuytren, since I had occasion to shew that certain tumors, seemingly in intimate connexion with the walls of the cœcum, present themselves in the right iliac fossa. These tumors are frequently accompanied by marked disturbance of the functions of the large intestine: in a great number of cases they terminate by resolution; in some circumstances by an abundant suppuration; and occasionally they constitute the commencement of inflammation extending to the whole surface of the peritoneum. They deserve, in these several aspects, to be considered with attention.

The first question which may naturally

be asked is, why are those tumors almost always formed in the right iliac fossa? Why are they so seldom found in the left? The reason can only be assigned from a consideration of the form of the intestine, and of the parts which surround it. Immersed in a quantity of cellular tissue, the cœcum at its union with the small intestine presents so marked a contraction that foreign bodies are frequently found accumulated there, capable in every respect of becoming the determining cause of these abscesses. Not so on the left side: the sigmoid flexure presents no contraction, and the state of the bowels there is perfectly regular. If, moreover, we consider the different condition of these abscesses as they appear on the right or the left side, we should bear in mind the anatomical characters of the parts, and that on the right, the cœcum, destitute posteriorly of peritoneum, offers less resistance to the collection of pus, its attenuated, worn out, or ulcerated parietes yielding with facility; while on the left, securely enclosed in the peritoneal membrane, and protected, too, by the aponeurotic expansion of the iliacus muscle, the pus, in order to reach the intestine, would have to raise the mesocolon and expand its folds. It has a more convenient issue than this: it flows towards the crural arch and the inguinal ring: and in this case it requires some caution not to fall into a mistake: we must avail ourselves of the signs which are afforded us of hernias or abscesses from congestion, in order to distinguish them from the complaint of which we are now treating. It should be added, that it is in this part that the contents of the canal, assuming the excrementitious form, are obliged to proceed contrary to the laws of gravity; and that it is here that we most frequently find inflammatory appearances resulting from numerous disorders. Have we said enough to account for the production of engorgements on the exterior of the intestine, and to explain the frequency of their occurrence in the right iliac fossa?

There are a number of precursory symptoms which mark the approaching development of the malady. After some irregularities in regimen—constipation, or diarrhœa more or less severe—colic more or less constant—sometimes without the appearance of any of these causes—the patient feels violent colicy pains, which have a tendency to be concentrated in the right iliac fossa; those pains may also irradiate in the direction of the great intestine, or be spread over the whole cavity of the abdomen. In general, the colics are accompanied by constipation, and sometimes vomiting. Such are the signs by which we may anticipate the appearance of the tumor. Their duration is very various: some patients may be thus affected for six weeks, two months, or more; while others suffer but for a few days previous to the invasion of the malady. It will be perceived, moreover, that the value of those signs is merely relative, for they are present in many cases where there is no iliac tumor.

Symptoms.—The symptoms which mark this disorder are, the steadiness of the pain in a well-defined spot of the iliac fossa, and the swelling in this spot. On handling the part, it is found more tense—more resisting than natural, and it is frequently possible to circumscribe a tumor of variable volume, of considerable firmness, and more sensible to the touch than any other part of the belly, while it seems to rest on the cœcum. The patient complains of constipation and colics; the emission of flatus is difficult. Sometimes the fever is pretty intense, but in general the constitutional symptoms are not observed to be severe unless when complicated. The fever and anorexia would therefore seem to belong to the gastric affection; and the constipation and diarrhœa to be accidental, arising either from the same cause, or from the greater or less volume of the tumor.

Predisposing Causes.—These are of various kinds. Adult age has an unquestionable influence. Of sixteen patients whose cases have been carefully watched, eleven were under 30 years of age: above two-thirds, therefore, were of that time of life when gastric affections most prevail. The constitution seems to present nothing peculiar. Not so with sex. The returns of the Hotel Dieu prove clearly that males are infinitely more subject to the affection than females. It is not easy to assign a reason for this particularity, but so it is; not only in hospitals where men are more numerous than women, but in civil practice, where the contrary is the case. The season appears to have no direct influence on the approach of the disorder; yet the end of summer and the beginning of autumn seem to be the periods when it is most observed. This coincides with the oft-noticed frequency of abdominal affections at the same period of the year, and seems to support the opinion of those who hold that there pre-exists a lesion of the mucous membrane.

The occasional causes are numerous and important. Professional employment is that which, in most patients, acts directly in producing a lesion of the digestive tube, which is usually attended with that of the cellular tissue in the right iliac fossa. Boat-painters, colour-grinders, copper-turners, incessantly exposed to the dust and emanations of certain metallic irritants, have suffered from colics and diar-

rhœas, which, after a time, have brought on the tumor. Sedentary persons have been affected in the same way, after much disturbance of the digestive functions. The place of residence is by no means to be disregarded; for we have seen several patients newly arrived at Paris who evidently owed their complaint to residence in the metropolis: and it is easy to account for a person from the country (which he leaves for the first time) suffering from this affection. The diet of poor operatives (especially in the summer season) is so wretched, that the greatest part of those who come into the hospitals with severe gastro-enterite owe their complaints to the way in which they have to live. But every cause which tends to produce irritation of the mucous membrane of the digestive tube, tends equally to develop phlegmon in the iliac fossa. Nor is drinking less capable of giving rise to analogous accidents: the result of observation proves that most patients in this complaint have made use of alcoholic liquors, made more irritating by the addition of acrid substances. Others have taken purgatives in enormous doses.

Termination.—The progress and termination of these tumors are not always uniform: the most favourable issue is resolution. M. Meiniere has made out a list of sixteen cases of this complaint, in which, in eleven instances, resolution was effected by suitable remedies. It is, however, slowly effected: a deep hardness, which remains for a good while, shews the seat of the swelling. In other cases, which are met with often enough, pulsating pain is felt in the tumors: these grow larger and larger, become soft, and end by opening into the intestines. This favourable issue is denoted by a pressing want to go to stool, followed by purulent alvine evacuations, coincident with diminution of the volume of the tumor. The cure is generally very prompt. These abscesses do not terminate only by opening into the cœcum; they sometimes make their way into both cœcum and bladder, or vagina: but on other occasions, as in the case of M. Malus and others, they open externally. This termination has generally been unfortunate, for the base and most depending part of this abscess reposing in the iliac fossa, whilst its exit is in front and elevated, the evacuation of the purulent matter can only go on slowly and incompletely: hence there result channels of pus, and numerous burrows. This opening, besides, lets in the air, and the matter is consequently decomposed. For which reason, I recommend the patient to be made to lie on his belly, so that the opening of the abscess shall be the most depending point.

This, moreover, is remarkable about these tumors—that the purulent matter is discharged into the intestine without the fæces getting into the orifice of the abscess; and this, perhaps, for three reasons: first, these abscesses are emptied gradually; the abdominal pressure which is constantly kept up prevents a void being formed in their interior, by means of which the fæcal matter might be introduced. Secondly, the opening is generally oblique; and, thirdly, the intestine is so circumstanced here as to do the office of a valve.

There are, lastly, some cases (fortunately they are very rare) in which the inflammation rapidly extends from the tumor to the peritoneum—sometimes even to the cellular tissue behind the peritoneum. It is even probable that, in certain cases, the inflammation commencing in the peritoneal membrane, but locally at first, only extends itself from the iliac fossa to the rest of the sac. Death may be the consequence of such extension. These notions being settled, we shall now cite some cases, by way of illustration.

Case I.—A young man of 23 years of age, fair complexion, scrofulous aspect, not stout, yet working hard, experienced, in the month of December, 1828, various symptoms of entero-colic, which were at first neglected, but subsequently treated with purgatives. The patient, however, would not be confined to any regimen. A phlegmonous tumor having now developed itself in the right iliac fossa, was treated with topical emollients. The patient came to the Hôtel Dieu just as the abscess was about to discharge itself. The integuments were divided towards the back part of the crista ilii, about the insertion of the quadratus lumborum; where there was perceived a fluctuation corresponding with that of the anterior tumor. The bistoury was plunged to a great depth, and the pus discharged abundantly. Notwithstanding, however, that the declivous position of the wound should have prevented a stagnation of matter at the bottom of the abscess, the latter was not completely emptied, and the tumor situated within the crural arch continued to enlarge. The counter opening was practised; but this double issue produced no favourable change in the condition of the patient: his strength failed him, infiltration of the parts ensued, with diarrhœa and hectic fever, and death closed the scene at the end of five months' suffering. On opening the body, there was found a large abscess in the cellular tissue surrounding the cœcum, with passages extending along the psoas and iliacus muscles. In some places the osseous surfaces were bare. The cœcum had no communication with the body of

the abscess, but at its back part it was certainly thinned; the mucous membrane also presented a degree of density and a slate-colour hue, and more softness than in its natural condition. There were a chronic pleurisy, and a hepatization commencing in the inferior lobes of the lungs. The other organs were all normal.

Case II.—A young tailor, 24 years of age, came to the Hôtel Dieu in 1829, having, in the right iliac region, several fistulous openings, through which pus and fæcal matter had been discharged. The complaint originally treated in the hospital of Orleans, consisted of a phlegmonous tumor, at first neglected by the patient, but on which were subsequently applied local emollients. He passed pus by stool. His health was re established—at least, partially. He came to Paris to complete his cure, but he soon found the disorder augmenting upon him, the tumor increasing, and abscesses opening above the cruralarch. These appearances were accompanied by considerable emaciation, cough, diarrhœa, and œdema of the lower limbs; in short, he was several times on the point of death during his stay in the hospital. Ultimately, however, after several months' treatment, his general condition improved, convalescence was established, and, after taking a great many douches and baths, the young man went out cured.

Case III.—Dr. Ouvrard relates the following history:—A man, of eight and twenty, was seized with vomiting, which lasted for six days: the existence of a phlegmonous tumor was then perceived in the region of the cœcum; vomiting and purging; the complaint got worse; leeches, emollients. In the course of a fortnight or three weeks, the pus makes its way into the cœcum, and is passed by stool. The swelling, however, maintains its bulk, and the surgeon attempts an opening through the abdomen, but does not find the abscess, though he almost pierces the cœcum. The wound is closed. The patient's health deteriorates; there are fever, diarrhœa, general emaciation. Six months thus passed over, when, as the patient was one day riding in a rude vehicle, an abscess made its appearance below the cicatrix: it opened of itself, and pus and fæcal matter came out. Some appropriate dressings, rest, compression, and a steady regimen, succeeded in restoring the patient in the course of eight months.

Case IV.—The same writer informs us of a man, thirty-three years of age, feeble, and of scrofulous aspect, who had a painful tumor in the right iliac fossa, but which augmented very slowly. Left to itself, it opened in three months, and through the opening there came daily a small quantity of pus. Two or three months later the patient found a grape-stone on the bandage. His general health was kept up. Presently, liquid and yellow fæcal matter issued by the opening, and the man began to sink. By compression and rest, and regimen the most strict, the fistula was cicatrized. It re-opened; and another surgeon enlarged the passage, pierced the cœcum, and gave occasion to the usual consequences. The usual treatment brought about a cure.

Case V.—*Inflamed swelling in the right Iliac Fossa, terminating in an Abscess which opened into the Cæcum.*

A young man, twenty years of age, who came in as a patient to the Hôtel Dieu, in Sept. 1827, experienced for a fortnight the following symptoms:—Frequent desire to go to stool, resembling the tenesmus in dysentery, but without the discharge of fæcal matter or gases; short colics, with borborygmi and pains of the bowels; circumscribed pain and swelling in the right iliac fossa, without fever or general disturbance. At first some nausea; then pain and difficulty in making water. No particular cause could be assigned as producing these symptoms; the patient had not been confined in his bowels, nor had he been guilty of any excess; he had simply had diarrhœa for two days previous to the appearance of his disorder. He had been bled in town, and thirty leeches were applied to the iliac region. On the day of his entry here, the patient passed an abundant purulent motion; on the two following days he had several stools of the same kind; and about a week after, the pus was perceived to be mixed with portions of fæces. The tumor was now reduced to a great degree, and the stools were becoming natural; the colics were no longer troublesome, and the patient was soon convalescent.

After what has been said of the seat, the symptoms, and the modes of termination of these tumors, it is evident that they are real phlegmons developed in the neighbourhood of the cœcum, exterior to the peritoneal sac, but capable of communicating inflammation to that membrane.

Diagnosis. — The distinctive marks of these swellings and phlegmonous abscesses seem sufficiently important to claim a portion of our attention. It is not unusual to observe in the right or left iliac fossa indistinct inflammatory swellings, which resemble those of which we have been speaking; but those are really formed in the cellular tissue which is about the psoas and iliacus muscles, and beneath the iliac fascia. This is a complaint which constitutes one of the varieties of that known to authors by the name of psoitis. Subsequent to parturition, it is common to find

tumors in one or both of the iliac fossæ; but they are connected with thickening of the round ligaments, or they originate in the cellular tissue interposed between the ligaments of the uterus, and may extend from that locality to the whole of the neighbouring cellular tissue, and become prominent in the iliac fossæ. These abscesses sometimes open into the womb, and sometimes make way through the walls of the vagina.

In certain circumstances the iliac fossæ become the seat of collections of matter, the source of which may be very distant: for example, the symptomatic abscesses from caries of the bones, or inflammation of ligaments in their neighbourhood. The pus is poured out in these cases along the psoas and iliacus muscles; it is deposited in a liquid state in the iliac fossa, and the swelling to which it gives rise is soft and fluctuating in its feel. This, however, will suffice to distinguish it from those to which allusion has been already made. But it must not be supposed that errors of diagnosis may not be made in this case. I have seen, said M. Dupuytren, the inflammation in question give rise to a belief of the existence of an internal strangulation—or of hepatitis—as occurred in the instance of the young son of the Count de B.; or it may be mistaken for metritis, or peritonitis, as in the case of Madame B. of Pontoise. In both these cases the exact boundary of the disorder in the iliac fossa, the retention of fæces, the comparative appreciation of other symptoms, served to obviate the error; and the discharge of the pus by stool almost at the very day predicted, confirmed the correctness of the diagnosis.

Prognosis.—In general the prognosis is not alarming: out of sixteen cases, for example, one only was lost. When the symptoms yield readily to the curative methods, the bowels perform their functions, the fever disappears, and the volume of the tumor declines—a speedy cure may be expected. But when, on the contrary, the symptoms continue, when the tumor, which has been more or less rapidly increasing, becomes now the seat of a fluctuation, obscure at first, then more distinct, and when pulsations with darting pains are present, in this case the evacuation of the matter may be expected by stool; nor need the prognosis be unfavourable, for experience has shewn that the cure may not be less effectual or complete in this way than when resolution has taken place. If peritonitis, however, supervenes, a fatal termination is to be dreaded, for the occurrence of this disorder is to be considered as indicating a rapid increase of the primitive malady, and the combination of both puts the case beyond the reach of art.

Treatment.—We should at first attempt preservative methods, which we may very well do if called in time: if we cannot prevent the formation of the tumor, we may at least impede its progress and thwart it. When pain in the iliac region is accompanied by diarrhœa and constipation alternately, when the touch informs us of a deep and ill-circumscribed basement, local bleedings, emollients in every shape, and gentle laxatives in drinks and in lavements, will remove the symptoms. Absolute rest, numerous and long-continued baths, will be very serviceable; nor should a severe regimen be neglected. If the tumor has already attained a certain size, we should hasten to limit its increase; and with this view, local and general bleeding must be adopted. If the patient be robust, and the fever brisk, a bleeding from the arm should be practised immediately; a large number of leeches should be applied to the tumor, which should also be covered with a large poultice. Emollient lavements must be administered morning and evening, and the patient must drink several dishes of veal-broth, having sulphate of soda or magnesia dissolved in them. Oily juleps should be employed at night, and the leeches repeated according to the state of the pulse, the strength of the patient, and the degree of inflammation present in the tumor.

The decrease of the pain, and the diminution of the swelling, giving promise of the approach of resolution, little more will be required than the emollient applications, rest, and regimen. If, on the contrary, the tumor maintains its volume and its tenderness, and the fluctuation becomes more and more perceptible, the antiphlogistics must be kept up; or if the state of the patient will not admit that, topical emollients must be persevered in until the opening of the abscess is effected. In such circumstances, some patients have found great benefit from the use of laxatives, which gently stimulate the peristaltic motions, and promote the evacuation of the pus. Finally, if peritoneal inflammation sets in, the means of combatting such a complication are not unknown.

ROYAL INSTITUTION.

February 8, 1833.

Sir Anthony Carlisle on the Causes of supposed Hereditary Diseases.

It was a very proper remark of Sir Anthony's, this evening, that it greatly depends on the influence and example of the better educated classes to remove the prejudices which vulgarly prevail, to the great

detriment of our profession; and the learned knight seemed to be sensible of the opportunity which was allowed him upon this occasion, of calling up that influence into action. He had a very large and a very enlightened general auditory to address; yet he was not happy in his labour of the evening,—and that for two reasons. We are of opinion that the medical man who is permitted to hold forth before such an assembly as that which is generally found at the *soirées* of the Royal Institution, should be particularly cautious with regard to two points—namely, that he should be brief, and that he should be clear. Sir Anthony was neither; and there was a want of substance and coherency in all that he said, which gave it a very soporific effect. He began by informing the audience how much he had studied all his life "to combine philosophy with medicine;" and after a few general remarks of this kind, apologized for reading a manuscript lecture to the meeting, as he felt diffident about addressing so enlightened an assembly extempore. The manuscript then went on to detail a vast quantity of desultory matter relating to quackery, pedantry, mistaken views of practice, and prevalent errors about scrofula—which complaint, by the way, Sir Anthony thinks is strongly proved not to be hereditary, because it is developed in animals in our menageries, and in slaves from Africa; and there are diseases like it which affect vegetables. He then shewed the great importance of attending to diet and clothing, and attempted to prove that tubercles may be produced in the lungs of the most apparently healthy and robust, if they have been given to intemperance. He mentioned that some of the stoutest of our pugilists fell victims to consumption: the Game Chicken, Johnston, Gregson, and Jem Belcher; he had examined them all after death. Sir Anthony then gave some hits at fashionable mothers, who expose their daughters' legs and necks. He recommended leathern waistcoats, exercise, and a healthy locality for residence. In a demonstration of the structure of the glands, Sir Anthony was horribly tedious; and he went out of his way to lug in his customary attack on anatomy, which he decried as vain and useless, though he allowed that the surgeon who would perform an operation without being minutely acquainted with what he was about must be "a ruffian." Sir Anthony holds, that the poison from the bite of a "mad dog" does not affect the glands, as syphilis does; of which latter fact, he said, he presumed all his audience were aware.

When Sir Anthony had at length ceased, Dr. Faraday came forward and greatly relieved the visitors, by explaining for a few minutes the principle of the Bommarang, a projectile implement used by the New Zealanders. It is a crescent-shaped disk, which, owing to a peculiar method of throwing it, effects its purpose, and returns to the hand from which it came.

In the Library were the customary attractions; and among them a quantity of newly-imported German works, lent by Mr. Schloss.

DISPENSARIES AS SCHOOLS OF PRACTICAL MEDICINE.

To the Editor of the Medical Gazette.

SIR,

THE enclosed circular letter has already been sent to the principal Dispensaries in London, but as it is impossible to forward it to all such institutions in the country, perhaps you will have the goodness to give it extensive publicity by inserting it in the Gazette.

I am, sir,
Your obedient servant,
JOHN WATSON.

Apothecaries' Hall, Feb. 7, 1833.

To the Physicians of *Dispensary.*

GENTLEMEN,—I am instructed by the Court of Examiners to call your attention to the notices relative to Dispensaries, which were published in the Regulations of the Court in September 1830, and in August 1832; and to remind you that the time for acting upon them is now arrived.

The Court are ready to receive applications for the recognition of Dispensaries from the physicians attached to these institutions respectively; and, with the view of saving unnecessary trouble to the medical officers of these establishments, the Court have further instructed me to state, that they will recognise, as schools of practical medicine, such Dispensaries *only* as shall give satisfactory evidence on the following points—viz.

"That the Dispensary is situated in some city or town in which there is a medical school recognized by the Court.

"That the rules for the government of the Dispensary permit the attendance of students, and that the physicians afford them opportunities of acquiring practical knowledge in medicine.

"That the Dispensary (if within the limits of the jurisdiction of the Royal College of Physicians of London) is under the medical care of at least two physicians, each of whom is a Fellow, Candidate, or Licentiate of the Royal College;

and if beyond these limits, that it is under the care of at least two physicians, who, if not so qualified, are graduated Doctors of Medicine of a British University of four years' standing:

"And that the apothecary of the Dispensary is *legally* qualified, either by having been in practice prior to or on the 1st of August 1815, or by having received a certificate of qualification from the Court of Examiners."

I have the honour to be,
Gentlemen,
Your obedient servant,
JOHN WATSON, *Secretary*.

N.B.—Every certificate of attendance is to be signed by all the physicians connected with the Dispensary attended by the student; and the Court especially request that no certificate may be signed unless the pupil has been *uniformly regular* in his attendance.

CASE OF CHRONIC AFFECTION OF THE SCHNEIDERIAN MEMBRANE AND OBSTRUCTION OF THE NARES.

MR. V. aged 38 years, of slender frame and lymphatic temperament, called on me in May 1829, on account of an obstruction in the nasal passages, under which he had been labouring three or four m nths, and which he supposed to have been occasioned by a bad cold contracted some time before. He was unable to breathe through the nostrils, one of which was entirely closed, so as to admit even a probe with difficulty; could by an effort force a little air through the other.

The mucous membrane was in a state of chronic inflammation and thickened, the secretions from which were changed to a dirty, waxy character, and seemed to be deposited in laminæ, as is the case with the cutaneous secretions, in some scabby affections of that tissue.

The mucous membrane of the mouth was also in a morbid state. He suffered much at night, having to breathe altogether through the mouth; the parts soon became dry and painful; his sleep interrupted by frequent calls for water, a pitcher of which he kept constantly beside his bed.

His skin was dry and harsh; there was some derangement of the digestive organs; otherwise he was in tolerably good health, and able to attend to his occupation, that of a ferryman.

He took a blue pill every second night, and a glassful of an infusion of gentian, rhei., orange peel, and super carb. sodæ, three times a day for two weeks; and injected a saturated solution of chloride of lime into the nasal fossa, twice a day; applied a small quantity of almond oil to the lower part of the nares on going to bed. The local treatment was continued for about five weeks, when he found the difficulty entirely removed.

There has been no return of the complaint since.—*Dr. Wells, in American Journal.*

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 12, 1833.

Abscess	3	Heart, diseased	1
Age and Debility	66	Hernia	1
Apoplexy	6	Hooping-Cough	28
Asthma	25	Inflammation	28
Cancer	3	Bowels & Stomach	4
Childbirth	13	Brain	3
Consumption	71	Lungs and Pleura	7
Convulsions	28	Insanity	1
Croup	1	Jaundice	3
Dentition or Teething	13	Liver, Diseased	9
Dropsy	14	Measles	15
Dropsy on the Brain	19	Miscarriage	1
Dropsy on the Chest	3	Mortification	4
Erysipelas	3	Paralysis	4
Fever	5	Small-Pox	24
Fever, Scarlet	8	Sore Throat and Quinsey	1
Fever, Typhus	1	Stone and Gravel	1
Fistula	1		
Gout	1		
Hæmorrhage	1	Stillborn	11

Increase of Burials, as compared with the preceding week . . . 22

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

February 1833.	THERMOMETER		BAROMETER.	
Thursday . 7	from 40 to 53		29·82 to 29·72	
Friday. . . 8	41	52	29·71	Stat.
Saturday . 9	39	47	29·56	29·66
Sunday . . 10	37	49	29·20	29·21
Monday . . 11	40	53	29·24	29·33
Tuesday . 12	38	52	29·41	29·56
Wednesday 13	39	49	29·30	29·24

Prevailing wind S.W.; very boisterous, especially during the night of the 13th.
Generally cloudy, with frequent rain.
Rain fallen, 1 inch and ·575 of an inch.

CHARLES HENRY ADAMS.

FORTHCOMING WORK.—We are requested to state that M. Rayer's Treatise on the Diseases of the Skin is presently to be brought out, in an English dress, by Mr. W. E. Image, of Bury St. Edmunds.

NOTICE.—The name of Mr. W. Squire Ward, the author of the report from St. Bartholomew's, was inadvertently omitted in our last number.

Erratum.—In our notice of Dr. Buchanan's History of the Glasgow Infirmary (see last No.), *for* "doctor and physician," *read* "director and physician."

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 23, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

APOPLEXY.

Lethargy.—We now, gentlemen, proceed to consider those diseases of the nervous system which are marked by no excitement, but by a simple deficiency either of sensibility or motion. The first of which I will speak consists of a deficiency of sense and motion together—a disease marked by profound sleep.

You will find it mentioned in the Philosophical Transactions for 1694, that a man, 25 years old, who resided near Bath, slept nearly a month in a state of lethargy. In two years he again fell into an inordinate sleep. At first he ate, drank, and discharged his urine and fæces; but at length his jaws set, and he ate nothing more, and did not awake for seventeen weeks. It so happened that the barley was sowing when he fell asleep, and when he awoke it was reaping. In August he fell asleep again; he was bled, stimulated, and treated *secundum artem*, but did not wake till November. The termination of the case is not given.

You will find it mentioned in Plott's Natural History of Staffordshire, that a woman slept forty days. In the Medical Observations and Inquiries, there is an account of a woman who slept seventeen or eighteen hours every day for fifteen years. Dr. Good mentions seeing a lady, who was only in the habit of waking for one or two hours two or three times a week, during the summer. I believe an affection of this description is not dangerous. I have heard, but I do not know the particulars of the case, that there has lately been an extraordinary person of this description, who was in the habit of sleeping for weeks together. The only cases of the kind that I have seen have been trances; those affections of an hysterical nature which I formerly mentioned.

Although this disease is usually not of a dangerous character, Dr. Willan mentions, in his Reports of the Diseases in London, that lethargy is very common among the Jews of this town, and that it frequently ends in fatal apoplexy. Occasionally, after fever, persons will sleep for a very considerable time. Willis mentions a case of putrid fever which terminated in a perfect sleep of four days; and at the end of that time the man was imbecile for two months. Mr. J. Bell, the surgeon, saw a man who, in consequence of a fall, lay a great length of time in a sleep of this description; and when he awoke he was incoherent; but he finally recovered. This is all I know of this kind of sleep.

But we frequently see a very profound sleep, beginning suddenly, and very often ending fatally, leaving palsy behind it. This affection is called *apoplexy*, and we all see instances of it every day.

Definition.—In this intense description of sleep there is a great diminution, or loss, of sense and motion; slow, laborious, and generally stertorous breathing—a loss, indeed, of all the animal faculties. It is generally sudden; whence its name απο and πλησσω, to strike, the person being struck down.

Symptoms.—If a person be upright, or walking about, or sitting, he falls down, and sometimes dies on the spot; he is dead

in an instant, as if he were shot. If, however, death does not take place instantly, you observe the pulse to be generally slow and full; the face is livid and flushed, and also swollen. The lips particularly are livid, and there is generally a little degree of froth, though not to be compared with what is seen in epilepsy, proceeding from the mouth, and a blowing frequently from the lips and nostrils. The lips do not act in the same way as they do when we are in moderate sleep, or when we are awake; but the air forces them open, and their elasticity brings them back again; so that the lips are constantly moved, together with the alæ nasi. The pupils are usually dilated, and the eye is insensible and closed. The cornea looks dull and glassy, the eyes are frequently blood-shot and have a livid tinge, and so has all the rest of the face. There is at last a difficulty of swallowing. In some cases, if the attack be very severe, there is a difficulty of swallowing at the very first, perhaps an inability from the very first; but when the disease terminates fatally, there is, of course, an inability at last to swallow.

When the disease does not terminate by instant death, it may last for a few minutes, or for some hours, and even days. Persons have recovered after lying in this insensible state for three days. I believe that when the state is not genuine apoplexy, but a symptom of what is called mere nervous derangement, in hysterical women it may last any length of time, and persons will then recover; but generally, if it be genuine apoplexy, persons seldom recover, if the insensible state continue beyond three days.

The disease does not necessarily consist of an *entire* loss of sense and motion, for there is a degree of both in most cases which do not terminate fatally immediately, even till just before death. Respiration is considered by some a voluntary process altogether. Although it continues during sleep in the natural state, yet it is no more than any voluntary action. If you tickle a person when asleep, he moves himself directly, to avoid the sensation, and therefore it is no argument that breathing is not voluntary because it continues during sleep. Almost all voluntary motion may be performed more or less, if no great effort be required. However, respiration continues, whether you choose to consider it voluntary or not, and the ability of a person to swallow is, of course, another instance of voluntary motion. Persons, however, will frequently do more than this; if you pinch them and make them uneasy—they will groan. You find the heat generally increased, especially of the head, and it is not unusual to see clammy sweats. These almost always occur, however, during the last period of the disease.

Premonitory symptoms.—Although the affection comes on generally in this sudden manner, yet it is occasionally preceded for a length of time by drowsiness. You see persons fall asleep in company and at church, where they will snore away, even months before the fit. It is common for the attack to be preceded by headache, by a throbbing, a sense of tension and weight of the head. Many complain previously of dimness of sight and double vision, giddiness and vertigo, and you may frequently observe the eyes to be red before a paroxysm. Some have flashes of light like stars before their eyes, deafness, tinnitus, together with dreaming, night-mare, and epistaxis. It is not uncommon for persons, before they become apoplectic, to have numbness of the fingers, or one finger, or some part of the body. Sometimes, besides this, there is tingling; in other instances, slight twitches of the muscles, and occasionally stammering. It is very common for impairment of the memory to occur, and more or less depression of the spirits. You may very easily conceive that the circumstances which occasion apoplexy will in a slight degree cause simple headache, or throbbing of the head, or double vision, or any of the other symptoms which I have mentioned. Stammering, an inability to use the muscles of articulation properly, and a loss of memory, will also arise from a fulness of the head, and such as in greater intensity will produce apoplexy. Sometimes, before the attack, persons will have hemiplegia for a longer or shorter time, so that hemiplegia frequently terminates in apoplexy. Independently of these symptoms, the invasion of the disease is sometimes very slow: instead of persons being knocked down, whether they have these symptoms or not, the disease will come on slowly, so that from being sleepy they at last become apoplectic quite insensibly.

There is another form in which the disease comes on, which it is very important that you should know, and that is, where it begins with syncope, from which the patient frequently recovers for a longer or a shorter time, till he afterwards becomes apoplectic. You will find this particularly mentioned by Dr. Abererombie, in his very excellent work on Diseases of the Nervous System. Before the attack of apoplexy, there is sudden pain of the head—a sharp, cutting, severe pain; but instead of the face being flushed, full, swollen, or livid, it is pale. Perhaps there is a little delirium, perhaps wandering; but a sudden pain occurs in the head, the face is pale, the patient feels cold and faint, and there is also vomiting

and purging. Now, after this attack of syncope, the patient gets up and may walk about; but in a few minutes, sometimes not for a few hours, and sometimes not for a few days—but after this, whatever the interval may be—gradually coma and apoplexy take place; the body then acquires its natural warmth, perhaps is as hot as in common apoplexy; the pulse is no longer faint, but becomes full and slow, and the ordinary state of apoplexy is established.

This form of the disease, I may mention, is almost always fatal, and from this circumstance—it arises from a rupture in the head. A rupture takes place within the brain, not producing immediate effusion in most cases, but sufficient to cause violent pain, sufficient to produce such an influence on the heart as to impair its action considerably, so that syncope takes place; and then, after this symptomatic syncope, gradually blood oozes from the vessels in different parts of the brain, till at last pressure takes place, and you have common apoplexy. It is particularly necessary to know this form of the disease, or you might give a favourable prognosis. Seeing the patient is very faint, and hearing of the pain of the head, you might think nothing of it; but you must remember that it may arise from a rupture in some part of the brain, and in a few minutes, hours, or days, effusion will gradually take place, and that to such an amount as to produce common apoplexy; for, after this disease, there is almost always found rupture and extravasation.

Progress of the disease.—However, when the disease has begun, if it do not destroy life, the symptoms gradually recede, till they disappear altogether; consciousness, perception, a knowledge of his own existence, and an observation of the external world, return, and the power of volition is directed to the voluntary muscles. Sometimes, however, there is not a perfect return; power, consciousness, and perception, return, excepting in one part of the body, so that one half of the body very frequently, after the disease, remains motionless, without being at all subject to the volition of the patient; and sometimes, in addition to this loss of power over half the body, there is a loss of sense there, at least in regard to touch. The surface of one half of the body frequently remains insensible; there is a paralysis of sense, as well as of motion, and this state may gradually subside, or only to a certain point, or it may never be recovered from, and in that state a person may live for an indefinite time. Frequently, too, after these attacks, their mental powers are weakened; patients frequently are never the men mentally that they were before,—never have the same power of attention, the same memory, the same power of mind altogether that they had before the disease.

If the affection, however, gradually destroy the patient, the power of sensation and volition does not return, and deglutition is lost. The power of deglutition and the power of respiration remain, unless the disease kill the patient directly; but if the patient remain insensible, the power over the muscles of deglutition is gradually lost; he swallows worse and worse, till he cannot swallow at all; the pulse becomes weaker and weaker, the body cooler, respiration quicker, and at length irregular, and thus the scene is closed; but the heart will beat a few strokes, after you have witnessed the very last inspiration.

Contraction of the pupil an unfavourable sign.—You will sometimes see in an attack of this disease, that the pupil is not dilated, but, on the other hand, extremely contracted, and there is no worse sign in apoplexy than this. I recollect a German friend of mine, who had the largest pupil I ever saw; in fact, the iris appeared to be nothing more than a thread in the form of a circle. I have frequently looked at him with astonishment; the iris never appeared larger than a thread in diameter, forming a very fine ring. He took it into his head not to live any longer, and therefore poisoned himself, by taking half an ounce of pulverised opium. I do not know the cause of the act, but some hours after taking the opium, he fell into a state of coma. It is a striking circumstance that coma did not come on for a considerable time, and having mentioned to his friends what he had done, they sent for all the doctors they could find, and for me among the rest. He lay upon the bed, and we of course proposed giving him emetics; but he, being as much himself as any one in the room, declared we should not give him any thing. We had sulphate of copper and zinc in abundance, and endeavoured to put it into his mouth, and pour it down his throat; but he so kicked, thumped, and beat us, that it required a dozen of us to master him. He said that, if he thought proper to die, no person had a right to interfere with him. We got a stomach-pump, finding he would not swallow what was reasonable, and with great difficulty we passed it down, and emptied the stomach, and then poured in so many wash-hand basons of water in succession that at last the water came out as clear as it went in; so that we completely evacuated the stomach — he all the while exclaiming against the barbarity of keeping a man in this world who had no desire to stay in it. After all this, apoplexy came on. He became senseless, his pulse slow, his face swollen, his lips livid, and his eyes suffus-

ed, and there was also stertorous breathing. Of course we opened the jugular vein, and a vein in the arm, bled him freely, and dashed pails of cold water on him, which is one of the best things, but it was all of no use. His passion, I presume, had a great deal to do with it; for he was in a violent rage to the last moment. He was sensible, and the iris was contracted so that the pupil was reduced to the size of a pin's point: it would have been difficult to pass any thing of a larger diameter than a pin through the iris. I need scarcely say he died. I believe that when apoplexy has come on from opium, and perhaps from other narcotics, a contraction of the pupil has been observed; but when apoplexy is of the ordinary kind, and has not arisen from narcotics, this symptom is mentioned by authors as being almost always a fatal sign. I never saw a patient recover in whom the pupil was so contracted, though I have of course seen them recover where it was dilated. Whatever danger there may be from other symptoms, you ought, if you see the pupil contracted, to give a guarded prognosis. It is mentioned by many authors that this state of the pupil is unfavourable, and, so far as I have made observation myself, I think the statement fully verified.

Varied state of the Pupil in Affections of the Head.—I may mention, while on this subject, that the state of the pupil in affections of the head is very various and very singular. When apoplexy is produced by external mechanical causes in injuries of the head, notwithstanding the comatose state, the pupils are obedient to light and darkness, following the introduction or exclusion of the light just as in health. This has been observed by Mr. Brodie, who has written an interesting paper on it in the 11th vol. of the Medico Chirurgical Transactions. He also mentions having seen dilatation of the pupil alternate with contraction; at one time the pupils were extremely dilated, and at another extremely contracted, and this alternation had been repeated several times. He also mentions, what you might expect—that he has seen dilatation cease when venesection was practised, and then, when the effect was gone off, the pupils were dilated again; that also you would suppose. When a bone compressing the brain was elevated, the dilatation ceased. Dr. Hennen, in his Military Surgery, which I need not say is an excellent work, states, that he has seen the pupil dilated when light was admitted, and contracted when it was removed; and Mr. Brodie mentions seeing each eye in an opposite state—that while there was a morbid dilatation of one eye, there was a morbid contraction of the other; and sometimes he has observed the pupil of one eye only to be dilated. These are irregular circumstances, and, as you may meet with one or all of them, it is well that you should know them, otherwise you might meet with them and pay no regard to them.

Hemiplegia and Convulsions conjoined with Apoplexy.—In the midst of a fit of apoplexy you will sometimes see also hemiplegia—in fact, double hemiplegia; but you find the hemiplegia existing more on one side than on the other. Although the patient is motionless on both sides, you will observe that the muscles of the face will be violently drawn to one side, showing that the apoplexy is not equal—that one side is able to draw the other towards it. Sometimes in this disease there are convulsions. I should presume that in these cases there was not only compression of the brain, but more or less laceration, or an inflammatory state;—there must be some cause of excitement, besides the compression, producing apoplexy; something injuring one portion of the brain so much that there shall be convulsions, and these convulsions are sometimes seen to affect only one-half of the body.

The blood that you take away from the temporal artery in this disease is very often as dark as venous blood; and the blood you take from the veins is very often buffy, and even cupped. The state is very often one of a decidedly inflammatory nature.

Morbid appearances.—On opening the bodies of patients who have died of this disease, you may perhaps find nothing. I have seen it stated that a person could not have died of apoplexy, because nothing unusual was found in the head after death; but I have opened many persons who have died of apoplexy, and have found nothing that would have led me to suppose they had been apoplectic. There most probably had been extreme fulness of the vessels during life, and after death the fulness had completely gone off. Sometimes there has been a retraction of the vessels, and sometimes copious blood-letting has been had recourse to; but the brain has been so compressed that the removal of blood was not sufficient to reinstate the brain in its former powers. However this may be, I have opened many patients who have died of this disease, and found nothing that would lead me to suppose they had died in that way. You will indeed frequently find after this disease that the fulness of the face, the great turgescence of all parts of the face, will go off, if not entirely, yet to a great degree, and you must suppose, therefore, that the same thing may occur internally. I recollect a patient who died of this disease. He was lying in the dead-house; but the

veins looked so full and tempting, that I begged some of them might be opened, and the subject bled freely to a pint; and, although the face was livid and swollen, the lividity went down, and the face recovered its former size. You may therefore presume that a similar change may take place in the branches of the internal carotids to that which occurs in the branches of the external carotids.

But, in the second place, you may find great fulness of the vessels; the sinuses are generally filled with blood, and the vessels of the pia-mater are exceedingly distended, so that they present an obvious and decided turgescence.

Thirdly, you will sometimes find an effusion of serum *in* or *upon* the brain. Sometimes there is simply this, but sometimes it is united with a general fulness of the vessels. It is said that, if the disease arise after ischuria renalis, serum is generally found; but I recollect opening one patient —I never opened more who had died of apoplexy after the suppression of urine— and in that person there was neither a fulness of the vessels, nor was there effused any serum in or upon the brain.

In the fourth place, we sometimes find extravasation of blood, and this may be upon the surface or in the substance; and, in the latter case, I believe it is found more frequently than not near the ventricle. It is seldom seen in the ventricle alone: if you find blood effused into the ventricle, it generally arises from its having been effused into the substance of the brain near the ventricle, and projecting through the cerebral substance, so as to make its way into this cavity. The blood may be effused of course in any part of the brain—in the cerebrum, in the cerebellum, and even in the pons varolii, so as to lacerate it, and if it be effused near the ventricle, it frequently makes its way into it. It is under these circumstances, for the most part, that you find blood in the ventricles; it has made its way from a neighbouring part in the substance of the brain. Andral has made a large number of dissections, and states, as the result, that the blood almost always finds its way to the ventricles by rupture. Of 386 cerebral hæmorrhages read of by him, he finds that 202 took place in the substance of the hemispheres, 61 in the corpora striata, and 35 in the thalami nervorum opticorum; so that that the hemispheres are by far most frequently the seat of hæmorrhage.

The new cavities formed by the extravasation of blood may be of all sizes, varying from the size of a small pea to that of a walnut, and much indeed beyond that. There is a great variety also in the number of these effusions; sometimes you will find only one, in other instances you may find two, and in some cases you may find several. The blood which is effused at first looks like currant-jelly with a bloody reddish fluid around it: it is about that consistence. In about a fortnight this clot becomes much firmer, and at length it becomes soft, and has merely a reddish fluid around it. It is sometimes completely absorbed, so that a cavity is left, and that is called an *apoplectic cell*. This cavity is sometimes lined by a new serous membrane, sometimes it contains clear fluid, and occasionally it is perfectly empty, and may remain so for a great length of time, and, for what I know, for life. It is said by some that a coagulum may remain for a long time in the brain without much mischief; but, where it does exist, it generally gives rise to paralysis.

If it be absorbed before that process is completed, there are filaments seen sometimes spreading in all directions, and occasionally the filaments contract adhesions. Adhesions are formed, and the part contracts; an appearance of cicatrization takes place, and the spot becomes much firmer than before—generally it is yellowish, and sometimes darkish.

Of course these observations are only made from inspecting a large number of cases. On opening different cases at different times, it is seen, in the first instance, that there is only blood of the consistence of currant-jelly; still later, it is found to be much firmer; sometimes it is completely absorbed. There may be an empty cyst, or the cyst may contain serous fluid: but sometimes the red particles are absorbed, and the fibrin only is left; this becomes filamentous, and the whole part becomes firmer than it should be.

The best representation of these things which I know is that by Cruveilhier. In the plate I now exhibit you will see the progress of the changes. Nature makes an attempt to restore the part, just as she would in any other situation in the body. (Dr. Baillie's plates are not coloured, and therefore they do not show the affection so well.) Plate viii., fas. x., fig. 1, represents the substance of the brain into which there has been an effusion of blood. Fig. 2 represents a cavity in which a clot had formerly existed, and which, he says, was filled with serous fluid when he opened it.

When blood has been effused into the substance of the brain, and you examine it soon after the occurrence, of course the appearances are the same as where the blood has been effused any where else; but, if the patient survive, this clot of blood may be completely absorbed, so as to leave a cavity, and that cavity may be lined with a serous membrane, and may contain clear serum, or the cavity may remain during the rest of the patient's life. Sometimes

the blood, it is said, is not absorbed, but remains where it was effused; and both in that case and where apoplectic cells have been formed, it is asserted that, in some few instances, no symptoms have arisen. You may have an opportunity of examining the process of absorption, when the clot has been absorbed, by opening a number of cases, and you find, in the first place, that the serum becomes absorbed, that the clot becomes firmer and paler, and then, frequently, a number of filaments are produced, running from the cells of the cavity. These filaments at first are loosely attached; they then become firmer; at length sometimes the cavity will shrink; all the parts will contract, and become hard together, so that a cicatrix is produced, and this cicatrix will become very firm. Sometimes there is no cell left, the blood is entirely absorbed, a cicatrix is produced, the sides of the cavity approach together, the filaments also are contracted, I suppose, and the whole becomes quite firm; and, under these circumstances, there is generally a change of colour—sometimes green, sometimes yellow, and sometimes purplish.

Now, when there is a clot effused in the brain, it is generally found that the substance of the brain around it is softened. Dr. Baillie mentioned long ago, that if blood were effused into the substance of the brain, the cerebral substance around the clot is very frequently softened—it is so injured that it becomes soft. Sometimes, however, there can be no doubt that a clot is the result of softening. I am quite satisfied of this from my own observation; for I have seen a person with a pain in his head gradually lose his memory, even have cerebral affection, then suddenly become apoplectic and die; and, on examination, I have seen a portion of his brain softened like pap, and in the midst of it an effusion of blood. This is nothing more than what you might suppose likely to be the case. If the cerebral substance of the brain be much softened, the large vessels will at last give way and let out the blood, so that you may have a softening of the brain through the presence of blood injecting the surrounding substance; and I feel satisfied you may have a clot of blood through the vessels becoming softened, and then you have more or less apoplexy. It so happened that today, at St. Thomas's Hospital, I opened a man who came in with hemiplegia, which is much the same thing in point of pathology. I forget at this moment the whole history of the case; but he came in with paralysis of the left side—the arm, the leg, and the whole of the side, were paralyzed. In the posterior part of the right thalamus nervi optici there was found a cavity, the brain was evidently injured, and the part looked just like an ulcer in a mucous membrane. I presume that in this cavity blood was effused, which coagulated, and was then partly absorbed. It of course produced a destruction of the cerebral substance around it, and the blood being partly absorbed, gave rise to the dark colour. I have always seen the injury on the opposite side to that on which the paralysis occurred.

Sometimes, besides congestion and effusion, you will find marks of more or less inflammation, you will see the membranes thicker than they should be, looking as if chronic inflammation had been going on. In the man, a piece of whose brain is now going round, the arachnoid on the surface of the brain was quite opaque, and there was also a considerable effusion of serum; but then he died from an inflammatory attack of the brain. His head suddenly became very hot, he became stupid, and then effusion took place into the substance of the brain, and likewise into the ventricle. This was a subsequent process, and is a very common mode in which paralytic persons die. There is a disposition to disease. In most chronic diseases effusion takes place, and there being no strength of constitution, the patients die. They sink from inflammation within. There is such weakness attending it that you can do very little for them.

Now this laceration, this rupture of the vessels and effusion of blood, very generally takes place from some disease of the vessels themselves. Now and then the vessels within the head have been found aneurismal; very frequently, too, they are found more or less ossified; sometimes they become calcareous, more or less earthy, and very brittle, and they are afterwards found in this state. But it is said that even the veins without the head are occasionally found diseased in a similar way. The vessels are so brittle that they will crack, and apoplexy takes place. Now and then very large vessels in the head have been found ruptured, even a large artery; generally, however, it is the small vessels that suffer, but even the sinuses have been found in that state. You will find an instance of the lateral sinus being ruptured, mentioned in the Journal Universel for 1820. There is another instance mentioned in the same work, of the lateral sinus being ruptured, in a person intoxicated. In the Edinburgh Essays and Observations, vol. 6, there is another instance mentioned where the lateral sinus was ruptured and caused apoplexy. A practitioner informed me that he was once sent for to a man who had been carrying a very heavy load, and he found the longitudinal sinus ruptured. We must suppose there was a disposition,

general or local, to some sort of disease. Usually, they are the small vessels that give way, and next to them come the arteries: the sinuses, certainly, are more rarely affected than either. The hæmorrhage, it is said, is sometimes found between the dura-mater, so that, on removing the skin, the hæmorrhage has been seen there. This is by no means uncommon after external violence; but, when it does not arise from that source, it happens from a bone being carious, and the vessel thus becoming injured.

It is said that in cases where apoplexy follows the suppression of urine a great quantity of fluid has been found in the brain, and even of a urinous character. Whether that is true I will not take upon me to say; but some people have even found gin in the brain—at least so it is said. It is stated that an old woman died at the Westminster Hospital who had been much addicted to drinking gin; she died with her belly full of it, and there was a distinct smell of gin in the ventricles of the brain. It is also said that tincture of assafœtida has found its way to the ventricles, or that there has been a strong smell of it in persons who have died apoplectic. An effusion has taken place into the ventricles of persons previously taking assafœtida, and it is said that there has been a strong smell of it in the brain. These things may be, and I suppose have been, but I have not seen them. Certainly, when persons have been unable to make water, and the urine has been retained, there can be no doubt that they have occasionally vomited urinous fluid, and even spat a fluid strongly smelling of urine. If this be the case, it is possible that such an occurrence may take place in the ventricles of the brain; but I can only say that I never saw but one instance of apoplexy from ischuria, and in that case there was no effusion of any sort into the brain.

Predisposing causes.—Now the predisposition to this disease may be constitutional, or even hereditary—an hereditary make of the head, neck, and body at large. Men who have a large thick head are those that are usually affected, because that is not the size for intellect—is is a *long-headed* man that is generally thought clever. Those men with short necks, circular breasts, and not very tall, are certainly very liable to apoplexy, and this is, of course, a constitutional make; and if it happen to be hereditary also, you may say that the predisposition to apoplexy may be hereditary as well as constitutional. In the next place, indolence of body and mind will predispose to it. Persons who satisfy themselves with little exercise and little mental exertion, have more or less congestion, and at last become apoplectic. It is said that Boerhaave had a student who took it into his head that sleep was the natural state, and he slept as hard as he could, till at last he fell into apoplexy—from the want of external excitement he became apoplectic. If persons sleep too much, they become more or less plethoric, and liable to become apoplectic. Too rich and too abundant food will have the same effect. Hypertrophy of the brain tends to produce this disease, an occurrence which we might *a priori* expect. An over-nourishment of the brain is likely to dispose to congestion, and to an irregularity of the circulation. I once saw an instance of this kind, and only once. It occurred in a young gentleman eleven years of age, who had a head bigger than most men—in fact, it was too large for his body. He was remarkably clever, and was not contented with the society of other children, but associated with his father and mother. He studied many things, but more particularly political economy. He was seized one day with hemiplegia, and had double vision, and the attack was soon followed by coma. Previously he had had double vision, and pain of the opposite side to that in which hæmorrhage afterwards took place. After death, the only thing I could discover was congestion in the brain, and I fancied that the corpus callosum was softened. A few minute tubercles were found in the arachnoid, but nothing to cause apoplexy. His brain was far larger than it ought to have been in a child of his age. The brains of very few adults attain so large a size. You will find a case in the Dictionnaire des Sciences Medicales, under the article "Rare Cases," of a German who died apoplectic at the age of thirty. He had very powerful mental faculties. His head began to grow at seven years of age, and at thirty it was twenty-seven inches five lines in circumference; the rest of his body was not proportionate, and, like my patient, he died apoplectic. It seems that Morgagni and others have spoken of hypertrophy of the brain. From the excessive nourishment the convolutions are very indistinct, and from the excessive substance of the brain growing out in all directions, and filling up the cavity, the ventricles are very small. The brain altogether, when you open the head, looks too large for the cranium, and the substance too is very firm. In the disease called "hypertrophy of the lungs," when you open the chest, they are glad to make their escape, to come beyond the limits of the incisions; and so, in opening the brain in these cases, it looks as if it were too large. Sometimes this hypertrophy is

only partial, sometimes the whole is too large, and sometimes the spinal marrow is also affected in this disease. There can be no doubt that cases of this description, of which I have seen one, predispose to apoplexy.

Apoplexy is also predisposed to by the decline of life. More persons die apoplectic who have passed the meridian of life than not, with the exception of children, who die in consequence of effusion; yet apoplexy does occur every day in children. There is an inflammatory state of the head, which causes more or less effusion; but apoplexy from a congestion of blood, effusion through diseased vessels, generally takes place after the middle period of life —more frequently than not. It occasionally, of course, takes place from the sudden cessation of a discharge—from the cessation of the menses. You will have it after the menses have ceased, and sometimes from amenorrhœa, but not so frequently as might be imagined. Apoplexy is the result of old age sometimes, and after the cessation of the menses women are getting old; but the utmost you generally see, when women do not menstruate regularly, is headache and giddiness. The suppression of hæmorrhoidal discharge has produced apoplexy, and the cessation of a long continued cutaneous eruption will do the same, and likewise metastasis, on the cessation of gout, and even, it is said, the removal of tumors.

Apoplexy is strongly predisposed to by organic disease in the head, in the brain, or in the membranes, or on the inner table of the bones, or the whole substance of the bones—the pericranium. When there is organic disease without the head, whether of the bones, or the pericranium, or the inner tables, or the dura mater, or the head itself; then a person, from the excitement going on there, is very much disposed to this disease. Anxiety of mind has a tendency to produce it: when persons are very anxious, they soon experience heaviness of the forehead, and apoplexy is soon induced.

Many of these things, you will perceive, act by merely giving rise to excessive fulness, and if there happen to be in the individual who is exposed to these predisposing causes any organic disease of the vessels or membranes of the brain, you may see how easily the excessive load of blood there may occasion apoplexy. When there is organic disease of the vessels, you will immediately perceive that it does not require a full habit, full living, a short head and a thick neck to induce the disease. If any of the vessels be diseased, if a person be as thin as a lamp-post, and nearly as tall, he will be liable to apoplexy; and people wonder that a person so spare should die of such a disease. It is so frequently the result of blood effused through the vessels, that you must expect to see the disease in thin people, not so often as in fat persons certainly, but very frequently. As it may arise without any fulness of the vessels whatever, but simply from one vessel, or a set of vessels, being brittle or softened, or ulcerated, or labouring under some other disease; and as it will arise from mere fulness of all the vessels, the vessels themselves being sound, but suffering more or less congestion; you therefore may expect apoplexy in two very opposite descriptions of people, and when it arises from the state of the vessels, none of these other predisposing causes are required. A person may live the most abstemious life possible, and yet the vessels will let out the blood, and the person must die apoplectic; so that no exciting cause may be required for it, and none of those predisposing causes which I mentioned as operating by occasioning fulness of the head.

Exciting causes.—As to the exciting causes of the disease, they may be equally influential in producing it, whether there is mere fulness, or organic disease of the vessels. Stooping, especially if a person make an effort while doing so, is a common cause of apoplexy. If there be previously present great congestion of blood, without disease of the vessels, stooping will increase it to such a degree that apoplexy will occur. Supposing there be brittleness of the vessels, stooping will have the same effect as if there be great congestion. You see that a common exciting cause of the disease for the most part will produce apoplexy, whether it may arise from an over-fulness simply, or disease of the vessels; because stooping, for example, is a violent effort, and will throw a great quantity of blood on the head, and will operate by forcing the blood through, or opening the vessels. Exposure to a very great fire, or being in a very close apartment, are causes of the disease, and so likewise are the rays of the sun—isolation. Intoxication, too, will frequently produce the same effect. Cold causes stupor: when persons are exposed to intense cold, they become exceedingly heavy, they are disposed to sleep, and it requires a strong exertion on their part to prevent them from going to sleep. When they travel over regions of snow, and have nearly perished from cold, if they give way to sleep, and lie down, they are sure to die; but yet they will be careless, and though their friends tell them of the danger, and entreat them not to lie down, the propensity to sleep is so great that they

cannot resist it, and the cold at last produces apoplexy. When a person falls into a sound sleep, I believe that death from cold is by no means unpleasant—of course it is unpleasant to be killed, but when they are benumbed they lie down quietly in an apoplectic state. It is said by Portal, a French physician, that he found a rupture of a vessel in a person who had died in this state. It would appear that others had observed that cold killed merely by numbness, did not kill by producing pressure, but by simply benumbing, taking away all excitement from every part of the body, and the brain among the rest. I may mention that the late Dr. Kelly, in the first volume of the Edinburgh Medico-Chirurgical Transactions, says that he found serous effusion, and great congestion of the head, in two persons who were destroyed by cold; but Portal says that he found actual rupture. Tight bandages have frequently produced apoplexy, or threatened to do so—that is, the person would have had it if they had not been loosed. You would suppose that the tight bandage which is applied by Jack Ketch would occasion this disease, and Mr. Brodie says, that in a person who was hanged he saw effusion of blood; and Dr. Monro says, he found in two cases congestion of the scalp and congestion within. But this is not always the case: persons who are hung do not die of apoplexy, but a want of breath. Occasionally it has happened that apoplexy has been produced—not only extreme congestion, but, according to Mr. Brodie, on whom we may place implicit reliance, he found rupture. Sometimes, after drowning, great cerebral congestion has been found; but there are several authors who deny the truth of this statement. Drs. Good, Winslow, and Currie, say that, after drowning, no congestion was found. Morgagni says, that, after hanging, he found no congestion. De Haen says, that, after hanging and drowning, nothing was to be found; and so says Dr. Kelly. It appears, therefore, that a person may be hanged or drowned, and no congestion nor rupture take place; but, in other cases, there may be rupture. People, from drowning, hanging, suffocation, and cold, do not die necessarily of apoplexy; there *may* be apoplexy in addition, but not necessarily so. I presume that a great deal will depend on the strength of the vessels; if the vessels be very strong, they will not give way, they will not allow great congestion to take place; but if, on the other hand, they be weak, they will allow it; or, if they be diseased, they will allow the blood to be effused. Anger has sometimes destroyed life by apoplexy. Ischuria renalis has been also found to produce apoplexy. Narcotics will give rise to this disease; they produce various disturbances of the brain, sometimes delirium, sometimes more or less phrenitis, and sometimes apoplexy. They cause apoplexy, by inducing compression where there is great congestion of the head; but, independently of producing this compression of the vessels, they do harm by their peculiar narcotic power—by destroying the vital powers of the body, just as cold will produce death independently of congestion.

Among the exciting causes of the disease, you find mentioned lying on a millstone; but I do not suppose that any one lies down in such a situation. If it do produce death, it is by the centripetal force, driving all the blood to the head, so that apoplexy is induced. Inflammation and suppuration of the brain frequently produce apoplexy. The inflammation goes on to such a pitch that apoplexy at last ensues from the congestion. Suppuration within the brain causes such a collection of pus, as to compress it, and the compression may produce apoplexy. The pressure occasioned by a depressed bone likewise gives rise to apoplexy. You continually see persons brought to the hospital, after an injury inflicted on the head, perfectly comatose, in a state of apoplexy, and, when the bone is raised, they recover. Some, however, deny that pressure will produce these effects—at least they deny that the brain is ever compressed. They say that the cavity of the cranium must always be full, that if you compress the veins, so that the blood cannot escape, so much less blood goes up to the arteries; or, if you quicken the pulse and increase the usual quantity in the arteries, the veins contain proportionately less. Dr. Kelly, who takes this side of the question, says, that he bled animals to death, and he still found a great quantity of blood in the head, so that the cavity must be filled. If you press more in one way, more comes out the other; or, if you endeavour to withdraw the blood, you cannot, because the cavity must be filled, and therefore you can only take away a certain portion. He says, as I just now stated, that after he had bled animals to death, he still found a large quantity of blood in the head.

Now, all this may be true; but I should think that there may be more blood in the head at one time than at another; the cranium may be full, but I should think there may be different degrees of packing. A portmanteau may be filled, but it may be packed tight or packed loose; and, when you see that, if a person stoops, he becomes stupid and sleepy and giddy, and all the vessels of the external part of the head are distended with blood, and you see him suf

fering something which, in a higher degree, would be apoplexy, I cannot help thinking that there is more blood in the head at one time than at another. I should conceive that the cerebral substance may be pressed up in a different degree. There must be a certain quantity of blood in the brain resisting the entrance of more; but I should think that more might be *forced* upon the brain, so as to compress the cerebral substance, and bring it into a smaller bulk.

When the face is red and full, all the external veins turgid, and you see a person labouring under evident external plethora of the head, and at the same time he has signs of apoplexy, if you open him, you are almost sure to find the internal vessels of the head all in a state of congestion; and hence, to all appearance, there is far more blood in the head at one time than at another. If a person tie his cravat tight, he instantly has the external veins of his face filled, his eyes become red, at the same time he feels stupid and giddy, and if he do not loosen it soon, he is very likely to drop down. Some have denied that there can be congestion of blood in the head from this circumstance, namely, that, after hanging and drowning, there has frequently no apoplexy been observed, no congestion of blood, and no effusion; but, I presume, this will all depend on the strength of the vessels, or the vessels not being diseased. If they be in this healthy condition, I presume that they will resist an overload of blood, and not give way—that they will not allow either rupture or congestion of blood. It is well known that persons with hypertrophy of the left ventricle of the heart frequently become apoplectic, there being such a quantity of blood forced violently towards the brain. But it is said, that we every day see such a violent quantity of blood driven up to the head, and yet no apoplexy is produced. I presume that the reason is, the vessels are so strong that they will not become over-distended—they will not give way; whereas, in other persons, they are diseased or feeble, and do give way, so that you have congestion. I cannot see the force of the argument that has been adduced. I will not deny that there may be only a certain quantity of blood in the head; but I do think that the cerebral substance may be more compressed at one time than at another—that the contents of the cranium may be packed closer. I cannot but conceive that there may be a great difference of packing in the cerebral substance.

Some contend, however, that we are able to say nothing about the existence of pressure; or, allowing that pressure does take place, they deny that it will produce apoplexy. There is a Frenchman, named Serres, who pretends that actual compression does not produce apoplexy. He trephined several dogs, cut out a piece of the cranium, and then wounded the brain through the aperture, producing effusion of blood, and yet, he says, apoplexy did not occur. Now, I presume, the reason there was no apoplexy was simply this, if we can depend upon his statements, and whether we can or not I will not pretend to say, because some say we cannot—that, if an opening were made in the cranium, the pressure would be without and not within, because the opening would allow the contents to be pushed forward. But, he says, after he had cut out a piece of bone, he took a cork and corked it up, so as to press on the brain, and no apoplexy was ever produced. I presume we are allowed to believe this man or not—no effect was produced by putting a piece of cork on the brain through a trephined opening! There can be no doubt that the brain will bear pressure without much effect being produced, provided it take place gradually. I believe I mentioned, in a former lecture, that a case is recorded by Dr. Heberden, in the Transactions of the College of Physicians, of a man in whose head no less than eight ounces of water were found, and yet he had only been deaf. He died suddenly at last. Of course these eight ounces could not have been formed suddenly. Before death he had had one or two epileptic fits, but in the intervals he had all his senses and faculties. This was an instance of gradual compression: sudden pressure caused by a less quantity would, I presume, have produced apoplexy. Dr. Marshall, formerly a lecturer and anatomist in London, mentions the case of a maniac who, a few hours before death, had become rational, and he found rather more than a pint of serum in and upon the brain, shewing what may be borne, if the part be accustomed to it gradually.

When there is any tumor within the head, it will act, not merely, I presume, by being a source of occasional irritation, but by occupying so much space in the cranium, that the least additional presence of blood upon the brain is likely to produce effects which would not be produced if the tumor were not there. If the cranium, for example, be diminished at all by the presence of a foreign body, of course it can less bear any additional quantity of blood which may be forced up, and therefore tumors may act in two ways—first, by exciting a sudden determination of blood to the head—and, secondly, by filling up the cavity of the cranium so much, that even a

little additional flow of blood cannot be borne—there is no room for it. You will see sometimes cases of persons who have died with a tumor within the head, having produced only occasional paralysis, or occasional loss of motion—a kind of stupor. You may say there was no organic disease, because the symptoms were only occasional. That I know has occurred, and, I presume, from this circumstance, that the tumor has gradually accustomed the part to its presence, and when apoplexy and paralysis have occurred from time to time, they have occurred, not from the tumor being there exactly, but from an additional flow of blood which could not be borne. Thus the tumor itself was not the cause of the occasional fits of epilepsy, but the additional congestion of blood, which could not be borne, in consequence of the presence of the tumor, or something occupying the cavity of the cranium; for it is a fact, that we sometimes see persons with considerable pressure, as you would imagine; but, having come on slowly, the apoplexy, or paralysis, has only been occasional—has only occurred when an additional quantity of blood has been forced to the head, which could not be borne, on account of the narrowed dimensions of the cranial cavity.

Patho'logy.—I need scarcely mention, that in apoplexy the muscles are not in fault, although a patient cannot move them, any more than the cords of the nerves. The fault is in the head; and, therefore, when galvanism is applied to the muscles, it acts upon them as it did before. Dr. Wilson Philip says, that he has found that the muscles are as irritable as in health. They are all ready to do their duty, if orders be given from *head* quarters; but, no orders being given, they are paralysed. This is not more than you would suppose *à priori*: but it is well to prove it experimentally, and Dr. Wilson Philip has done so.

Treatment.—Of course in this, as in every other instance of disease, if there be an evident exciting cause still in existence, and removeable, we should remove it. Supposing it arises from the depression of a piece of bone, that is a surgical case, and no medicine in the world can remove the symptoms while the bone remains in that position. In all probability it would be a proper practice to attempt the elevation of the bone. The pulse has sometimes been quite imperceptible while the bone was depressing the brain, but immediately on the bone being elevated it has become strong. Mr. Brodie mentions such a case. He says the pulse was only 40 while the bone was pressing on the brain, but on its elevation it instantly rose to 60.

Of course if we know that the apoplexy has arisen from any thing taken into the stomach, we should adopt proper steps to evacuate that organ—that is to say, emetics, or mechanical means—the stomach-pump.

If, however, it be an ordinary case of apoplexy, the first thing, of course, is to raise the person's head and shoulders, to loosen every thing about his neck, and to open a vein—a vein in the arm, or the jugular vein. As to the quantity of blood to be withdrawn, I need not say any thing: that must depend on ten thousand circumstances. The next thing should be to give a full dose of purgative medicine; a drop or two of croton oil, or a scruple of calomel. Perhaps it would be well to give a dose of calomel, whether you add any thing to it or not, because early ptyalism after apoplexy often appears useful. There is effusion left, for which ptyalism is apparently useful, and it is well to lay the foundation for it by beginning with calomel first as a purgative. As it is best to open the bowels very speedily, a strong purgative injection should next be given. The state of the brain causes the heart to be more or less torpid, and likewise the alimentary canal, giving rise to a slow pulse and torpidity of the bowels, and a clyster of oil of turpentine (two or three ounces) answers very well. Whether it is objectionable on account of stimulating the brain, and producing vertigo, I do not know, but I am not aware that I ever saw harm arise from it. A good clyster is one of the best things—salt, or an infusion of extract of coloeynth, answers very well. It is made in a moment, and may be exhibited in gruel or barley-water. It is very useful to apply water to the head, much more so than a blister. You generally find the head hot, and ice applied in a bladder is exceedingly serviceable. The patient should be kept very low, and sinapisms applied to the feet or legs may be useful. But the great point is to raise the person, to keep him as upright as you can, to loosen every thing about the neck, to bleed freely, to give an active purgative, and instantly, without waiting for its operation, a strong acrid injection into the rectum, and apply ice to the head. It would be well afterwards to continue the calomel till the mouth is tender, and that on two accounts; first, in this disease the head is frequently found hot—it is so often an inflammatory disease; and, secondly, you frequently find the blood buffed and cupped; and I may say, in the third place, we so often find paralysis occurring, and that appears to be the result of effusion, the excess of which should be absorbed. Calomel may be useful in that respect.

Great care, however, must be taken not to carry this too far; for there can be no question that persons will sink after a time, entirely from these measures being pushed beyond what is proper. Although you starve the patient the first few days, you must ultimately give him support. I am sure that some persons have had apoplexy from having been bled too frequently even locally, and being deprived too long of food. It is all very well in the first instance; but if the patient begin to sink, you should not go on evacuating. It is necessary to get the mouth sore, and then apply a blister behind the ears and over the head, and after a time, if you please, over the whole of the head; but great care must be taken not to evacuate too much.

There was formerly a distinction drawn between *serous* apoplexy and *sanguineous* apoplexy—serous where it arose from serum effused, and sanguineous where there was great congestion of the vessels, or rupture. Now taking this distinction literally, it is altogether absurd, which will immediately appear when you consider the indications of cure. It was supposed that when there was sanguineous apoplexy, you were to bleed, purge, and starve; and when it was serous, you were to support the patient well, because it was a case of apoplexy from the oozing of water. That was absurd, because you may have serum where the inflammation is more or less severe; you may have serum in a case where it is quite proper to bleed, purge, starve, and apply cold. Common inflammation of the arachnoid membrane will produce it, whether it be active or not; and in the next place, where you have effusion of serum you have continually great congestion of blood. You may have it in both cases; and nothing is more common, when you find a vessel ruptured in the head, than to find serum effused upon the brain and outside the head. Serum in this case, as in its effusion in all other parts of the body, may be the result of weakness, the result of congestion, or the result of inflammation; and therefore you see that no treatment of apoplexy can be founded on the presence or absence of serum, even could we tell it beforehand any more than an indication of practice can be drawn from serum in other parts. You may have serum in peritonitis, and you may have to treat the case as active peritonitis, or you may have to support the patient well and give stimuli; and the same remark applies to the brain. Hence this distinction is not founded on pathological principles. Where a person looks full of blood, we must treat him by depletion; but where he looks pale, watery, leucophlegmatic, and has a weak pulse, as if the effusion were serum, then you should not employ active depleting measures, but be exceedingly careful, and perhaps you may have to support him. There is a distinction to be drawn; but it is not because there is serum or no serum, but because in the one case there is a state of fulness and congestion, and in the other a state of debility. It is necessary, of course, to consider the powers of your patient. In some of these cases you find the patient looks as though he would be dropsical in the head, and every other part of the body is pale and white, and if an effusion of serum took place, it would be more from weakness than any thing else; yet in such persons as these, after death, you continually find congestion, and more or less organic disease giving rise to the effusion of serum. You must depend on the state at large, and proceed on general principles, and not as to whether there may be serum or not, for you cannot tell its presence *à priori*.

After the fit is over, and the patient has recovered, it is necessary to pursue the general treatment which you adopted during the fit, only on a more moderate scale. If it be necessary to bleed copiously, to treat the case very antiphlogistically, or in a very depleting mode, of course the patient should be very abstemious in his diet, should keep an open state of his bowels, and use all those measures which are calculated to prevent a phlogistic condition from occurring, but in great moderation. If a patient have not borne an evacuation during the disease, of course a more generous diet must be allowed; you need not be so strict; and Dr. Babington, from his extensive experience, became convinced that, after a time, many persons were made to suffer exceedingly from having antiphlogistic measures carried too far, not only from the very outset, but afterwards. He says that he found great advantage, after a time, from the moderate exhibition of tonics; however, there is one kind of apoplexy in which it is necessary to give a particular remedy, or you will be sure to lose your patient, and that is in apoplexy arising from the suppression of urine. I believe in that species of the affection evacuants do little or no good, but that cantharides employed both internally and externally are the proper remedy. It is well to resort to them always, and give a grain two or three times a day. I should not recommend the tincture, for I believe it is uncertain in its operation. I have given two or three drachms two or three times a day without any effect; and sometimes I have given the same quantity and found great irritation. I do not think there is a more uncertain medicine in the Pharmacopœia than tincture of cantharides,

nor do I think there is a more certain one than the powder. If you give a grain, or two grains, every night, or night and morning, you are almost sure to make the bladder perform its functions. The only experience I have of cantharides internally has been in cases of gleet; but it has been unsatisfactory on account of the people being out-door patients, so that I had no great controul over them, and therefore I cannot speak as to its powers. I have no experience of it in apoplexy from ischuria. I applied it in one case, but the patient died in twelve hours, so that there was no time for it to do him good; but a gentleman told me that he had seen it successfully exhibited in two cases. In the first case Sir Astley Cooper suggested its employment; and although an unfavourable prognosis had been given, the patient recovered. The second case shortly afterwards fell under the same gentleman's care, and he adopted the same remedy with equal success. It does appear, that in that kind of apoplexy stimulation of the urinary organs is the proper remedy.

I must here draw your attention to a fact perfectly analogous to that which I mentioned respecting the hydrocephalus of children. I stated that children were occasionally subject to hydrocephalus from mere excitement, that their pupils became dilated, that they would fall into a state of coma and perhaps be convulsed, and that if you bled them you would destroy life; whereas, if you gave ammonia and beef tea, and supported the child well, it generally recovered. I mentioned that there was a similar state in delirium, called "delirium tremens," and which, in the greater number of cases, is not at all inflammatory, and must be treated by opium, and not by bleeding. Now adults will sometimes fall into a state of apoplexy from downright exhaustion, called *apoplexia exsanguinea*. Dr. Abercrombie says that he has seen adults comatose and collapsed, the pulse not full, the lips not purple, and the face not turgid. You will recollect that in apoplexy the face is turgid, and more or less livid; but in this form of the disease the face is collapsed and pale; and notwithstanding the pulse may be full, Dr. Abercrombie states, that in this condition the diagnosis is to be drawn from the paleness of the face. He says that he has seen it arise from neglected diarrhœa. Starvation might probably sometimes have the same effect. He says that he has seen the state in an old lady amount to a loss of memory and squinting; and he mentions one case in which a person was regularly deaf, paralysed in one sense when in the erect posture—when less blood goes to the brain and more freely escapes from it; whereas, as soon as the patient lay down, the deafness ceased and the face became flushed.

Now it is very necessary, in looking at a case of apoplexy, to ascertain whether it is of the kind you see in nineteen cases out of twenty, or whether it arises from a state of exhaustion of the brain; and if it be a case of the latter description, if the face be pale and collapsed, you have reason to believe that the patient has had causes of debility applied, and then certainly it would be necessary to give ammonia. Ammonia is preferable to wine, because wine might induce perhaps too great a stimulation of the brain, which would last afterwards; the stimulus of ammonia is very evanescent.

There will, of course, occur cases in which you will be much distressed, being unable to make up your mind as to what ought to be done. The same circumstance occurs in the treatment of inflammation. You will recollect I stated, that at last you will be unable to make up your mind how far there is irritation, and how far inflammation. In such cases it is best to mix the treatment; evacuate as much as you can; apply blisters rather than leeches, leeches rather than cupping, and cupping rather than bleeding at the arm; and at the same time give moderate diet and ammonia. The operation very soon ceases; and if you see it do harm, the effect is over, and there is no serious mischief: there is this advantage in combining both plans.

Increase of Apoplexy and Palsy within the last century.—I may mention that it is said apoplexy and palsy have very much increased of late years. Dr. William Heberden, the son of the author of the Commentaries (which is an excellent book to read for a description of certain diseases, but not for any thing else, because the treatment was not very vigorous) has written a very excellent paper upon the increase and decrease of different diseases, and he states that the increase of apoplexy and palsy has been gradual and constant of late. His paper was written about fifteen years ago, and there is double these cases now in proportion—not absolutely, but in proportion to what there was a hundred years ago. Whether people drink more porter and strong malt liquors now than formerly I do not know. The upper orders drink less wine, but the lower orders may drink more porter. I do not know how it is to be explained, but there are double the cases now in proportion to the population that there were a hundred years ago. Sir Gilbert Blane mentions, that he had more apoplexy in the hospital than in private practice; and the people

who go there certainly drink more porter than their superiors in society. I suppose porter or spirits, or both, have more tendency to produce the disease than wine. If it were the wine which produced the disease, as that is now so much less drank than formerly, the proportion of cases would not be what Dr. Heberden has stated.

CLINICAL LECTURE

ON

LITHOTOMY,

Delivered at the Middlesex Hospital, Jan. 26, 1833,

By Sir Charles Bell.

To strike while the metal is hot, should be the motto of a clinical lecture; that is to say, it should be a lecture delivered with reference to the case that is before us, and while our interest is excited in the highest degree—and this, I am confident, is your condition at this time.

You have witnessed a little boy taken from the arms of his mother, and brought into the operating-room struggling so that it required three men to hold him. This is a very disagreeable prelude to the performance of a most arduous duty; but it is much more so when you operate in private. Having selected the room where there is perhaps a better light, and prepared every thing for the operation, and placed the blankets and pillows upon the table, you go into the bed-room to receive your patient. He takes leave of his wife and family, and you lead him literally to be bound hand and foot; and you have then an operation in which the slightest thing performed amiss determines the life of the patient. In short, either, with all the triumph of your art, you deliver him back to his family, and to the enjoyment of many years of health, or you have to announce a failure, and an anticipation of his sinking under his suffering. This is a condition almost too severely painful, I should say, for a man to suffer—I speak of the suffering of the operator. You need not be ashamed of this anxiety before an operation, since he who was undoubtedly the first operator that England has produced, and to whom we are most indebted for a right method of operating in lithotomy, Cheselden, felt all this previous to an operation, although his hand was ever steady during it; and, indeed, there is nothing more true than this—that when a man has ceased to be anxious about his patient, he has ceased to improve himself, or to be capable of improving his profession.

Now this operation, I beg you to notice, must be studied by two different methods: first, through a knowledge of the anatomy, and by the dissection of the dead body; and also historically.

With reference to the first, you must know the parts perfectly well, and look upon them in every aspect; and you must also perform the operation upon the dead body. But if you operate upon the dead body, and then come to operate upon the living one, without somebody to tell you the difference, you will be very apt indeed to be thrown out, and to lose your presence of mind, for you will be astonished at the difference. You operate on a dead body, with the parts in a state of perfect relaxation; whereas, in actual practice, you find your finger and your instruments engaged in a deep wound, where the parts are spasmodically contracted; and hence arises a difficulty in ascertaining the extent of your incision. I cannot express to you otherwise the difference which there is in the living body, as contrasted with the relaxed condition of the parts, and the facility with which you cut into the bladder in the dead.

With regard to the history of lithotomy I have observed, that in the last five-and-twenty years there have been continual changes in the mode of operation, and in the application of instruments. We have heard one of our late great surgeons saying, "I have now operated for the last thirty times without losing a patient:"—a great consolation this to any man who is anxious to fulfil the same duties. But what happens next? He changes the mode of operating, and is found cutting above the pubes. What does that import? Does it not declare, in the most emphatic manner, that he has not perfectly succeeded before; or, if he have succeeded in thirty successive cases, what excuse has that surgeon for changing his mode of operating? Then go into an instrument-maker's shop, and inquire, whose instrument is that?—whose instrument is this?—"Here, sir, is something new," says the cutler. In short, for every hospital, for every surgeon of eminence, you find some description of new instrument—a gorget, a gorgerette, &c. What does that declare? Does it not demonstrate, that the surgeon has experienced a difficulty? Does it not most distinctly say, that he has not been successful, and that he is seeking modes by which the errors of former operations may be guarded against? Here is the condition in which you are placed. You are coming forward as young surgeons, and are naturally exercising your ingenuity, and, as you think, laudably exercising it.

Looking at the parts in the dead body, you say, "If I had such an instrument, I think I could operate better;"—and it is very natural. But I beg you to notice, that this operation has been studied for 500 years by men of great knowledge, dexterity, and ingenuity; and are we to be so presumptuous as to think, that, because we possess a little nack for inventing an ingenious instrument, we are therefore to succeed where they failed? The fact is, that surgeons have been re-inventing things which were invented hundreds of years ago, and which were thrown aside on their first invention because they were bad. It is to avoid this folly that you must study the operation historically. You must know what has been done—what instruments have been used—and with what idea, and why they were thrown aside—otherwise it is ten to one but that your ingenuity may be defeating the very object which your good feelings prompt you to—to make the operation an easy and a safe one.

Well, then, certainly a clinical lecture ought to go directly to the case before us; all the remarks ought to tend towards that point: and I shall not go into the history of the operation farther than to remind you of one great era in it, and that was what took place on the appearance of Frère Jacques. Frère Jacques was a poor barefooted mendicant friar; he pretended to inspiration, and did his operations "in the name of God." He was, moreover, a man of great dexterity and coolness, and he operated with considerable success—at all events, most rapidly and fearlessly. Now, in order to understand what that man did for us, and for our profession in this department, you must recollect what the regular surgeons were then employed in. They had proceeded upon an aphorism of Hippocrates, that membranous parts ought not to be cut into. They had found the difficulty of the operation—they had experienced mishaps—and the learned of the profession, upon looking into Hippocrates, found the aphorism against the practice of cutting membranous parts, and declared, that the cutting of the bladder was the reason of failure. The effect of their theory upon their practice was, that instead of cutting for stone they dilated the parts. They made an incision too small and too high, and dilated the wound by the application of a succession of instruments. It so happened that men of distinction in the court of France, and men high in our own profession, were suffering from stone: observing the manner of the surgeons at the Hotel Dieu, and also the manner of the itinerant operator, they saw in the one operation protracted cruelty—under this idea of dilatation, laceration; and in the other they saw rapidity, and dexterity in the use of the knife, attended with great success. What was it natural for those men to feel who were thus suffering? "Would," they said, "that this itinerant-operator had a knowledge of anatomy, and that he knew all that the surgeons know; then, with his decision, his steady hand, joined to all the methods that the regular surgeons have to direct them, what an excellent operator would he be, and how willingly would we submit ourselves to his hands!" This is the short history of what is termed Frère Jacques' second method. He was taken into the Hotel Dieu—he was taught the anatomy of the parts—the dangers of the operation were pointed out to him—the right instrument was put into his hand—I mean the grooved staff—and he then, in his second method, as it is termed, cut very much, I believe, as you have seen me cut. He had a direction from the staff, and he cut into the bladder with a knife.

Now I shall not prosecute the history farther; but this you will note, that there have been, in fact, two methods—one of dilatation, which proved to be laceration, and one of operating with the knife. It farther appears, that the regular operation was making an incision too small and too high, whilst Frère Jacques is described, in his first operation, as striking a dagger-pointed knife near the prominence of the hip, and going directly into the bladder. Notice then, I entreat you, this grand dispute, for these controversies come round again. The same things happen, the same ideas are engendered, and the same question is agitated; and, at this present time, a discovery is made, that, in lithotomy, it is best to dilate. You will comprehend the matter as we proceed.

But, now, to go over the operation as you have seen it performed, the first point to which I beg your attention is THE SOUNDING, for he that cannot sound well will never operate safely. This little boy has been three times in this house, and I have sounded him, and felt a stone at each of these different periods. Many were anxious that I should operate; but I said, "No! the time is not come. Here is a small stone bobbing about in the boy's bladder; it is not large enough, and he is very young. There is no hurry; he is not wasting, he is growing:" and so I have put the operation off till now. The mother brings him again, repeating the story of his great sufferings: now, he is a little grown, and the stone is not too large. That is one object, then, of your sounding, to ascertain the condition of the stone, whether it is large enough for operating, and then to see whether it moves in the bladder. I never think, for example, of cutting a person for stone unless I can put the instrument on both sides of the stone. It is not what is

called a *rub* that will suffice; you must be able to put the instrument first on one side of the stone and then on the other, and chuck it to the right, and then, placing the staff anew, chuck it to the left. You must be able to put the convex side of the instrument on the stone, and, in short, to pass the staff round it. "You will operate upon this boy to-morrow," said one of my friends when I struck the stone. "No, I will sound him again," I replied. "I wish to know where the stone generally lies, and whether I can place it to the left side of the staff."

The next point is the introduction of the staff. Now here [*presenting it*] is a proper staff. There are properly grooved staffs now on the table, but I knew the time when there was not one to be found. Who could operate with the staff which I now show you? or what could tempt any man to operate with this or that staff? [*presenting two.*]

When I first operated in London, I went round to all the shops, and could not get a staff fit for use. You see the reason. Suppose that you were to pass such a staff as I now exhibit into the urethra, [*it was small, with a very slight groove,*] and that you were cutting through the urethra upon the groove, in order, we shall suppose, to place there the beak of the gorget, this instrument does not dilate or stretch the canal—the urethra rolls upon it. I have seen surgeons cut into the groove, and then seek to pass the beak of the gorget along it, but they could not find their way; and so they would cut and try, and cut and try, again and again. Why? Because the slightest motion of the patient closes the urethra upon so small a staff, and on such an insignificant groove as this. But when you have a proper staff in the urethra, that is to say, one of the diameter of the largest bougie that a patient can suffer to pass, the membrane of the urethra expands, opens upon the first cut, and you can almost put your finger along the groove. A necessary quality of the staff, then, is to have a large groove, and that it shall be of a size fully to stretch the urethra, so that it shall not roll upon it.

You observed how the staff was introduced in this boy. The surgeon, when he operates, ought not to be groping about with the forceps, this way and that way in the bladder, to find the stone. He introduces the staff so as to have the stone at a certain part of the bladder, that it may bear a certain relation to the staff; and, accordingly, you saw that when the instrument was passing along the membranous part of the urethra, and just slipping into the bladder, the boy was thrown to the left side: that was for a very particular purpose—that the stone might gravitate, and that it might thereby lodge low, and to the left of the staff. Do not you see at once, that if the stone were high up in the bladder, and not in contact with the staff, how much more awkward a thing cutting for stone would be than when it is placed directly opposite to your incision? You ought to have the stone upon the left side of the staff; so that the moment you make an incision, and put your finger into the bladder, you have the inexpressible comfort of feeling the stone, and being able to say whether it is large or small: that is an essential part of the operation, and one that is not commonly attended to.

The incision, you will observe, is for two purposes. You seem puzzled with this: you say, is it not to extract the stone? True—but when the stone is extracted, you must see to something more—that the urine has a free exit. If you make your incision too high, you find that you have deceived yourself; the arch of the pubes diminishes the incision, as it were, in reference to the extraction of the stone. Suppose my two fingers to represent the arch of the pubes, and you begin your incision too high; the half of your incision is of no avail, because the stone strikes against the bone, and too often this forces the stone out of the grasp of the forceps. You saw in this case of a restless boy, that I put the point of my little finger into the anus, and made an incision by its side, cutting down past it. I then turned up the edge of the knife towards the prostate, going deep, and cutting upwards, to avoid the rectum. Where there is a great unsteadiness, and much twisting and motion on the part of the patient, I find this the more certain method. The first incision ought to go deep, through all its length, the usual error being, that it is carried no deeper than the skin, and leaves the muscles resisting the extraction. But to prosecute the operation, you withdraw the finger from the anus; you then pass the finger into the incision, and press on the lower part, so as to push down the rectum, and to keep it out of the way altogether; and directing the edge of your knife upwards, you do not make an incision, but gently, slowly, and carefully dissect the parts covering the staff, just anterior to the prostate. This is a part of the operation in which there should be a most absolute correspondence betwixt the hand of the assistant and the hand of the operator. I have had an assistant who has laid his weight upon the staff, so that, when I cut into the bladder, the staff was always at the lower part of the incision. This deceives one, and inclines him to believe that he has not cut enough. It is a great fault, if, on the other hand, the assistant hold the staff up

under the arch, for it is then very difficult to get at the groove; he should press it down a little, to let you feel the groove distinctly, and suspend or draw it up again, while you are about to make an incision in the bladder.

When the outward incision was thus made, and the staff dissected bare just anterior to the prostate, you saw that I directed the point of the knife so as to penetrate into the groove of the staff. It was then carried along in the groove, the edge being horizontal, and towards the left side; it was passed through the prostate, cut the prostate, and no more. Now, if we are operating on an adult, this is quite sufficient, because, with the common scalpel, having cut through the prostate, the finger, directed by the groove of the staff, slips into the bladder. But when you are operating upon a boy this cannot be expected, because the parts are in miniature; and although you cut across half of the prostate gland in a child like this, you cannot expect that the finger will follow the incision easily; and therefore we must have a bistoury passed into the groove of the staff, and the finger to follow it. The use of the bistoury in the adult is only, when the finger is in the bladder, to enlarge the incision, so as to let the finger in fully, that you may feel the stone. Now you will notice what kind of bistoury I am using: it is strong, it is curved, it has a probe point of an inch in length, and cuts only in a small part of its edge. When the probe-point is passed along the groove into the bladder, I relieve it from the groove, and pass my finger between the two instruments. The curve in the blunt extremity of the bistoury is now of great use; for with it I hold the bladder, and prevent its being pushed before my finger. If the finger do not pass with ease, with the sharp part of the bistoury I cut the resisting edge. The extended probe-point is of further service; it saves the interior of the bladder. With the common bistoury I have seen an incision made on the internal coat of the bladder, and with the bistoure-caché it is on record that this was often done.

If you ask me what distinction there is in this operation that I am describing to you, I would say it is *the operation with the finger*. Here the finger is to be the director—it is to be the sound—it is to be the dilator. You do all with the finger; you put no instrument beyond the guard of the finger. When you have got the finger through the prostate, and into the bladder, you gradually dilate with the finger; and if you find, in thus dilating, that there is an edge resisting, you put in the blunt point of the bistoury along the finger, and give the edge a little touch. Still you work with the finger; and I verily believe that there is no good operator, no safe operator, that does not prefer the use of the finger to all other instruments.

You will remember that you have cut the muscles freely—that you have divided the left half of the prostate—and that you are dilating the membranous part of the bladder. Now, observe, that, by a rude and improper way of operating, you may push the bladder off from the pubes, you may tear up the cellular membrane which is between the prostate and os pubis, or between the bladder and os pubis, and the consequence of that will be, that the urine will pass into the cellular texture, and you will lose your patient by inflammation and suppuration. But when the bistoury has this sort of curve, you draw the bladder as it were towards you; there is no fear of its being pushed from its connexion with the pubes, or of tearing the cellular membrane above the prostate and at the anterior part of the bladder. I have seen the consequence of this error in operating. I have examined the body of a child after the operation of lithotomy, where the bladder was separated from the os pubis, and where a great urinous abscess extended behind the os pubis. I have known such a cavity made here, that the surgeon thought he was in the bladder, while the bladder remained uncut!

In the early part of the operation you have very little to do with the staff. You know that the common way of operating is for the assistant to hold the staff to one side, and to make the bulging or convex part of the staff stand out in the perineum, so as to be felt, and upon that you are to cut; but it is an exceedingly bad practice. This misleads the surgeon, and makes him cut too high; and, indeed, he is thus made to cut upon the bulb of the urethra. The common mistake in this first part of the operation is, making the incision through the integument only, and then cutting into the groove of the staff too near the handle, or (in the position of the patient) too high; and then, prosecuting the operation still by the direction of the staff, they leave uncut the parts in the outlet of the pelvis, which ought to be divided. These, of course, resist the extraction of the stone. You have no difficulty in making an incision by the side of the anus, in avoiding the rectum, in cutting up to the face of the prostate; and you do not for this purpose require the staff to guide you; it is only when you have made what is called "the outward incision," which is, in fact, a careful piece of dissection—it is only when you have laid bare the outside of the prostate, that you seek for the staff just anterior to the gland.

Well, then, suppose that we have used the finger in preference to all other instruments,

and got the point of it into the bladder, the stone having been near the neck of the bladder and on the left side, it is touched; and that calms the feelings of the operator most marvellously. Next you pass the forceps along the groove of the staff; for having such a staff as I have described to you, it serves as a director to the forceps, and you do not need the blunt gorget. I always have a blunt gorget beside me, but seldom use it. When I do use it, it is thus: if there be a difficulty in laying hold of the stone, and yet I can touch it with my finger, I pass the narrow and blunt gorget along my finger and under the stone, and, withdrawing my finger, run the forceps along the groove of the gorget. You pass the forceps along the groove of the staff, directing them with the finger into the bladder, for you have touched the stone and know where it lies. You are not seen plunging in different parts of the bladder with the forceps—that is a most unseemly mode—directing them to the right and to the left, above and below, and opening and shutting them. Having touched the stone, and thus learned where it is, you open the blades of the forceps and you grasp it. Now, when you have got hold of the stone, a difficulty occurs in ascertaining whether or not you have the long diameter in the grasp of the forceps. In the present case the stone was not properly seized—the long diameter was across the blades of the forceps; I wished to change it, and lost hold of the stone, but easily found it again, with the diameter the right way, with its length parallel to the instrument, and it was easily withdrawn.

Again, with respect to the extraction of the stone and the use of the forceps, let me point out to you what is generally amiss. When the incision is too high, when the surgeon has miscalculated the place of the arch of the pubes, and the stone is within the grasp of the forceps, he brings it out of the bladder; but, on coming against the arch of the bone, it is struck off and thrown back into the bladder; or, if it be firmly grasped, he finds a difficulty in extracting it. If, however, the incision be properly made, this difficulty will not occur, and that is one of the advantages of the incision being low. You do not pull the stone directly out; the rectum and the parts below are those alone which yield. But did I say *pull*? No, gentlemen, do not pull. There are many parts of surgery which require the illustration of the practice of midwifery, and there is no occasion which requires it more than in speaking of the present instruments. What does the midwife?—I mean a proper, a scientific lecturer—a person like Dr. Hunter, who knew the powers of nature and the propriety of not interfering with them, but who, when an operation was to be performed, executed it with care and on mechanical principles, both with reference to the bones of the pelvis and the diameter of the child's head. Such a teacher will inform you that the midwifery-forceps is to be used as a double lever—that you are to bear alternately upon one side, and then upon the other—that you bring down one ear a little on this side, and then the other a little further. Here is a lesson for the lithotomist. He is not to pull directly; or, if he do, I only wish it would happen to all such persons just as I saw it once occur to an individual in performing this operation. The stone bolted out at once, and he fell backwards into the arms of his assistants—a very awkward situation, and worse than awkward, giving too evident a proof of the violence he had been employing on the bladder. No; the force ought not to be employed in that way. The mode in which the two blades of the forceps operate is as a lever, first from one side and then again from the other, so that you get the rough edge of the stone a little on one side over the cut edge of the bladder, and again a little on the other side; and so you go on gradually, till it comes out of the grasp of the bladder; and so with regard to the other parts. When the incision is made low and free, there is no difficulty in getting the stone out of the wound when it is past the bladder; and let me intreat you to do the operation slowly, for these membranous and muscular parts will yield in a remarkable degree.

The next point to which I beg your attention is the dressing. I certainly used formerly to see some of the best operators clap pieces of lint upon the wound, bring the thighs together, and put a tape round the knees. Now that is the most dangerous practice possible, and it is the more dangerous the better the operation has been performed. I have been criticised for saying that I have lost a patient by operating too well; and it was a very fair subject of ridicule, but I beg you will recollect the circumstances, for it is quite possible that you may err as I did: I am indeed confident that many patients have been lost by neglect of the circumstance to which I am about to allude. I operated on a patient where every thing went on right, as I should say, perfectly correctly; but I took no care of the wound. The evening came; about nine o'clock the bladder was fully distended—the patient had a great disposition to pass water; at last he did pass water; he had the sensation of passing water, but none came by the penis. However, it came out of the bladder and passed into the cellular membrane, all round the bladder. Now this was in consequence of the agglutination of the outward wound; it was not

from adhesions, but from a process which, if not interfered with, would have become adhesions. It arose from the blood being agglutinated in the lips of the wound, so as temporally to close it, and the urine, having no outlet, flowed into the cellular membrane. When I look into cases I am convinced that this has happened very often, without the operator knowing the cause of death. This is the source of those extensive suppurations that take place in the cellular membrane of the pelvis, and which destroy the patient two or three weeks after the operation: therefore, I say, take care not to bring the parts so together as to endanger the agglutination of the wound. Accordingly, you saw me put a bit of lint around a piece of hollow bougie, and introduce it into the wound, and beg the house-surgeon to pass a probe through the tube, and see that the urine escaped freely. This should be done during the first day, and the next day you may take the tube away. By this means you secure the patient against that cause of fear, namely, extravasation of urine. As to those who will not act on this hint, I hope they will see their patient a few hours after the operation, and pass their finger into the wound and break down the coagulum, or the slight temporary adhesions. This is very necessary; but it is a clumsy way of guarding against extravasation of urine. It is not unusual to hear a surgeon say rather exultingly, "the urine came through the penis on the second day." That patient, I do affirm, ran the greatest risk of destructive extravasation of urine.

There is one reason why this danger has not been noticed so much as it otherwise would. If an operation for stone have been performed with a good deal of fingering, a good deal of working with the instrument, with repeated introduction of the forceps, and when violence has been done, the wound is not so apt to unite in the manner which I have described, and therefore the urine comes out pretty freely. I do believe that it is in consequence of the operation being so frequently done in that way that this accident has happened so seldom, or at least that it has not been noticed.

On the whole, then, gentlemen, looking at the operation of lithotomy, what are the causes of failure?

The first is violence—long continued violence. Now to avoid that, I repeat, that there is nothing so necessary as a careful sounding for the stone, ascertaining its size, its place, and having it so situated that you find it easily, without much groping in the dark, or much disturbance of the parts. If you will only consider what a patient suffers from the passing of a bougie, what inflammation is likely to occur from that alone, you may readily conceive the impression made on the system generally by the operation for stone; and, therefore, it ought to be, if I may so express it, performed as simply as possible, and with as little injury and no laceration. If unfortunate circumstances do occur, let us hope they may be those over which you have no control. Why are we so anxious about this operation if every thing be correctly done? I suffer as much or more torture of mind than Cheselden did; but I do not believe that any one ever saw my hand shake in an operation. What is the source, then, of anxiety? It is, that, after all our care, there may be something in the constitution, something in the size of the stone, something in the condition of the bladder, something in the running of the arteries, that makes us necessarily incur a certain chance of failure. No sensible man, therefore, can go to this operation without having these chances before his mind.

Violence is one cause of failure—extravasation of urine is another, and, I am certain, a more frequent cause than operators are aware of. The next cause is hæmorrhage. You must have observed that, in this operation, there was very little blood; that is to say, compared with what I have seen in other operations, the boy lost very little blood. Now I do believe that the incision, which is very low down by the side of the anus, which goes altogether behind the bulb, which is not near the artery of the bulb, is that mode of cutting which is attended by the least hæmorrhage. It does sometimes happen that the artery of the bulb comes along the prostate, and then the hæmorrhage may be very great—the patient will lose a good deal of blood during the operation; then again in the evening; the next day more: it will then stop, and you will think it is disposed to cease; but it occurs again, and so you lose the patient. And if the patient do not die of hæmorrhage directly, what with the operation being a severe shock to the constitution, and what with the loss of blood, which is another severe blow to the powers of life, the patient at last sinks.

Finally, you have patients who die of inflammation of the peritoneum. Just as you may have peritoneal inflammation from violence to the womb, so you may have it from an injury to the bladder. Inflammation is set up in the fundus of the bladder and spreads over the abdomen. In short, this is an operation that demands great study, singular dexterity, and precision. I would not wish to see you throw aside the consequences, and be too bold, but I would have you dismiss from your minds what the bystanders are thinking, and to remember that you are not operating against time. It is never the time which

passes during an operation that hurts the patient; it is the repetition of fruitless attempts—the repeated introduction of instruments, that is most to be lamented.

LECTURES

ON

DISEASES OF THE EYE,

Delivered at the Birmingham Eye Infirmary,

By Richard Middlemore, Esq.

GONORRHŒAL INFLAMMATION OF THE CONJUNCTIVA.

The last form of conjunctival inflammation attended with purulent secretion, to which I shall call your attention, is gonorrhœal ophthalmia. It is an affection of an extremely violent nature, rapid in its progress, and very generally destructive in its consequences, almost always seriously impairing, and not unfrequently destroying, vision. As its name implies, it bears some relation to gonorrhœa; and it will be our object to explain, as far as we can do so, the kind and degree of connexion subsisting between the puriform inflammation of the urethra and that of the eye. This disease very rarely attacks females: I have only seen it take place in females on three occasions, and Mr. Lawrence remarks that he has never on any occasion observed it in the adult female. It may also be noticed that it seldom affects both eyes at the same time; occasionally the second eye becomes inflamed in the course of four or five days after the first; less frequently it becomes affected as its fellow is more nearly approaching recovery. These circumstances will be particularly considered when we investigate the causes of this complaint.

Symptoms.—The earliest symptoms of gonorrhœal ophthalmia are, increased vascularity of the conjunctiva, with slight intolerance of light, and augmented lachrymal secretion. The redness does not commence at any one point of the conjunctiva, but appears to affect simultaneously its whole, or nearly its whole, surface. There is also that sensation of sand beneath the lids which is common to almost every form of acute conjunctival inflammation, and which sensation has been said to depend mainly on the prominence and sudden distention of its vessels, by which the smoothness of those surfaces which move upon each other is destroyed. This sensation is more severe in this form of inflammation and the acute purulent ophthalmia previously mentioned, than in any other. These symptoms are very rapidly aggravated; the conjunctiva soon becomes extremely red, and raised from its connexion with the lids and the sclerotica, so that it projects between the palpebræ as a convex vascular mass, and nearly conceals and overlaps the cornea. There is profuse purulent secretion; great intolerance of light; and a sense of tension in the eye-ball, which feels as though it would burst; the lids become swollen, and of a dark-red colour; the upper lid frequently hangs down upon the cheek, and is so much prolonged and thickened by congestion of its vessels, and by effusion into its loose cellular tissue, that it cannot be raised by the natural efforts; there is also severe pain of the face and orbit, and hemicrania of the side affected; the constitution is also greatly disturbed; there is much irritative fever, with a loaded tongue and suppressed secretions. If you now carefully examine that central portion of the cornea, which the chemosis, at this stage, has not yet covered, the pupil will be found to be contracted, and the aqueous humour turbid. This turbid appearance of the aqueous humour is not always produced by any change in the quantities of that secretion, but generally depends on the tense and inflammatory condition of the globe; for if you will lessen its fulness by evacuating the aqueous humour, as advised by Mr. Wardrop*, (Medico-Chirurgical Transactions, vol. iv. page 112, and Edinburgh Medical and Surgical Journal, vol. iii. page 6) you will find the turbid appearance of the eye removed, and the clearness of its chambers completely restored.

Now these symptoms establish themselves with extraordinary rapidity; and such is the violent character of the disease, that even if it falls under your notice as soon as the patient discovers any uneasiness in the organ, you are not able to prevent the establishment of acute inflammation, with, very probably, serious injury to vision.

It has been stated that the lids, particularly the upper one, are extremely elongated and enlarged, and that they are in a state of extreme vascular congestion; and you may inquire what necessary connexion has such a state of things with the gonorrhœal inflammation of the conjunctiva? The inflammation of the conjunctiva extends to the cellular membrane, connecting it to the neighbouring parts. This inflammation terminates in effusion, and its cells receive in addition the increased exha-

* This mode of relieving the distention of the globe was first recommended by Dr. Whyte, in his "Observations on the mode of managing Ocular Inflammation," published in the Medical and Physical Journal, March 1802.

lation from the posterior surface of the inflamed conjunctiva, the distended vessels of that surface relieving themselves in the same way as do those of its opposite and external surface, by increased secretion; and as a consequence of this state of things, the palpebræ become tumid and enlarged. But not only is the cellular membrane intermediate to the cuticular and mucous surface of the lid distended and enlarged by serous and lymphatic deposition, but the lid itself becomes increased in size, from the augmented magnitude of its vessels, and particularly of its veins. This congested state of the circulation, and consequent distention of vessels, is owing, first, to the compression produced by the effusion beneath, and is afterwards much assisted by the inflamed state of the eyelid. This leads me to consider the kind of effusion upon which this extreme and rapidly formed chemosis depends. You would imagine that an effusion produced by inflammation of that surface of a mucous membrane by which it is connected with the cellular tissue beneath or around it, and by the inflammation of the cellular tissue itself, would, if rapidly formed, consist chiefly of serum, in whatever state of constitution it might occur; and such, indeed, is the case; for although the chemosis attendant on gonorrhœal ophthalmia does not assume that pale red appearance, and acquire that loose and rather flabby state, which has been mentioned as one of the common characters of slight œdematous chemosis, yet, if it be freely scarified, it will yield an abundance of serous fluid, and become materially diminished in volume.

There is yet a third, or last stage of the disease, to be mentioned. If the cornea do not ulcerate, and the contents of the globe be not partially evacuated, the symptoms would appear to wear themselves out; the morbid action seems to have a determinate extent, and to subside after a certain period of continuance, even though it may previously have been uninfluenced by treatment, or not treated at all. The transparency of the cornea is then destroyed; sooner or later it ulcerates or sloughs; the globe is filled with pus; its natural contents are changed in character, or partially removed; the conjunctiva becomes comparatively pale and flabby; the discharge thin, gleety, and mixed with a great variety of secretions, which are sometimes of a bloody, and in other instances of a fœtid and ichorous character; the palpebræ diminish in volume; the pain either ceases altogether, or becomes materially lessened; and the intolerance of light is no longer a source of complaint, unless, indeed, the opposite organ becomes irritable and inflamed; then, of course, there may, or may not be, intolerance of light, as the organ last attacked may be more or less irritable. Such are the symptoms which indicate the subsidence of inflammatory action, when the case terminates unfavourably for vision; but if, on the contrary, vision be not much injured, you will have a declension of all severe symptoms, leaving the cornea clear, or nearly so; the discharge lessened, and increased in its consistence, and in its glutinous properties, but not mixed with bloody or fœtid secretions, and the internal structure of the eye not materially changed.

I have told you that the discharge is very abundant; so extremely abundant that unless it be frequently removed it will flow freely down the cheeks; and it may be remarked, that if it be received upon a linen handkerchief, it stains it, in the same way as does the discharge from the gonorrhœal inflammation of the urethra; indeed, its characters are, in every respect, so precisely similar, that I do not think any one can distinguish the one from the other, or point out any circumstance, as to consistence or colour, by which they may be referred to their respective sources. These changes may all occur in the course of three or four days—that is, the disease may appear, and at its onset be attended with a puriform discharge, mixed with mucous and lachrymal secretions; and in the space of time just mentioned, the qualities of the discharge may indicate the subsidence of acute symptoms, and the injury consequent on their previous existence.

Termination or effects of the Disease.—This disease may, under favourable circumstances, terminate without leaving behind any remarkable traces of its former existence; it may give rise to adhesion between the eye-lid and the eye-ball, (symblepharon) if the medical attendant does not take the necessary measures to prevent such an occurrence.

The cornea may become opaque; and this opacity (as was mentioned when speaking of purulent ophthalmia) may be dense or otherwise, superficial or deep-seated, extensive or limited; or it may ulcerate, and the ulceration may be confined to the superficial layers or its interior laminæ, or it may take place within its lamellæ. It may also occupy a greater or less extent of surface, varying from a mathematical point to a great portion of its entire dimensions. The cornea may be rendered gangrenous, and this state of gangrene may vary in extent; but I think it always *commences* in its external layers. If the cornea perish, in consequence of the existence of chemosis, its external layers first perish, because the circulation of that part of its outer covering, through the

medium of which it obtains its vascular supply, is destroyed; but this effect may not take place throughout the whole of its external surface. Suppuration and consequent collapse of the eye-ball, is apt to occur; and, in such case, the contents of the globe are discharged through an opening in the cornea or sclerotica, but more generally through an aperture in the cornea; and after the shrinking and contraction of the remaining portion of the tunics, there will remain a small button-like knob, to which the muscles of the eye-ball are attached. This button-like tubercle has generally a depression in its centre, into which an artificial eye may, if required, be fitted. However, the tunics of the eye may be merely extenuated; the cornea, or the sclerotica (but much more commonly the cornea), after having been weakened by inflammation and absorption, may project externally, and not merely produce deformity, but excite that amount of irritation which may render the removal of its most prominent point necessary, equally for the patient's comfort and the safety of the opposite organ.

Diagnosis.—The diagnosis of gonorrhœal ophthalmia is somewhat difficult, inasmuch as it bears a strong resemblance to another form of inflammation of the conjunctiva attended with purulent secretion. Many of its prominent characters are occasionally exemplified in the acute purulent ophthalmia of adults, which formed the subject of a former lecture: thus there is, in both, tumefaction of the lids, great chemosis, and profuse puriform secretion. However, gonorrhœal inflammation of the conjunctiva is generally accompanied by these phenomena to a much greater extent than the purulent ophthalmia, although a severe case of the one and a mild attack of the other cannot be distinguished by those circumstances alone. Gonorrhœal ophthalmia is almost invariably confined to one eye, and affects the whole of the mucous membrane almost equally; whilst purulent ophthalmia more commonly commences in the palpebral portion of the conjunctiva, and attacks both eyes at, or very nearly at, the same time. And here also it must be remembered that exceptions sometimes, though rarely, occur; for gonorrhœal ophthalmia has been known to attack both eyes at, or nearly at, the same time, and purulent ophthalmia has been limited to one eye.

Lastly, we must endeavour to discover if the individual has been particularly exposed to the risk of receiving gonorrhœal contamination; and if this circumstance can be clearly discovered, we may be tolerably sure, if the other symptoms are present, that the disease is gonorrhœal ophthalmia, even though the individual should be unconscious of the fact, by any painful or uneasy sensation, that gonorrhœal matter has been applied to his eye; and even if you are mistaken, it will be an error on the safe and judicious side—an error that will only lead to increased attention to the case, and perhaps greater activity of practice than would be otherwise employed.

Permit me to place before you, in direct contrast, a summary of the chief characters of these two acute diseases:—

Characters of Gonorrhœal Ophthalmia.—Course very rapid; symptoms extremely severe; termination very frequently destructive to vision. It rarely attacks both eyes at the same time; seldom affects women; commences in the whole mucous membrane, quickly producing chemosis, with profuse purulent secretion and great tumefaction of the palpebræ; and has some relation to, or connexion with, gonorrhœa.

Characters of Acute Purulent Ophthalmia.—Generally commences in the palpebral portion of the conjunctiva; symptoms less severe than those of gonorrhœal ophthalmia; course less rapid; termination less frequently destructive of vision; attacks males and females indiscriminately, and generally both eyes at the same time. Has no connexion with gonorrhœa; the swelling of the lids, the chemosis, and the amount of discharge, are less than in the gonorrhœal inflammation of the conjunctiva.

Prognosis.—A knowledge of the obstinacy of the disease, and of our incapacity to control it effectually by the remedies ordinarily employed for the subduction of other forms of acute conjunctival inflammation, and an acquaintance with its general mode of termination, would at all times dispose us to hold out very little hope, or, at all events, to excite no sanguine expectation, of the recovery of perfect vision. Knowing that, even though you may see a patient as soon as the disease commences, and employ with the utmost promptitude the most active and judicious treatment, the disease will proceed to destroy the organ of vision, you would, I repeat, be guardedly cautious in your prognosis, and by no means hazard your professional reputation by holding out a prospect of the eventual recovery of unimpaired vision.

Causes.—The chief objects of inquiry connected with this department of our subject are—first, does there exist a necessity for the direct application of the matter of gonorrhœa to the conjunctiva, in order to excite gonorrhœal ophthalmia? and is it necessary that the matter so applied should proceed from the urethra or vagina of the same individual, or from that of some other person? in other words, if

matter be taken from the urethra of a person labouring under gonorrhœa, and applied to his eye, will it excite gonorrhœal ophthalmia? or is it necessary for the production of gonorrhœal ophthalmia, that the matter applied to the conjunctiva be taken from the urethra of some other person who may be suffering from a gonorrhœa?

Secondly, Can the eye become affected with gonorrhœal ophthalmia on the principle of metastasis? in other words, can the diseased action going on in the urethra or vagina, constituting what is termed gonorrhœa, suddenly cease, and be transferred to, or become evident in, the mucous membrane of the eye, as rheumatism and gout change their seat, and have their action transferred?

Thirdly, Can the existence of gonorrhœal inflammation of the urethra or vagina produce that state of constitution which permits and excites gonorrhœal ophthalmia, independently of the actual contact of the gonorrhœal discharge, in the same way as the iris sometimes becomes inflamed from the previous existence of chancre? that is, by imbuing the constitution with certain principles, by the agency of which it receives a disposition to excite peculiar local action in particular parts, organs, or districts?

And, lastly, Does there exist a necessity for any peculiar state of constitution, either natural or acquired, or any particular condition of health, to determine the commencement, and permit the development, of gonorrhœal inflammation of the conjunctiva?

In order to determine whether or not the discharge from the urethra of an individual labouring under gonorrhœa, possesses, when applied to the conjunctiva, the power of exciting gonorrhœal ophthalmia, Dr. Vetch states, that an hospital assistant applied the matter of gonorrhœa from his own urethra to the conjunctiva of each eye, without producing the gonorrhœal disease in that part; and certainly if experiments such as these were conducted on an extensive scale, the fact would soon be decided; but as this is not likely to be done, we must judge from evidence of a less satisfactory nature; for it would be obviously wrong to say, from a solitary experiment of this description (which the zeal of few will dispose them to repeat), it would, I say, be quite wrong to consider such evidence decisive of a fact so highly important.

There is yet another circumstance to which your attention must be directed, namely, the very rare occurrence of gonorrhœal ophthalmia, compared with the frequency of gonorrhœa. If you for a moment reflect upon this subject, you will imagine that very many patients labouring under gonorrhœa, particularly those of uncleanly habits, touch their eyes with the discharge from their urethra, and yet it is very unusual for such persons to suffer from gonorrhœal ophthalmia, whilst comparatively few are exposed to the contagion from others; or at least they who merely associate with persons suffering from gonorrhœa, are only occasionally and very indirectly exposed to its contagious influence, whilst they who are actually suffering from gonorrhœa are constantly exposed to the risk of transferring the gonorrhœal matter to their eyes. Under these circumstances, it certainly does not seem probable that a person can infect himself; or that, even if he were to touch the eyes with the discharge, it would excite the disease, although, until this fact be most unequivocally established, it is right to request patients to be extremely cautious, and not needlessly peril the safety of their eyes.

We now arrive at our second inquiry. On referring to the work of Professor Scarpa, you will find that he says, that, on the sudden suppression of the gonorrhœa, the affection of the eye commences; that is, when the gonorrhœal discharge from the urethra becomes suddenly suppressed, the morbid action is transferred to the mucous membrane of the eye, and leads to the same result—namely, puriform secretion; and you will notice that this celebrated surgeon endeavours to establish a distinction between those cases in which the conjunctiva is inflamed from the metastasis of gonorrhœa, and those in which it arises from the direct application of gonorrhœal discharge, by stating that the symptoms are not so violent in the latter case as in the former; a distinction which, in spite of its non-existence in nature, we are almost tempted to believe on such authority. Saint-Yves remarks, upon this subject, that it (gonorrhœal ophthalmia) generally appears "two days after the beginning of a virulent gonorrhœa. The matter being suppressed from the penis, seemed to pass through the eyes, staining the linen in a similar manner*." Now, although I will not presume to place my experience on a level with the unusually laborious and extensive sphere of observation possessed by the authorities just quoted, I could wish to mention, that in no instance within my own observation, in which a patient labouring under gonorrhœa has been the subject of gonorrhœal ophthalmia, has the discharge from the urethra been materially, and very rarely at all, diminished in quantity;

* Nouveau Traité des Maladies des Yeux. Paris, 1722.

and, in proof of the correctness of this representation, I may refer you to almost every admitted authority of the present day; and, as in other instances of what is termed metastasis, the morbid action cannot properly be said to be established in a new situation until it has quite, or almost entirely, quitted its original seat, the notion of metastasis, with regard to gonorrhœal ophthalmia, under the circumstances I have just explained, cannot be admitted.

Most of the continental writers, and among others the celebrated Beer, endeavoured to reproduce, as they termed it, the discharge from the urethra, when persons were suffering from gonorrhœal ophthalmia, by means of bougies smeared with gonorrhœal discharge, introduced a certain distance down the urethra; and I have no doubt that, with an impression of this kind upon the mind of the surgeon, many patients affected with gonorrhœal ophthalmia have been persuaded to admit a new disease; to allow themselves, in short, to receive, in this unpleasant manner, gonorrhœal inflammation of the urethra, with a view of curing the inflamed eye. Now you will see persons affected with gonorrhœa, attended with very free discharge, suffering at the same time from gonorrhœal ophthalmia of a most severe and active character; at once refuting the accuracy of the opinion I have just quoted, and at the same time proving the impropriety and the inadequacy of the practice founded thereon; for it is evident that if, in the case before us, a free discharge from the urethra were capable of curing the disease of the eye, it must necessarily be cured, and vision most certainly preserved: but such is not the fact; for cases of this description are as severe, and are generally attended with quite as much injury to vision, as any others in which no such combination of disease exists—certainly as severe as those cases of gonorrhœal ophthalmia unattended with urethral discharge. You will therefore see the impropriety of producing an additional disease for no useful purpose. Does it not seem to you that the same discharge that affected the urethra may also affect the eye, and thus produce the disease of both textures almost or quite simultaneously? To explain myself more fully—a person may receive by intercourse gonorrhœal inflammation of the urethra and of the mucous membrane of the eye at the same time, the effects of which may be developed in those respective parts almost simultaneously.

I am aware that Mr. Mackenzie explains the infrequency with which gonorrhœal conjunctivitis occurs, by stating that it is extremely difficult for an individual to convey the matter to his conjunctiva, "on account of the instant closure of the eyelids when the finger (or discharge) approaches the eye." I admit that it is difficult to apply the matter of gonorrhœa to the conjunctiva, but, of course, I do not coincide in the former part of Mr. Mackenzie's statement. I do not think it is at all satisfactorily proved that the matter of gonorrhœa, taken from the urethra and applied to the conjunctiva of the same individual, is capable of giving rise to gonorrhœal ophthalmia; and of course I do not believe that this is the mode in which this disease is generally propagated.

BURNS BY GUNPOWDER.

To the Editor of the Medical Gazette.

Sir,

Should you think the following observations upon burns produced by gunpowder, of sufficient importance to occupy a place in your valuable journal, you will oblige me by inserting them.

I remain, sir,
Your obedient servant,
Edward F. Lonsdale,
Late House-Surgeon to the Middlesex Hospital.

8, Berners-Street, Feb. 1, 1833.

It is sometimes of importance, in a medico-legal point of view, to ascertain whether a burn be produced by gunpowder or not. This was lately made evident in the case of the man Smithers, who was executed last year for arson. One point in the evidence to be established, was, whether he had employed gunpowder for that purpose? It happened that the man himself was severely burnt, and brought to the Middlesex Hospital while I was house-surgeon there; so that I had opportunities of attending to his burn, and had also to give evidence at his trial as to its nature.

The impression on my mind was, from some peculiarities about the burn on his face, that it had not been produced by ordinary flame; but that, from its nature, it was not unlikely to have been caused by gunpowder. I hope to be able to point out some peculiarities as characteristics of burns from gunpowder, and which will strengthen the probability of his burn having had such an origin. The objection made to Smithers's burn having arisen from gun-

powder, was the absence of particles of powder in the skin: of course, where these are present, they are decisive; but as there are cases in which no such marks exist, this must not be taken as the only criterion.

The existence of particles of powder in the skin, must depend greatly upon the state it is in at the time of explosion—that is to say, when it is in a confined state, or has resistance offered to it, it will produce effects differing from those caused by the explosion of the powder when it is in an unconfined state, and has no resistance offered.

This speckled appearance of the skin is owing to the presence of particles of the powder being driven *unexploded* beneath it; if so, they must be propelled before they can become ignited by the adjoining portion of powder. This separation or propulsion of the unexploded particles, is caused by the momentum given them when there is resistance offered to the violent and sudden expansion which takes place in the portion of powder first ignited.

Now when the powder is in an unconfined state at the time of its explosion, there is generally no separation or propulsion of the particles; because, no resistance being offered to its expansion, there is not sufficient momentum given, but particle after particle of the powder takes fire, till the whole is consumed.

If this be a reasonable explanation of the manner in which the powder explodes when in the two opposite states, may it not account for the existence of the marks in the one case—viz. when the sufficient momentum is given—and for the non-existence of such marks where it is absent?

A boy was admitted into the Middlesex Hospital, November 6, 1831: he had been playing with gunpowder the day before, when the accident happened. His eyebrows and eyelashes were burnt off, the cornea of one eye was injured, but *no particles* of powder were left in the skin.

Another boy was admitted in August last. He had been playing with gunpowder, and had his face near a small train when he set fire to it. The eyebrows and eyelashes of one eye were completely burnt off; the cheek and forehead were also burnt; but *no particles* of powder were beneath the skin.

These two cases illustrate the non-existence of the marks of the powder; and may it not be accounted for by the powder being in an unconfined state at the time of its explosion?

Another boy was admitted last June: he had been playing with a squib, and burnt his face. In him there were distinct marks of the powder, giving a speckled appearance to the skin; but was not the powder, in this case, in a confined state, and will not this account for the particles being driven in?

There is another circumstance very worthy of attention, where the burn exists in the face—viz. the state of the eyebrows and eyelashes. It will be observed in the two cases mentioned above, that the eyebrows and eyelashes were destroyed, and how, in this respect, they differ from ordinary burns of the face. Whilst at the hospital, I had frequent opportunities of observing ordinary burns; in some of them the eyelashes were singed at their extremities, but never do I remember having seen them completely destroyed.

The surface of the eye itself is never injured in common burns, while, in burns from gunpowder, it is often found to be so. May not these peculiarities be owing to the following circumstances?—that the flame, in the explosion of gunpowder, is so violent and instantaneous as not only to attack the most prominent parts, but to enter the hollows also, and so come in contact with the surface of the eyes and eyelashes *before the eyelids have time to close?* Now in burns from ordinary flame, the most prominent parts (as the cheeks, the end of the nose, and chin) are generally the most severely burnt. The circumstance of the surface of the eye not being injured and the eyelashes being so slightly burnt, may be accounted for *by the eyelids closing* (as they naturally would do) when coming in contact with flame. It will be found, that when the eyelids are forcibly shut, there is a very small portion of the eyelashes left exposed. The flame, in this instance, not being so expansive and sudden, will allow of their closing in time to prevent its entrance. The hair itself not being of a very combustible nature, requires a powerful and intense flame to destroy it so completely as is seen in burns from gunpowder. In ordinary burns, supposing the flame to come in contact with the hair, it would be some time before it could be completely burnt off.

Having remarked these few points of

distinction in the two kinds of burn, may not the following conclusions be drawn from them?—viz. that the absence of marks of the powder in the skin is no criterion that the burn was not produced by it, but that it depends upon the state the powder is in at the time of its explosion, whether such appearance be produced or not; that where the eyebrows and eyelashes are destroyed, the probabilities of its being produced by gunpowder are strengthened; that the surface of the eye itself may be injured from gunpowder, and not by common flame.

It is not my object to attach any importance to the appearances presented by the man Smithers's burn, as it was not *known* to have been produced by gunpowder; but my reasons for thinking that it probably was so produced, were upon associating it with the above peculiarities of the eyebrows and eyelashes being completely burnt off. The whole face also presented a peculiar pale hue equally throughout; and not in patches, some darker than others, as is seen in ordinary burns. There was also powder found lying in the room where the fire originated.

It may be said that the two or three cases I have seen are not sufficient to form a general rule upon; but if the distinctions I have pointed out are found to stand good, and have been observed by those who have had more experience, I think they are of sufficient importance to deserve more attention than has hitherto been paid them.

ON THE SYMPTOMS WHICH DENOTE THE DEATH OF THE FŒTUS IN UTERO.

By Edward Rigby, M.D.

If there be any subject, says the admirable Mauriceau, connected with midwifery, which demands the utmost care and attention of the accoucheur, it is the being able to determine whether the fœtus in utero be alive or not. In cases where there is misproportion between the head and pelvis, unusual undilatibility of the os uteri, tumors, or any other cause which renders the passage of the head unusually difficult or dangerous for the mother, even with the aid of the forceps, it is of the utmost importance to be able to decide with certainty whether the child be still living, because if it be not, the perforation of the head may be performed, and the mother released from her danger and suffering.

On the continent, especially in Germany, the Cæsarean operation is frequently performed in cases, not only, as in this country, where the child cannot any how be delivered by the natural passages, but also where, being known to be alive, it might, by diminishing the bulk of the head, be made to pass without danger to the mother. Here it becomes of immense importance to be able to decide with certainty whether it be still living, because in cases, under these circumstances, seeming to indicate the Cæsarean operation, if we are able to ascertain that the child is dead, the perforation may be performed, and the mother spared the danger of this terrible proceeding.

Very many symptoms have been enumerated which are said to denote the child's death; but for the most part they are extremely equivocal and uncertain, and have frequently occurred when the event of the labour has not only shown the child to be living, but healthy and vigorous. To render this subject more intelligible to you, I shall divide the symptoms of the child's death into those which occur *before*, and those which are observed *during* labour. Of those which occur *before* labour, I know but of one symptom upon which we can rely with any degree of certainty; I mean the sensation of a weight, or foreign body, lying loosely in the abdomen. Whenever the patient rises from her chair, whenever she turns in bed, stoops, or in any way changes her posture, she feels the rolling about of this weight. A woman may even dance when pregnant, and she feels no more of a living fœtus than she does of her own liver or spleen; but the moment the fœtus is dead, the case is quite different; the fœtus now no longer obeys the laws of organic life, but merely those of gravity.

Without this symptom, it is extremely difficult to determine whether the child be alive or not. A woman may affirm that she felt the motion of the child at the beginning of her labour, and yet she will bring forth a fœtus which, from the degree of putridity, must have been dead several days; whereas another, just before her labour, will feel alarmed from not perceiving the child move lately,

and is apprehensive that it is dead, and she will be delivered of a vigorous healthy child.

Among the symptoms which you will find enumerated by authors as signs of the child's death, are the following: the patient is seized with a sudden shivering, of more or less duration; she complains of a general sensation of uneasiness, loss of appetite, bad taste in the mouth; she becomes pale and sallow, with a dark leaden coloured ring under her eyes: the breasts are flaccid, the cervix uteri relaxed, and there is a discharge of fœtid bloody coloured mucus from the vagina. With all this, she feels no motion of the child, but has a strange sensation of cold at the lower part of the abdomen, which is said to be diminished in size, and remarkably flaccid.

From all these symptoms, collectively taken, we may perhaps conclude, with tolerable certainty, that the child has ceased to live, but there is not one of them which of itself can be considered as diagnostic. Of late years the stethoscope has been recommended, in order to distinguish by the presence or absence of the pulsations of the fœtal heart whether the child be alive or not. But little reliance, however, can be placed upon a means of diagnosis which in this case must ever be exceedingly imperfect: the absence of the pulsation of the fœtal heart is no proof that the fœtus is dead; and if the placenta be situated towards the posterior part of the fundus uteri, or upon the os uteri, as is not unfrequently the case, no pulsation can be heard, and yet the fœtus may be alive and strong.

During labour there are many symptoms which, even when separately taken, will enable us to decide with considerable certainty that the child is dead. In presentations of the head, a considerable swelling of the scalp is produced by the pressure of the os uteri and external passages impeding the circulation in the part; but if the child be dead, there is no cranial swelling, and the scalp is felt flaccid and loose. If it has been dead some days, the scalp will occasionally become crepitous, from a degree of emphysema, the result of putrefaction; the bones of the head will frequently be felt quite loose under the scalp, producing a sensation to the finger, as Johnson very aptly observes, of a bag of shells.

If the arm has fallen down into the vagina, as in cases of arm presentation, it swells very considerably, and becomes of a purple colour in a living child, from the pressure of the os uteri and external passage obstructing the return of blood by the veins; whereas if the child be dead, no swelling will be produced, and the epidermis will soon begin to separate.

If the cord be prolapsed, the pulsation of it will immediately assure us that the child lives; whereas if it be felt flaccid, empty, and without pulsation, we may be as certain that it has ceased to exist.

In presentations of the nates, the sphincter ani in a living child is always found contracted, and will distinctly contract upon the point of the finger; and in face presentations, the tongue will be frequently felt to move; but if the child be not alive, the sphincter ani will be found relaxed, flaccid, and insensible to the stimulus of the finger, and the tongue motionless and flabby.

Besides these symptoms, the membranes rupture early, with scarcely any pain, discharging a highly fœtid liquor amnii, more or less mixed with meconium. But neither of these two last are certain signs of the child's death, for I have known cases where the stench has been so insupportable as to drive every body from the bedside of the patient, and yet the child was born alive and perfectly healthy; nor is the presence of the meconium a sure sign, for it not unfrequently occurs in cases where the nates present; nevertheless in any case *except* presentation of the nates or inferior extremities, the presence of the meconium will always authorize a suspicion of the child's death.

CONTRIBUTIONS TO PATHOLOGY.

By John Alexander, M.D.

One of the Medical Officers to the General Dispensary for Children, Manchester.

Scarlatina.

Connected with an institution which during the last twenty-four months has presented to the cognizance of its officers the ailments of no fewer than twenty-six hundred sick children, there is, I presume, little apology requisite for a brief intrusion on the pages of

your journal. Nor should the long existence, and frequency in our nurseries, of the complaint hereafter treated of, disincline the profession from taking a critical review of its treatment, as accredited at the present day. "A medical practitioner," remarks Zimmerman, "who establishes a good method of treating the most common diseases, by judicious and certain observations, contributes more to the good of society than another who attaches himself wholly to uncommon ones; because these (though very valuable in an academical collection) will avail but little in ordinary practice."

Scarlet fever, although now so common a complaint, like several other specific diseases, is of modern origin, no distinct mention of it being traceable in medical literature previous to the seventeenth century. According to one of our latest and best authorities, Dr. G. Gregory, the malady first broke out in Spain in 1610, raged epidemically in Naples in 1618, appeared in London in 1689, and was not observed on the American continent until 1736. Hence its propagation was remarkably slow—a circumstance which, though not unparalleled, all will allow difficult of explanation, except by a vague reference to the observed, but little understood, phenomena of epidemic diseases.

The *forms* in which scarlatina first shewed itself in Europe appear to have been essentially the same as they are observed at present, viz. three—the simple, the inflammatory, and the malignant. The first variety known by a simple scarlet cuticular efflorescence; the second by partial cuticular efflorescence, and inflammatory affection of the tonsils; and the last, or malignant form, characterized by putrid sore throat and low typhoid fever, without any observable affection of the skin. When we reflect how different are the aspects of the simple and malignant forms of scarlet fever, it can little surprise us that the identity (in nature) of the two complaints was, on its first appearance, and even much later, most stoutly denied and conscientiously disbelieved. At the present day, however, I believe but little discrepancy of opinion exists on this point, differences of age, condition, temperament, and season, being presumed, as in confluent and distinct small-pox, to account sufficiently for the varieties observed.

But to proceed to a consideration of the symptoms and treatment of scarlet fever—first, of the simple form.

A child is slightly feverish for two or three days, and then presents the following appearances:—The face is a little swollen, and covered, along with the neck and limbs, with innumerable red points, which by and bye form a scarlet efflorescence, diffused and continuous in some parts, and of irregular patches in others. On opening the mouth, we behold the tongue coated with a thin whitish fur, through which the papillæ, elongated and of a scarlet colour, protrude, and afford a very characteristic and good diagnostic feature of the disorder. The natural, vital, and organic functions of the system are little disturbed; scurfy desquamation of the cuticle succeeds in the course of a week, and thus terminates the case.

The second or inflammatory form, in which scarlatina is observed in practice, is a much more serious one than the variety just described; it is ushered in by more or less headache, considerable restlessness, slight delirium, and difficulty of deglutition. The cuticular efflorescence is less in points and more in patches, irregularly distributed, and frequently visible and absent in the same hour. Upon opening the mouth, the pharynx is seen to be tumefied, highly inflamed, and, in the later stage, more or less extensively ulcerated. The pulse is rapid, and in children of previously good stamina, not unfrequently of a sharp character. To these symptoms, which vary in degree of intensity as the case is severe or otherwise, is superadded a remarkably high temperature of the body, on several occasions, in my own experience, averaging 106·7°—a degree of heat rarely presented by any other fever in this climate. It is to this form of scarlatina that the subsequent observations on treatment are more particularly directed.

The third variety of scarlatina is a most formidable disease, and if occurring in the very young, speaking from individual experience, almost invariably fatal. It is the form of scarlatina which was observed to be epidemical in London in the year 1747, and was afterwards admirably described by the justly-celebrated Dr. Fothergill. Its symptoms are—a low typhoid fever, with delirium; a swollen state of the face, particularly of the parotid glands; a flowing of cor-

rosive sanies from the nostrils, excoriating the angles of the mouth and cheeks; dark sloughs with livid bases in the throat, throwing forth a most intolerable fœtor; a mouth encrusted with brown fur, and filled with viscid phlegm, threatening suffocation; a pulse weak and irregular, and bowels diarrhœal. This malignant variety of scarlatina is now happily rare in early life, though still too frequently presenting itself, as my esteemed colleague, Mr. W. B. Stott, and myself can testify, having only a few weeks ago visited three children, the oldest not six years of age, dying under it.

After the monograph of Dr. Willan, and the many valuable writings of others, on this interesting disease, a detailed specification of its symptoms might be regarded as a work of supererogation; but I have taken the liberty (and a liberty I am sensible it is with the more experienced of your readers), not because they are inadequately known to even the youngest in our profession, but because the treatment to be considered has direct dependencies on the forms which I have thus cursorily described.

In two distinct seasons it cannot have escaped the notice of the attentive practitioner, that scarlet fever frequently presents two distinct epidemical types; nor can it be denied that a mixed form, commencing with an inflammatory and terminating with a typhoid character, is equally common. However, when a case of scarlatina is presented to our view, I would strongly recommend that we direct our attention to existing symptoms, in a great measure regardless, though not altogether, of the character of the prevailing epidemic, as I feel assured that we often—very often—by our fears, realize the very evils which we wish to avert.

The simple form of scarlet fever, it is obvious, requires little interference on the part of the medical practitioner, beyond the recommendation of the child being kept in an equable temperature. Whether that temperature be a cool or a warm one, I apprehend is of little moment, although the supporters of Dr. Currie's excellent views would have us implicitly believe, that in all forms of scarlatina cool air is markedly useful. I have placed children, passing through this simple disorder, in both states, and have not been made sensible of any peculiar advantage or disadvantage attendant upon either of them.

In combating the inflammatory variety of scarlatina, almost every thing depends upon early recourse being had to moderate depletory measures, especially bloodletting. In most specific maladies, and particularly in the one under consideration, the time for this measure is, though well marked, a brief one, and rapidly succeeded by a status, or condition, in which its adoption is fraught with evil instead of benefit. In young children, and my remarks have especial reference to them, I have generally drawn blood by leeches in preference to the lancet; but I have more than once had occasion to regret not having had recourse to the latter when the febrile action has been excessive, and the topical application of the former has permitted that action to induce the evils it generally leads to—viz. *ulceration of the pharynx, and disorder of the brain.* In proportion as these latter effects are prevented, in the same proportion are our hopes of well-doing sanguine and well founded. From purgative medicine, beyond its moderate employment, I have seldom seen much good arise in inflammatory scarlatina: nor is this to be wondered at, if the objects we have in view are considered. Besides the relief of the oppressed head and tumefied throat, we have the internal mucous membranes to relieve; and that indication can scarcely be answered by alvine evacuation, which rather counteracts than favours their (in these cases) *natural* mode of relief—cuticular efflorescence. Instead, then, of giving the stronger purgatives in aid of diminishing febrile action, ipecacuanha and other sudorifics may be had recourse to. They lead to the same end, and by means unobjectionable. One sudorific, however, much used, I am little disposed to recommend, when *children* are the sufferers under this complaint—and that is, the tartrate of antimony. Although it might be no light task to adduce satisfactory reasons for dispensing with its use, yet careful observation has tended very much to disincline me from generally administering it. In this opinion I am not singular, the same being entertained by my brother, Dr. Alexander, of Rochdale. An alterative dose of calomel, given night and morning, has always appeared useful.

The neutral salts are both agreeable

and useful in lessening the febrile excitement. Of emetics I have had little experience, but can conceive them attended with considerable advantages, if mild ones, and employed on the first symptoms of indisposition presenting themselves. In the latter stages they might prove pernicious, by adding to the actual debility attendant upon this malady.

The next remedy to be alluded to is cold affusion. It were not difficult to prove that the advocates and decriers of this highly-lauded, and as highly-deprecated, remedial means, have (as is but too common) carried their several views to an extreme. But this were a tedious and invidious task; suffice it, therefore, to simply state that the opinion of the present writer is opposed to its *early*, but favourable to its *later* application: that is, to affirm that cold affusion should give way, during the period of efflorescence, to sudorifics, and that its legitimate time of application is when that period has passed over, and considerable morbid heat exists, accompanied by tonsillary ulceration, in the cure of which it assuredly is (indirectly) a most powerful agent. Properly applied, cold affusion lessens the frequency of the pulse, abates thirst, relieves the headache, and favours the influence of "balmy sleep."

As an adjuvant, the use of blisters to the throat is generally recommended. In the tumefied condition of the pharynx, succeeding upon its inflammation, they are certainly of much value; particularly if kept open by the usual means. Their earlier application may, perhaps, better be dispensed with; as I have frequently imagined the benefit accruing from them during the inflammatory stage of scarlatina (as also in croup), when weighed against their bad effects, extremely apocryphal.

Stimulant gargles, containing capsicum, when the age of the patient will allow of their use, are exceedingly beneficial in the later stages; as is the application of half dilute nitric acid to the pharyngeal ulcerations in an earlier one. Bark, wine, and the various tonics, should now be given freely, and without delay; for "many children," justly remarked the late Dr. Armstrong, "are lost by continuing an active depletory treatment after the original disorder has been removed—another, in truth, being thus set up and supported."

There is one pharmaceutical preparation which I have given very extensively—the tincture of iodine. Its peculiar efficacy in glandular affections is universally known and appreciated; but I apprehend its use has been confined, in a great measure, to such complaints. Whereas, in convalescence from a variety of infantile complaints (and amongst others, scarlatina), it has been a commonly prescribed tonic with the present writer; and almost daily experience for the last four years justifies me in strongly recommending it.

Warm clothing and a generous diet are indispensable to a favourable convalescence; nor, opposed to the use of the latter, have we to fear any pulmonic affection, too common after recovery from measles and some other cutaneous affections.

By a pursuance of the above treatment, I have generally found the inflammatory form of scarlatina (which is its most frequent form) terminate favourably. Of the truly malignant or third variety, I have seen in children but some six or seven cases, and therefore shall only presume to say, that the result of my observation thereon disinclines me from bloodletting, purging, and cold affusion; all of which appear to exercise an influence any thing but beneficial.

In conclusion, the dropsical swellings which so frequently follow an attack of the disease we have been considering, (being independent of any organic cause, and most frequently the simple effect of cuticular derangement,) are easily removed by gentle purgatives, warm bathing, and diuretics. In addition to these measures, a small bleeding is occasionally found necessary.

SELF-SUPPORTING DISPENSARIES:

PROPOSED IMPROVEMENT.

To the Editor of the Medical Gazette.

SIR,

BOTH the public and the profession are much indebted to Mr. Smith, of Southam, for his unwearied exertions in directing our attention to the imperfections of the arrangements generally adopted for supplying the sick poor with medical aid at their own houses, and for suggesting others. That gross abuses of the charity

of the public, and destruction of the spirit of independence in the poor, result from the present mode of conducting dispensaries, cannot be denied. The evil is great; and it becomes every one who has at heart the amelioration of the moral and physical condition of our labouring classes, to do what he can to lessen it.

I think the general adoption of some such scheme as that of the "Self-supporting Dispensaries," proposed by Mr. Smith, would have this tendency; and I feel surprised that it has not hitherto met with more extensive patronage. It appears to me, however, that it is susceptible of some modifications which might render it more generally acceptable. These I shall, in a few words, attempt to point out; and have to request that you will give publicity to my suggestions through the medium of your valuable journal.

My chief objections to Mr. Smith's plan are, that it places too nearly on the same footing those of the labouring classes who are considered as independent of charitable aid, and who pay something for medicines and attendance, and those who are entirely dependent on the bounty of the public; and that it proposes to extend its benefits to *all* labourers, irrespectively of the amount of their wages, or their capabilities of remunerating medical men in a regular manner. To obviate these faults, I would propose that institutions should be formed, entirely distinct from dispensaries; by becoming members of which the labouring classes might secure to themselves and their families (on the principles of mutual assurance, now so well understood and so popular amongst them) the benefits of medical advice and medicines at a lower charge than they would otherwise be subjected to, and from which the medical men attending them might derive, at least, as much pecuniary compensation for their labour as they do at present, and that in a much more agreeable and simple manner. These institutions might be denominated "Medical Assurance Societies." The direction of their affairs ought to be vested chiefly (if not wholly) in medical men; and, I think, all the regular practitioners residing in the town or district where such an institution may be established, ought to be entitled to share in the direction. I propose that the medical practitioners should engage to give both advice and medicines to all the members of the institution, in consideration of having its funds annually divided amongst them, in proportions corresponding to the number of patients attended by each respectively; that those only of the labouring classes, and their families, whose wages do not exceed a certain sum, (to be fixed upon by the directors, according to local circumstances,) should be admitted as members; that all desirous of becoming members should apply, in the first instance, to the directors, and lay before them a statement (properly certified) of the amount of their wages, rent, number of their families dependent upon them, &c.; that the directors should determine who of the applicants should be admitted to membership; that the members should renew such applications yearly; that every person above twelve years of age should, on first entering, make a deposit of a certain sum (5s. to 8s.), and all under twelve years, a smaller sum, for which a receipt should be given, to be kept constantly by the member; that afterwards, monthly, quarterly, or yearly payments, should be made of sums equal to from 2s. to 6s. per annum, for which other receipts should be issued, to be given to the medical men on their being called to visit the members; that the members should be entitled to call in any regular medical practitioner they may prefer; that the medical men should, at their first visit to each member, take possession of the receipt for the yearly contribution, and inspect the other; that they should continue to attend the same patient, as long and as often as may be necessary, during the whole period for which the certificate or receipt bears that payment has been made; that all the certificates collected from the members should be preserved by the medical men, who should, at a certain fixed time, annually return them to the treasurer of the institution, and, in exchange for them, receive a part of the funds proportional to the number of patients each may have attended.

The advantages which this plan appears to me to have over that of the "Self-supporting Dispensaries," are, first, that it would tend more to maintain an honourable spirit of independence in the labouring classes, by affording them medical aid without rendering them in any degree dependent on a charitable

institution; and, secondly, that it would give medical men an opportunity of preventing those from availing themselves of the benefit of such arrangements whose circumstances ought to enable them to remunerate them in a regular manner.

This latter circumstance, too, as well as others sufficiently obvious, seem to entitle it to a decided preference over the plan of "clubs" for obtaining medical aid on easy terms, which is so generally adopted throughout England, to the great detriment, I am persuaded, of the profession at large: and, in common both with "the Self-supporting Dispensaries" and the "clubs," it would, I think, much diminish the number of applicants at dispensaries constituted on the old plan, wherever such exist to the exclusion of the two former. The data afforded by medical statistics are now amply sufficient to enable us to arrange the rates of contribution to the funds of institutions such as that I have suggested; so that there would be a certainty of the whole amount of remuneration derived from them being, at least, fully equal to that now obtained by medical men from the class of patients for whose benefit chiefly they ought to exist, at the same time that the patients themselves should not find them, in the least degree, oppressive.

I am, sir,
Your most obedient servant,
J. C.

January 28, 1833.

MEDICAL REFORM — PRACTICE OF SURGERY.

To the Editor of the Medical Gazette.

Sir,

I cannot resist the temptation of saying a few words on the important subject of medical reform; at least on that division of the subject which relates to the College of Surgeons. I am rather surprised that no one has lately recommended an Act of Parliament to prevent persons from practising surgery without being duly qualified*. If a man practise as an apothecary without having become a member or licentiate of the Apothecaries' Company, he is liable to prosecution. But any person, however ignorant, may practise surgery, and the College has no power to prevent him. This is an anomaly which ought not to exist, and which does no credit to the present enlightened period. It is a pity that surgeons do not exert themselves to prevent the public from becoming the dupes and victims of unprincipled charlatans. It is in vain to complain of it, unless we put our shoulders to the wheel in earnest. I entreat the Council of the College of Surgeons to give this subject their serious consideration. If they will come boldly forward, I am convinced they will be supported by nearly all the most influential members of the College. By submitting a bill upon this subject to the consideration of Parliament, they will perform an important public duty. And if such a bill should become the law of the land, they would have performed an important service to the cause of justice and humanity.

But some persons will say that the Council of the College possesses too much power already. They would have us believe that the members of the Council have been appointed in consequence of family interest and connexions, and without any regard to merit. But let any unprejudiced man read a list of the Council, and he will there find the names of all the principal hospital surgeons in London. He will find the names of Sir Astley Cooper, Sir Charles Bell, Mr. Brodie, Mr. Guthrie, Mr. Samuel Cooper, Mr. Lawrence, Mr. Earle, &c.; men whose talents have raised them to the highest rank in the profession. And are men of common sense to be persuaded that we should be benefitted by the removal of men of high honour and integrity, and by the substitution of a set of visionary theorists, frothy declaimers, and men without practice? And all this under the name of reform! Such are the benefits held out to the profession by a few of the miscalled medical reformers. I am a general practitioner, sir; but I can see neither sense nor wisdom in being made the tool of individuals who wish to produce discord and disunion among medical men. Why should we envy hospital surgeons their dearly-earned reputation? and who does so from any motives save those of hatred, malice, and all uncharitableness?

One of your weekly contemporaries states that you have changed your opinions, inasmuch as you have now

* A petition, with a draft of a bill to that effect, originating from certain practitioners in Ireland, was presented to Parliament last session. We gave a copy of it in our preceding volume.—E.G.

become an advocate for medical reform. As I have been a constant reader of the Medical Gazette for some years, I was not a little surprised at a statement so grossly erroneous. Why, sir, you have recommended medical reform again and again. You have supported reform as far as it could be carried with safety and with prudence. But you have opposed those who wished to lay the medical institutions of the country prostrate in the dust, and to raise themselves upon the ruins of all which is respectable in the profession. I hope you will give your attention to the subject which I have brought under your consideration. A little exertion on your part might have the effect of uniting the members of the College in promoting an object conducive to their mutual interests, and to the welfare and security of the public.

I remain, Sir,
Your most obedient humble servant,
MEDICO-CHIRURGICUS.

January 30, 1833.

COLLEGE OF PHYSICIANS.

MAXILLA TO VESTIBULUS.

London, February 9, 1833.

MY DEAR FRIEND,

SINCE my last letter, pray remark that Lord Althorp has given notice of a "Committee to inquire into the state of all existing Corporations." Moreover, the Lord Chief Justice has declared from the Bench, in a *quo warranto* cause relating to the election of Matthias Attwood, Master of the Merchant Tailors' Company, that any Bye-law of that Company narrowing the number of the *eligible* to the Presidency, although sanctioned by the verdict of a jury, could not, and would not, be confirmed by him, as such Bye-law would be essentially bad. Now here are signs for those who are learning the times. Was I wrong in saying that a *crisis* was imminent in the politics of medicine? Should the question be played with, and allowed to stand over, by those who can resolve it? Must we not stir, and quickly too? I quote only from the newspapers; but he who reads the newspapers carefully and cautiously, needs no other instructor in the affairs of this world: I mean as to what is "expedient" and "what is to happen." Had the Duke of Wellington read the newspapers, and believed only a little in "sentiment," he would have sat where Brougham was sitting, (at the last College meeting) in a chair of honour, on the President's right hand. Did you see him there, three years back, the observed of all observers? Who thought him insecure? Those who read the newspapers, and believed in "sentiment." He lives for ever, while there is life in England—but he has lost power when he might have held it, and while he still wished to hold it; and in the College of Physicians, as in the Cabinet, another sits in his place. Well! you smile at *one* of the great Captain's losses: so do I: but though I congratulate him on his escape from the Doctors, I could not see the Toga in his *Armed*-Chair, the other night, without musing on the instability of human affairs in general, and of the College of Physicians in particular. Will there be no other change within the walls of the College? *Should* there be none? Is it not certain, quite certain, that there will be a great change,—and whom should the present Fellows prefer to themselves, as ministers of the reformation? Considered *as a body*, they are a learned, courteous, honourable set of men, anxious for the interests of the profession, as conducing to the advantage of the public. It would, I really and truly believe, be difficult to find any association of persons more trustworthy in the discharge of the duties committed to them. Let them only be roused—let them but read the newspapers, and there will be found enough talent, enough good sense, enough (don't sneer at the word, abused, obsolete, as it has become, since *morgue* prevailed) of sentiment, enough of all these, and more than enough, to meet the time's emergency.

Well! I hear you saying, the Bye-laws are not so bad, after all, for under them have been elected a body of Fellows who assuredly, *as a body*, do not bring discredit on the College which they constitute. How much might follow from this remark, which is true to *an extent*. But I have been rambling, and must labour to be brief. Others will now take up the bye-laws in detail, and to them I refer you for the dates and circumstances of their enactment, all of which you will find in "Willcock's Laws." The bye-laws, like those of other corporations, are in principle

Anti-Catholic and Anti-Jacobin—and both principles were very good principles as long as they were wanted. The circumstances, however, which created them, no longer exist: Catholics and Protestants sit together in the House of Commons: HIGH *Church* vails its head: the radicals of 1825 are Ministers now, and mean to remain so: the Universities of Oxford and Cambridge have lost their prestige, and no longer exclusively afford the highest standard of education. But even in the high Tory times, in the No-Popery days, when Priestley's library was burned, and his house sacked by the Church and State Birmingham Union—even *then* the doors of the College were furiously assaulted by Licentiate Physicians claiming admission under their right of "men of the Faculty of London." Chief-Justice Mansfield, and Judge Aston, thought them entitled to admission, if found competent, under the Charter, and in the interest of the public. Will Chief-Justice Denman, and the Whig Judges who are coming, be less favourably inclined to their claims? Is the Government—are the people Anti-Catholic, or Anti-Jacobin, in their tendencies? Are the Universities of Oxford and Cambridge gaining influence or losing it, in the House of Commons and "out of doors?" Who are their representatives? Is it possible, now that the Catholic Claims are conceded, now that the Test and Corporation Acts are matters of distant history—is it decent for the College any longer to reserve the two classes of "candidate and inceptor candidate," for Church-of-England men exclusively? This religious distinction is the real important one resulting from the operation of the College statutes of the last century, between the class of "Candidates," or *Fellows elect*, and the great body of licensed physicians, not eligible to the Fellowship until after the age of six and thirty, and even then, only as one by one, and under very close restrictions. It cannot be too often repeated, that no physician licensed by the College can be a "Candidate," or "Inceptor Candidate" for its Fellowship, unless he have adhered formally in Oxford or Cambridge, to all and each of the Thirty-nine Articles. This is the distinction to which Parliament and the public will look, when they enquire into our Charter as a working statute of the realm, under Lord Althorp's committee. Neither Parliament or the public, be assured, in these low-church and radical times, will tolerate such distinctions as I have mentioned; therefore let us reform! You may have remarked, that I have said nothing about the difference in the examination to which the English, and Scotch or foreign graduate, applying for the College license, are respectively subjected at the Censor's Board. The English graduate, it is well known, is required to translate a few lines of Greek, while the physician of Scotch or foreign growth, is questioned only in Latin. Why should I observe on what is trifling and futile? No one would less willingly forego Greek in the manufacture of Physic than I, your friend; but the translation of a few lines in Aretæus, or of an aphorism in Hippocrates, surely should not make the difference of ten years in the eligibility of a London physician to the offices of trust and honour in the College whose license he holds. Besides, the Scotch or foreign graduate would in most cases be very glad to submit his education to the same test, on condition of reaping the same advantages, should his Greek suffice.

The graduate *not* of Oxford or Cambridge, however willing, is not *allowed*, under the present rule of examinations, to display his acquaintance with the Greek language. As far as the College takes cognizance of the qualifications of the two applicants, there is no difference between them, but this of Greek words translated by one, and not by the other; and in many cases even this difference would not exist, did not the College insist upon making it. How long will this stand? Keep your Greek, I would say to the College; ask for more of it; improve your examinations to the utmost; extend the period of the noviciate for the Fellowship; make the prize difficult—but keep it in *your own* hands, and then throw open the lists to all comers.

I really cannot in reason or in prejudice, see why this exclusive preference should any longer be given to Oxford and Cambridge, as preparatory schools for the London College; or why these Universities should be allowed to impose Forms of Faith on all under the age of six and thirty, who are admitted to its Fellowship. If Greek be requisite for the proper discharge of the trust, at

least *ask* for it from all who apply for the office; if habits of business, they will perhaps be found in the character of the Scotch, as in that of the English graduate; if mature age and sound attainments, they are required of the same date and degree from both applicants under the present system of examination; if good manners and honourable behaviour in the affairs of life—put them both on their probation (as *one* is now placed), for a year, two years, five years if you will—and then select him who has behaved best, for the Fellowship. Surely this would be more for the interest and dignity of the College, than conceding, as we now do, to Oxford and Cambridge the right of judging for us in these matters. We are told that the Oxford and Cambridge physicians (ergo Fellows of the College), are the most "gentlemanly" and "best bred" members of the profession; and that it is of importance (and so it is), to keep up high breeding and a refined standard of manners, in the physician's character. I agree (how sincerely you know!) in the *principle* here expressed; but I think that the College should establish this standard on its own estimate of what is honourable, courteous, and refined.

I would much rather refer to a society of London gentlemen for rules of manner and general conduct, than to any Common-Room, or any combination of Common-Rooms, in Oxford or Cambridge. But really this standard of gentility is very vague. It was so, sixty years ago, when Goldsmith made his bear-dancer protest against low tunes; how much more difficult to fix in the days of *morgue*, from which we are just escaping! I have heard Byron and Talma set aside as "*vulgar*," by talkers at a dinner-table; every thing, indeed, that is grand and simple, by the listless and arrogant of these latter days. I do not believe that Oxford and Cambridge will now furnish more "gentlemen" to the world at large, than other places of education hitherto decried; or, what is more to the purpose, that they will be *supposed* to do so. Their prestige is gone. Their standard of character and manners was always, in great measure, illusive, and one of convention.

Those who bid us rely on Oxford and Cambridge as schools of "gentility" for the young physician, should select the particular College at which they would have him enter, and should then tell us with what particular *set* of the particular College they would have him associate. I do not know how the scale of importance is adjusted between the Colleges and their *sets* at Cambridge, but I remember something of these absurdities in the Oxford graduation. The gentleman-commoner of Christ Church, nay, even its Fellow or Student, was separated, in his own estimation, from the men of Wadham, Worcester, or St. John's, by a much wider gulph than the London Physician-Fellow, late of Wadham, Worcester, or St. John's, could ever hope to place between himself and the Scotch Licentiate. The man of Wadham, Worcester, or St. John's, no doubt, repaid the Christ Christ *morgue* with interest: of the scorn respondent I cannot speak; but I know what the feeling of the Christ Church Aristocrat was with respect to "Ex-Collegees,"—that he would have shuddered at the phrase of "Oxford men," as classing him with them; and I only refer to this gentlemanly arrogance for illustration of my argument, and that I may express my utter disgust at such ungenerous, such contemptible vanities. The "Licentiate" Physicians of London are surely (who will deny it?) as well behaved, as "*gentlemanly*," as the graduates of Oxford or Cambridge. Perhaps, if admitted into the Society of Fellows, they might even improve on the original stock. Their age, when admitted to the License—their attainments, are the same (we have disposed of the Greek)—they are recognized by the College as equally good men, as equally competent physicians. They *should* be equally eligible to the Fellowship under the Bye-laws, as they actually are in the spirit of the Charter. They are no longer too young, *omnino inidonei*—foreign to the soil, unhonoured by degrees, *non satis docti*; to none of these objections, under which they were first distinguished as a class from the Fellows, are they *now* liable; while the Fellows, on the other hand, are no longer the "Socii" of the Charter, or of the first hundred years that followed it, but a select exclusive body of Oxford and Cambridge Graduates, arrogating to themselves the rights, titles, and privileges which belong to the entire community "of the Faculty of London." But the wrong and the folly of the present system are endless. I have done. Yet another word: Harvey was a Doc-

tor of Padua; afterwards, it is true, received as such at Cambridge—but had the present Bye-laws then existed, he would not have been admitted to the London Fellowship, for he was not *created* a Doctor at Cambridge without grace or dispensation. Old Hamey, a great benefactor of the College, and lively chronicler of its Annals, was dubbed Doctor at Leyden, and became Fellow of the College, as I believe, without any introduction from Oxford or Cambridge. Remember, too, that Oxford and Cambridge were much more liberal in their proceedings in those days than at present; they courteously received, and kindly adopted, all the favoured children of other Universities. However, let us dismiss the College and return to the "New Pathology," which begins from the Blood. Look over what I have selected from a much longer brief; reserving all *secrets*, eschewing all personalities, preventing all heat, as far as my nature permitted; *meaning* to be on the right and useful side—at all events in earnest; and then tell me whether you prefer the Charter, which establishes "all men of the Faculty"—all licensed Physicians—if not actually as Fellows, at least as fully and equally *eligible* to the Fellowship—or the Bye-laws, by which the large majority of "men of the Faculty" are excluded from the Fellowship. Another quere: is the College, in its present frame, a good *working* body of "men of the Faculty? Does it afford a ready efficient Board of Health, commanding respect, inspiring confidence? Do the public know or care enough about it? Does the Government defer to it in matters of public health? Can it put down the Quack? Does it call to severe account the unlicensed pander to the selfish fears of an Aristocracy too vain and too stupid to be entrusted with the charge of their own health? Did the Cholera find us ready? Did it leave us wiser or richer in men's credit? From the Cholera to the Blood—how easy the transition! Don't trouble yourself about the answers to my questions; I can get them from any who lives in the world and reads the newspapers.

Yours ever,

MAXILLA.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue a abréger."—D'ALEMBERT.

Researches on the Pathology and Treatment of some of the most important Diseases of Women. By ROBERT LEE, M.D. F.R.S. &c. &c.

IT is now several years since Dr. Lee published some papers connected with the subject of his present work, which attracted notice and approbation by their originality and importance. It affords us satisfaction to have assisted in directing attention to them, at a period when their merits were not yet duly appreciated; and to have predicted what is now evidently in progress of accomplishment—namely, that the author will take a distinguished place among the improvers of medical science.

The work which has given occasion to these remarks is divided into two parts; the first relating to puerperal fever and crural phlebitis; the second, to uterine hæmorrhage. It is to the former alone that we can advert on the present occasion.

"On puerperal fever and crural phlebitis!" The association is such as, but a short period ago, would have been regarded as preposterous, and yet it has already become familiar; it implies a great principle in pathology, which appears to us to have been satisfactorily established — the connexion between some of the hitherto obscure diseases of lying-in women and venous inflammation. But of this more hereafter. It appears that, from January 1827 to October 1832, Dr. Lee had seen, marked, and followed, either to recovery or the dead-house, 172 cases of well-marked puerperal fever; of fifty-six which proved fatal, forty-five were examined, and in all were found some morbid change, the obvious result of inflammation either in the peritoneum covering the uterus, or in the uterine appendages, the muscular tissue, the veins, or the absorbents. In thirty-two the inflammation was found in the peritoneum and uterine appendages; in twenty-four the veins of the uterus were inflamed; in ten the muscular texture; and in four the absorbents were filled with pus. Now these facts Dr. Lee regards as disproving the common idea, that there is

a specific idiopathic fever which affects puerperal women, independent of local disease. "It is to the uterus, left in a condition after delivery in which no other organ can be similarly placed, and rendering it peculiarly liable to attacks of inflammation, that we are to look for an explanation of all the phenomena of puerperal fever." It must, we think, be acknowledged, that until lately the morbid anatomy of the uterus in puerperal women has not received the same degree of examination which has been devoted to other parts, or which its importance deserves. References and extracts are made by our author to the histories of puerperal fever, as they present themselves in the records of medicine, which are for the most part vague and imperfect, but afford strong evidence of inflammatory appearances having been found after death, whenever they were sought for with sufficient care. We are not aware, however, of their having been described in detail and in their combinations, in the manner, or with the system, pursued by Dr. Lee; and we shall therefore give an outline of his views, referring for particulars to the work itself, which we doubt not, in a few months, will be on the tables of most practitioners in midwifery in the kingdom.

The principal varieties of uterine inflammation are—

"1. Inflammation of the peritoneal covering of the uterus and of the peritoneal sac.

"2. Inflammation of the uterine appendages — viz. the ovaria, fallopian tubes, and broad ligaments.

"3. Inflammation of the mucous and muscular, or proper tissue of the uterus.

"4. Inflammation and suppuration of the absorbent vessels, and veins of the uterine organs."

These may occur either separately or combined, and may prevail more remarkably at one season than another, assuming more or less of the epidemic character, in which case it is common for one texture to be more affected than another. Thus at one time the peritoneum shall suffer most; at another the deeper seated structures. By far the most interesting of these is the inflammation of the veins in and about the uterus.

Some of the French pathologists described various cases of inflammation of the veins, both in child-bed and under other circumstances; and it would seem that M. Dance was occupied in investigating the subject between 1826 and 1829; but it was not until the appearance of an elaborate and very valuable paper by Mr. Arnott, published in the Medico-Chirurgical Transactions of 1828, that any attention was bestowed upon the subject in this country, or that practitioners generally became aware of its importance. Mr. Arnott's observations went to demonstrate, that many obscure constitutional affections, as well as local disorganizations, particularly in the form of purulent depositions, had their origin in inflammation of veins, whether from venesection, wounds, parturition, or other injury. On this point Dr. Lee is perfectly explicit. "Mr. Arnott stated to me (says he) that he considered this (*i. e.* phlebitis) to be the true explanation of all Mr. Rose's cases, and of Dr. Marshall Hall's cases of suppuration of the eyes in puerperal women; and that the painful swellings on the joints and extremities of lying-in women, arose from inflammation and suppuration of the veins of the uterus. Before hearing these important facts from Mr. Arnott, I was entirely unacquainted with the true cause of several of the most severe constitutional symptoms of uterine phlebitis." Nor was Dr. Lee the only person "entirely unacquainted" with the circumstances in question; it is quite certain that they were neither known nor suspected by pathologists, though some have not been quite so candid in their acknowledgments.

The opportunities enjoyed by our author of following up the investigation, and tracing it in all its ramifications, have been of the most ample description; and the results are correspondingly detailed and satisfactory.

"*Inflammation of the Veins of the Uterus, or Uterine Phlebitis.*

"In women who have enjoyed good health during pregnancy, and in whom the process of parturition has been easily accomplished, uterine phlebitis occasionally commences within twenty-four hours after delivery, with pain more or less acute in the region of the uterus, accompanied or followed by a severe rigor, or a succession of rigors, suppression of the milk and lochial discharge, acceleration of the pulse, cephalalgia, or slight incoherence, with most distressing

sensation of general uneasiness, and sometimes by nausea, vomiting, and diarrhœa. These symptoms, after a short duration, are succeeded by increased heat, tremors of the muscles of the face and extremities, rapid feeble pulse, anxious and hurried respiration, great thirst, with brown dry tongue, and frequent vomiting of green coloured matters. The sensorial functions usually become much affected, and there is a state of drowsy insensibility, or violent delirium and agitation, which is soon followed by symptoms of extreme exhaustion. The whole surface of the body not unfrequently assumes a deep and peculiar sallow or yellow colour, or a petechial or vesicular eruption appears on different parts of the body. The abdomen also sometimes becomes swollen and tympanitic, and some of the remote organs of the body, such as the lungs, heart, brain, liver and spleen, or the articulations and cellular membrane, and muscles of the extremities, suffer disorganization, from a rapid and destructive congestion and inflammation.

"There is scarcely an organ which has not been observed to become secondarily affected from inflammation and suppuration of the uterine veins. The vessels of the brain sometimes become greatly congested, and lymph is effused upon the surface of the pia mater, or serum into the ventricles; portions of the cerebral pulp have become softened and disorganized, or purulent infiltrations have taken place into the cerebral substance.

"In other individuals whose lungs had previously been healthy, a rapid and destructive inflammation of the pleura has taken place, or portions of the pulmonary texture have become condensed, of a dark red colour, or infiltrated with pus. In four cases, which have fallen under my observation, where there had been only obscure pain during life, with slight cough and dyspnœa, a copious effusion of lymph and serum was found within the cavities of the thorax; the pleura was covered with false membranes, and portions of the lung had fallen into a state of complete gangrene. In one individual the pleura had given way by sloughing, and the right side of the chest was found distended with air. Gangrene also sometimes takes place rapidly in those parts of the body on which the patient rests, and the same process is established in other soft parts where no pressure has been made. In a case related by Cruveilhier, which did not prove fatal, the nose became black and gangrenous.

"In uterine phlebitis, the mucous membrane lining the stomach has also been observed to be reduced to a pulpy state, and the substance of the spleen has been softened and disorganized. The eyes have also become suddenly affected with a destructive inflammation, and the vision has been entirely lost many days before the termination of life. In two cases which came under my care, the conjunctiva of both eyes, without much pain, suddenly became intensely red, the cornea opaque, and the eyelids much swollen, and under their lining membrane a large serous deposition took place; lymph and pus were also effused into the anterior chamber, and in one the cornea ultimately burst.

"Deposits or infiltrations of pus, of enormous extent, also take place into the cellular membrane, in the neighbourhood of the large joints, and between the muscles of the extremities, the cartilages of the joints themselves become ulcerated, and pus is formed within their capsular ligaments. In a recent case of uterine phlebitis, the cartilage at the symphysis pubis had been removed by ulceration, and a quantity of purulent fluid deposited within the capsular ligaments between the naked extremities of the bones.

"In other puerperal women, who have never been subject to attacks of rheumatism, severe pain is experienced in various parts of the body, more particularly in the joints and extremities, with an exhausting fever. M. Tonellé states, that the integuments covering the deep abscesses resulting from uterine phlebitis, are always of a violet colour, or present a peculiar characteristic tension and shining appearance. The inflammation is not confined to certain defined limits, so as to form circumscribed abscesses, but the pus is diffused and disappears by an insensible transition into the surrounding parts. Where pus is deposited in the muscles, the fibres become of a grey colour and softened. M. Tonellé also states, that he has frequently seen the pus in little abscesses among the muscles, where their fibres were not altered in appearance.

"All these affections have a common origin, and cannot be referred to any other cause than to the morbid condition

of the veins of the uterus. The purulent, or other secretions, formed by inflammation within the cavities of these vessels, probably produce the whole of the injurious effects now described, by entering the system and contaminating the mass of blood, in like manner as poisons do when absorbed into the body. It may be true, as some have supposed, though it cannot be demonstrated, that a certain number of the purulent particles fix themselves in the muscles and other parts, like globules of mercury injected into the veins, and that they become the focus, or centre, of an inflammation exactly circumscribed, which speedily runs on to suppuration.

"In some cases, uterine phlebitis commences at a later period after delivery than above described, and in a much more obscure and insidious form, without pain or sense of uneasiness in the region of the uterus, or any other local symptom by which the affection can be recognized. The uterus may return to the reduced volume it usually assumes after delivery; the lochial discharge may continue; and the inflammation and suppuration of the veins, which have caused the whole of the violent constitutional disturbance, and destructive lesions in distant parts of the body, may have been wholly overlooked.

"Inflammation of veins rarely takes place in any part of the body, where it cannot be referred to a wound, or to some specific cause externally applied to the coats of the vessels. In uterine phlebitis, the inflammation cannot, it is true, be traced in all cases to the semilunar shaped orifices in the lining membrane of the uterus which communicate with the sinuses, where the placenta has adhered; yet, it scarcely admits of a doubt, that the frequent occurrence of the disease arises from the orifices of these veins in the lining membrane of the uterus, being left open after the separation of the placenta, by which a direct communication is established between the cavities of these veins and the atmospheric air, in a manner somewhat analogous to what takes place in amputation and other extensive wounds. Such a condition of the uterine veins, in consequence of the separation of the placenta, must be favourable to the production of inflammation; and inflammation once excited, is seldom limited to these veins, but extends with greater or less rapidity along the continuous membrane of the uterine veins, to the spermatic or hypogastric, and from thence to the vena cava and its principal branches, which return the blood from the lower extremities."

But the association by our author of crural phlebitis with puerperal fever will have induced the reader to anticipate that the extension of the inflammation to the thigh gives rise to new phenomena: it is in fact held, and we believe with justice, to be the true cause of phlegmasia dolens. It has, indeed, been for some years a current, if not admitted opinion, that this disease depended upon inflammation of the veins, but the source whence this originated was not suspected to be the uterus itself till the late observations of Dr. Lee began to render this a probable circumstance. It is a curious and important piece of medical history, and we therefore extract Dr. Lee's account of it.

"It is a remarkable circumstance in the history of crural phlebitis, that nearly a century and a half should have elapsed, from the time when it was first clearly pointed out by Mauriceau, until an opportunity was presented of ascertaining by dissection the precise nature of the disease. There had indeed been opportunities, as I have shewn, to determine the accuracy of the different hypotheses which had been advanced, but these were neglected, and the seat of the disease, and its commencement in the uterus, were imperfectly understood, until I ascertained, by dissection, the true nature of the complaint.

"In January 1823, M. Bouillaud related several cases and dissections, in which the crural veins were obliterated in women, who had suffered from a swelling of the lower extremities after delivery; and M. Bouillaud distinctly stated, that he considered obstruction of the crural veins to be the cause, not only of the œdema of lying-in women, but of many partial dropsies.

"In May 1823, the valuable Essay of Dr. Davis on Phlegmasia Dolens, was read before the Medical and Chirurgical Society, and subsequently published in the twelfth volume of the Transactions. Although the cases of M. Bouillaud were published four months before Dr. Davis's paper was read, it does not admit of dispute that Dr. Davis was the first who proved, by dissection, that phlegmasia dolens depended on inflam-

mation of the iliac and femoral veins. So early as 1817, a fatal case occurred to him, which was examined by Mr. Lawrence, in which the iliac and femoral veins were inflamed and obstructed. Two other cases were recorded by Dr. Davis, and another by Mr. Oldknow, in all of which there were proofs of the previous existence of inflammation of the crural veins.

"For six years after the publication of the cases of M. Bouillaud and Dr. Davis, pathologists remained in doubt, whether these cases should be considered as examples of genuine phlegmasia dolens, or be viewed as essentially different diseases, and analogous in their nature to those formidable attacks of phlebitis which sometimes succeed to venesection and wounds. In opposition to the views of Dr. Davis, it was urged, that if phlegmasia dolens depended on inflammation of veins, three out of four patients would die; whereas, death does not take place in one case in the hundred, where that disease is distinctly marked. Dr. Davis has communicated no additional information on the subject since 1823, and he is still of opinion that the inflammation commences in the common iliac, and not in the veins of the uterus, and that the disease is produced by the pressure of the gravid uterus during pregnancy.

"In none of the cases of Dr. Davis does it appear that any attempt was made to trace the hypogastric veins to the uterus, though it is now certain, from what is known respecting the progressive changes witnessed in cases of phlebitis, that the alterations of structure which he has described in the common and external iliac, must have originated in the veins of the uterus.

"Thus, then, none of the writers who have been hitherto quoted, have made *any* allusion to phlegmasia dolens commencing in the *uterine veins*, and even M. Velpeau, the *latest* continental author on the subject, has given it as his opinion, that the affection of the veins is not the primitive disease, but is the consequence of the inflammation and suppuration of the articulations of the pelvis, with which he observed it to be frequently combined. The puriform fluid found within the veins, he supposes to have been introduced into their cavity by absorption, and not to have been the effect of inflammation, nor the cause of those affections of the articulations, which is now known to be the case. How far this opinion was incorrect, I need not now point out to the reader.

"It is due to Mr. Guthrie to mention, that, in a paper on Inflammation of the Veins after Amputation, published in the Medical and Physical Journal for 1826, he suggested the importance of tracing the veins from the common iliac of the affected side down to the uterus, and expressed a suspicion that the disease would be found to originate in that organ.

"All the authors who have treated of phlegmasia dolens, describe it as commencing, in the great majority of cases, subsequent to the tenth day after parturition, with symptoms of uterine irritation, and constitutional disturbance of a low typhoid character, and with pain and swelling in one extremity only. They have assigned various reasons for these remarkable peculiarities, in the period and mode of development of the disease, as pressure of the gravid uterus on the iliac veins during gestation, the change in the distribution of the blood from the sudden removal of this pressure, exposure of the extremity to cold, suppression of the lochia, deposits of milk in the limb; all of which, taken singly, or combined, are insufficient to account for the phenomena, and the occurrence of the disease after menstruation, abortion, and the malignant affections of the uterus, proves that these causes are neither necessary nor sufficient for its production.

"The facts which have been stated in this chapter, offer a more satisfactory, and, I trust, conclusive explanation of the phenomena. They demonstrate, that if inflammation be excited in the uterine branches of the hypogastric veins, it may continue to spread along these, until it reaches the common, external iliac, and femoral veins, and, by the morbid changes induced in them, give rise to all the subsequent symptoms."

Very strong facts are detailed by Dr. Lee in support of his opinion that "inflammation commencing in the uterine branches of the hypogastric veins, by extending to the iliac and femoral veins, invariably gives rise to all the phenomena of phlegmasia dolens in puerperal women;" but to the cases themselves we must content ourselves with referring. They are numerous and minutely described, and the names of those who witnessed the dissections are severally

given. We think it satisfactorily made out that phlegmasia dolens is invariably the result of phlebitis, but, of course, it does not follow that such phlebitis "invariably" begins in the uterine vessels of lying-in women, though this is doubtless the most obvious, and probably by far the most common source from whence to derive its origin. The circumstances of the disease (phlegmasia dolens) sometimes occurring in men, is decisive on this point, and of course the causes which lead to it in them may produce analogous effects in the other sex; besides which, Dr. Lee has given several cases in which the inflammation originated in the saphena veins of lying-in women. It is curious, however, to observe, that in females, not in the puerperal state, who suffer from the peculiar swelling of the lower extremities under consideration, there is almost always, if not universally, evidence of the uterine organs being primarily at fault. Thus it is preceded by suppressed menstruation, or malignant ulceration of the os or cervix uteri, or by some other analogous cause in which the uterine veins can scarcely fail to be implicated. Several instances of this nature are related.

On the causes and treatment of uterine inflammation generally, some important remarks are made; but the views of the author in these respects differ less from those of preceding writers than with regard to the pathology of the disease—the subject to which we have been anxious to direct attention. There is one point, however, which we cannot pass over without notice, namely, the astounding proposition, that *so far from any benefit accruing to the public from hospitals and infirmaries for lying-in women, the rate of mortality is prodigiously increased by them!!*

"From the registers of the British Lying-in Hospital, the Maternité at Paris, the Dublin Lying-in Hospital, and the tables of M. De Châteauneuf, it is proved that the average rate of mortality greatly exceeds that of institutions where individuals are attended at their own habitations; and if it should ultimately appear that all precautions are unavailing in diminishing the numbers attacked by the disease, it becomes a subject deserving of the most serious consideration, on the ground of humanity, whether Lying-in Hospitals should not be altogether abolished, as injurious rather than beneficial to society. From what has fallen under my own observation in the British Lying-in Hospital, and other similar institutions in this metropolis, where the utmost attention is paid to ventilation and cleanliness, and where the wards are not over-crowded with patients, I cannot hesitate to express my decided conviction, that, by no means hitherto discovered, can the frequent and fatal recurrence of the disease be prevented in Lying-in Hospitals, and that the loss of human life thereby occasioned, completely defeats the objects of their benevolent founders."

If future investigation should confirm this, and the subject demands instant attention, it must necessarily lead to an important change in the arrangements of an extensive set of public charities. We shall return to Dr. Lee's volume on an early occasion.

Principles and Illustrations of Morbid Anatomy. By J. Hope, M.D F.R.S. Part II. Price 8s. 6d.

We have no hesitation in expressing our opinion, that the present Part of Dr. Hope's Morbid Anatomy is superior to the first: the colouring is truer to nature, and the general effect better. Some of the plates are excellent; and the accompanying letter-press conveys a clear and satisfactory description, not merely of the figures, but of all the important points connected with the pathology of the various subjects. The diseases illustrated are, pulmonary apoplexy, emphysema of the lungs, encephaloid tumor, melanosis, black pulmonary matter, œdema of the lungs, ossification, and hydatids. Some of the diseases of the air-passages are likewise comprised in the present fasciculus, consisting of ulceration of the epiglottis, ulceration of the larynx, cauliflower excrescence in upper part of trachea, dilatation of the bronchia, ulceration of the mucous follicles of the trachea (the appearances here represented, fig. 51, seem to us extremely to resemble those of the same parts in small-pox), and, lastly, contraction of the bronchia by thickening of the mucous membrane.

The simultaneous appearance of two such works as are now in progress, cannot fail to extend the knowledge and facilitate the cultivation of morbid anatomy in this kingdom.

Lectures on Diseases of the Urinary Organs. By B. C. Brodie, F.R.S. Serjeant-Surgeon to the King, and Surgeon to St. George's Hospital. Octavo. 8s.

To the readers of this journal it must be unnecessary to say a word regarding the excellence of these Lectures. Mr. Brodie's discourses on the subjects connected with the morbid affections of the urinary organs, constituted the first regular series of papers which appeared in the Medical Gazette, and were mainly instrumental in obtaining for it that share of public attention which the support of a very large portion of the profession has since extended and confirmed. The lectures, however, are here presented in an improved and enlarged form, with the farther experience and critical corrections of the author. They constitute, beyond all comparison, at once the most scientific and the most practical work upon the subject which has hitherto appeared.

MEDICAL GAZETTE.

Saturday, February 23, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

EFFECTS OF THE FACTORY SYSTEM.

It is with unfeigned pleasure we observe that the Labour Bill is so soon again to occupy the attention of Parliament. That some amply efficient measure may now speedily be adopted—not merely limiting the hours of labour, but securing the due observance of all its provisions, by the appointment of proper guardians and inspectors—must be the fervent wish of every friend to humanity. Thus, and thus only, can amends be made for our imperfect and tardy legislation. It is not a little remarkable, that while our very beasts of burden have had protection from ill-usage afforded them by the provisions of the legislature, the most helpless and injured creatures belonging to our own species, have been totally overlooked.

Of a truth the people calling themselves political economists, are a strange race. Exact, or fancying themselves so, in their information relative to every thing touching our trade and commercial concerns, they talk of the results of machinery, and the productions of our factories, as if there was nothing like human nature connected with them. They never once deign to take into their calculations the expense of human life by which the manufacturing system is supported. They are ignorant, or utterly regardless, of the ruinous expenditure of the vital principle which is taking place, while all their thoughts are directed to the improvement of capital. The fact, that above 50,000 souls are cut off annually in this country through the baleful effects of trading occupations alone, is never once noticed in their profound reveries about the state of the nation. We wish they would please to pause upon it, however, and consider for a moment what a sacrifice is this—one hundred and forty victims offered up daily for the support of our manufacturing prosperity!

It may perhaps be said, that it is not quite fair to upbraid the economists with all this; that even as regards the labour in the factories, the masters are not so much to blame—that they are at least not alone culpable; and that the people themselves, and the parents of the children employed, have their eyes open to the consequences—yet they volunteer very often for extra labour. So lame a defence, and we see not what other they can make, scarcely deserves attention. Where mischief has been done, and can be traced, beyond the immediate agents, to certain aiders, instigators, and abettors, we believe that, for all moral purposes, the inquiry,

as it regards retribution, does not stop short of the fountain-head. The question is not merely who has yielded to a temptation, but who has held that temptation out—who has profited most by the proceeding—who has originated and protected it? Let the philosophers without humanity answer this in the case of the factories. It is true that circumstances have of late years immensely favoured the merchant manufacturers. An over-abundant and impoverished population, without encouragement to pursue the peaceful and healthful occupations of agricultural industry, have found in our manufactures a ready resource. Swarms of children, of both sexes (for their employers soon found that children about machinery could do the work of men), thus seemed to be immediately provided for; the parents, besides their own earnings, could calculate upon the support of their offspring; and while health lasted, things seemed to go on very well. But it was soon found that human beings wore out as machinery did, though the wear was less sensibly felt in the former, on account of the abundance of new hands which could be supplied; nor was it early perceived, that persons thus employed consumed much quicker than other people. Truths of this sort are slowly learned. The seeds of disease and death must have time allowed them to produce their harvest. But fearful as that harvest was, when it came to be counted—families becoming totally extinct in the third generation, and those who still lived being the victims of incurable distempers—yet even this might have been borne, had not the grievances of the sufferers been multiplied almost beyond endurance. Leaving accidents from unguarded machinery out of the account, and making due allowance for the ordinary effects of factory occupation, the encroachments by which the master manufacturers took advantage of the necessities of their unfortunate operatives, soon became but too visible. In our former papers on this subject, and in which we gave the substance of what was elicited from professional witnesses personally acquainted with the system, we noticed some of the chief hardships to which the children employed about the machinery are exposed—the high temperature and the foul atmosphere in which they work—the deformities which they contract—the intolerable length of time during which they are daily kept at their labour—and the "hellish system of night-work" (as it has been appropriately called) which is still pursued in many of the factories. We could accumulate examples from the minutes of evidence before us, of the revolting methods by which the tortures of the sufferers are aggravated, but we will only now give one. In the examination of Mr. Hannam we find the following:—

"You have stated that the children have their arms in hot water; is the water so hot as not to be borne without pain?—They now make the water so hot that the children can scarcely bear their hands in it; the hotter it is, the more effect it has upon the flax. The object of the hot water is to divide the flax, to spin a finer yarn from the same material.

"What effect has it upon their arms?—It is the steam more than the water, which has a bad effect.

"To what temperature is the water heated?—They are getting to work it now so hot that they can scarcely bear to have their hands in it. I do not know the exact heat.

"Has this such an effect as to drive them from their work?—Yes, many cannot stand it, and apply to other mills for work."

This is a sample of the system, to which we allude, of augmenting the ill-treatment of the infant operatives beyond endurance; they have no sooner become habituated to one degree of suffering, than they are submitted to an additional ordeal, until both mind and

body are consumed. It is, however, by the insidious nature of their employment that the greatest amount of mischief is done: by this, the corporeal frame becomes distorted and diseased, and the mind depraved and imbecile. Moral as well as physical pestilence is necessarily engendered among these hapless creatures, thus herded together without distinction of sex, impelled by mere animal instincts, and in a state of ignorance not to be described. Nor are their prospects, it would appear, ever illumined by a single ray of hope; there is no provision for sickness or old age; and so far from their wages being sufficiently ample to maintain them comfortably, they are constantly exposed to the harassing imposition of fines and penalties, which materially subtract from their scanty resources.

Will it be believed that, to meet this physical and mental ruin, the wise plan of night schools and Sunday schools has been struck out? In the state of distressing languor in which they daily, or nightly rather, leave off work, it has been proposed that they should repair to a school to be taught the elements of a common education; and that at the end of the week again, when they have got a day of rest, they should be shut up in a Sunday school, to be instructed in the principles of religion! This were a remedy indeed,—consistent perhaps with political economy—but certainly not with medical economy. Ye simple and shallow concocters of Utopian schemes, know you not that the languor after excessive bodily toil can endure any thing rather than mental application; and that the bed or the beer-shop, in such circumstances, will always take precedence of the academy? The wizard, in Spenser, did not forget "sleep after toil" among the attractive allurements that he held forth for the wretched in despair. The economists would heap toil upon toil.

We almost hesitate, from an apprehension of the ridiculous, to lay the following little portrait before the reader. It is contained in the evidence of Mr. Whitehead, of Holmfirth.

"What moral effect do you think it has on the minds of children who labour thus at this early period of life?—With regard to the morals of the children who work in mills, we cannot expect that they should be so strict as those of children under the care of their parents. I have seen a little boy, only this winter, who works at a mill, and who lives within two or three hundred yards of my own door; he is not six years old; and I have seen him, when he had a few coppers in his pocket, go to a beer-shop, call for a glass of ale, and drink as boldly as any full-grown man, cursing and swearing, and saying he should be a man as soon as some of them!"

This must be looked upon, we suppose, as rather a precocious youth, but he may serve for a specimen of his order; one may judge from him how "the twig is bent" in the factories, and whether the night or the Sunday school would be likely to work miracles upon such subjects. Mr. Whitehead, we ought to mention, is a clothier, and, from his occupation, familiar with the manners of the young operatives; he is evidently no severe censor, nor does he seem to view their depravity in all its glaring unseemliness. Other witnesses, however, are not so; we do not remember one, out of the whole list of those summoned from the factory districts, who has not spoken in the strongest terms of the dreadful state of demoralization which this "light and easy" labour produces. We shall just notice a passage or two in the testimony of the Rev. Mr. Bull. After describing the conversation and conduct of the factory children, whom he had often met returning from their work, as worse than any thing he had ever witnessed even among the most abandoned characters in our seaports, he adds:—"I also beg permission

to say, that I esteem night-work to be a most fruitful source of immorality. I do not speak of my own knowledge, of course, but the parents of the young persons have reported to me most shameful scenes that have taken place during night-work; and overlookers of the mills, one or two respectable persons whom I have happened occasionally to converse with upon the subject, have told me very disgraceful things that occurred to their knowledge during night-work. I believe very frequently, that scenes of great debauchery take place in the mills; and I do believe, that, in many instances, they are perfectly known to the masters of the mills." Speaking of the attempt to establish night-schools, the same gentleman says that the children *cannot* attend them. "I know a few that do, but I know that they do it to their very great physical inconvenience; and I have seen them myself fall asleep over their slates, at an evening school, from absolute exhaustion." But we surely need not waste more time in exposing the absurdity of those who would mend the evils of which we speak by schooling reckless minds and exhausted bodies? Could it serve any purpose, we could state the opinions of all the medical men who were examined before the Committee on the point, and who were unanimous that such a proceeding would only add to the cruelties already exercised upon those unfortunates.

The true and only plan is to limit the hours of labour: we do not say to ten, because we hold that number, on an average, to be quite too much; but if it cannot be less, let it be ten: and, as the bill contemplates, by all means let no children be employed below the age of nine. It is monstrous to think that those years in which the child is most susceptible of impressions, on which the colour of his future life so greatly depends, should be spent in a hot-bed of vice and disease, mental and bodily. The apprehension that those limits must prove injurious, by affecting the means of support which under the present mode of proceeding exist, is groundless. It is known that the employment of tender infants, to whom the manufacturers have of late years given the preference, from obvious motives of economy, has thrown the parents very generally out of work, and that the latter have, in many instances, been wholly supported—aye, even in their excesses of dram-drinking and drunkenness—upon the earnings of their children, toiling at forced labour. Now the regulations intended to be introduced will lead to the employment of numerous hands that are at present disengaged—at a low rate of wages, perhaps, but still this will be better than none, and will bring with it occupation, a thing in itself much to be desired. At the same time it does not necessarily follow, that even if the master manufacturers employ no more operatives than they do at present, that less work will be performed under the proposed regulation. On the contrary, it not only would appear to be a rational inference, but it is a positive opinion expressed by some of the most intelligent witnesses, that the limited number of hours cheerfully given will produce fully as much labour as the forced toil under the existing arrangement. As to the supposition that any interference with the exertions of our great manufacturers must prove prejudicial to our trade, in the event of a national competition, it is too manifestly absurd to require any notice. When we shall hear that the population of the country is diminishing, and that the adults refuse to work because the children's labour is limited, then may we seriously take such an objection into our cognizance—but not till then.

But while we thus speculate on the probable consequences of the suppression of the present iniquitous system, let us not forget that that system is at this

very moment in full operation—that the infant labourers of both sexes are even now employed at their weary work, in a foul atmosphere, and encompassed with the most corrupting influences—that they have their heavy tale of work to make good, and heartless task-masters to satisfy—that there are plagues in the land, to testify to the abomination of the system; but the plagues are unfortunately among the victims—*they*, and not their persecutors, suffer.

We are glad to perceive in the newspapers the announcement of a public meeting, relative to this subject, which is to take place in the city on Saturday (this day), under the auspices of the Lord Mayor. We trust that upon this occasion the public sympathy will be benevolently evinced, and the ways of justice and humanity efficiently vindicated.

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EXANTHEMATOUS EPIDEMIC AMONG CHILDREN.

An epidemic accompanied by an eruption of unusual character, and great fatality, has recently prevailed in the province of Hainaut. The attack commences by great pain at the pit of the stomach; the surface of the body becomes covered with small red spots, less uniform than those of measles; and the joints swell. The eruption remains for two days, and then disappears; the children at the end of this time sink under the attack, the face and gums having previously assumed a black appearance. It has proved fatal in a large proportion of cases, and no remedy has been discovered which is of any avail. The conjecture of the medical men is, that the epidemic is a modification of scarlatina.—*Gazette Medicale.*

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SULPHATE OF CADMIUM.

M. Grivaud has announced to the Academy of Sciences, that he employs the sulphate of cadmium, in many cases, as a substitute for preparations of mercury. At the same sitting, M. Pelouze presented a memoir on the mutual action of phosphoric acid and alcohol. He has obtained, he says, a phospho-vinous acid similar to the sulphovinous, which results from the reaction of sulphuric acid on alcohol.

ST. BARTHOLOMEW'S HOSPITAL.

[Cases communicated by W. S. Ward, Esq.]

——

Case I.—*Abdominal Tumor (Hydatid)—Phthisis—Death.*

Eliza Vann, aged 36, an unhealthy looking woman, was admitted November 16, into Sitwell's ward. Her statement is as follows:—That she is a married woman, and has had one child about two years ago. About twelve months after this time she discovered a small tumor at the lower part of the abdomen, which gradually increased in size, and for which she consulted Dr. Conquest, who seemed to be of opinion that it was ovarian disease; but as she did not follow the rules he laid down, she never returned to him. Its increase continued gradual until she became pregnant, about six months ago, when it was much accelerated.

On the hand being placed upon the abdomen, a soft elastic tumor is felt occupying the right iliac region, and which, from its size, presses the impregnated uterus so firmly against the abdominal parietes in the opposite corresponding region, that every movement of the child may be most distinctly felt, and sometimes even seen, at a considerable distance. As much difference of opinion existed respecting the treatment which ought to be adopted, Mr. Earle requested that Dr. Conquest should be asked to see the patient.

This gentleman still considering the tumor to be ovarian, recommended that labour should be brought on as soon as possible: this was effected by gradually dilating the os uteri. From the very debilitated state of the patient, her labour did not commence for some days after the rupture of the membranes; and the pains were so feeble, and of such short duration, that I was induced to administer the secale cornutum, which, however, seemed to produce so little effect, that finding the parts in a soft and dilatable state, I gradually drew away the child, which presented by the breech, and was dead. The cough, from which she suffered before her confinement, now became aggravated, and proved to be a symptom of phthisis, of which she died in five weeks.

When the abdomen was opened, a globular tumor, about five inches in diameter, presented itself; it was situated about the middle of the cavity, and its lower circumference was on a level with the fundus uteri; it had, even then, very much the appearance of an ovarian cyst. It was

covered by the omentum, to which it was adherent; this being reflected upwards, exposed a portion of the ileum and mesentery spread out upon, and firmly adherent to it; so much so, that the cyst seemed to have been developed in the mesentery.

A portion of the cœcum was also firmly adherent to the tumor, which was found to be perfectly unconnected with the ovaries, and attached to the uterus only by a fold of peritoneum. The tumor, after a very careful dissection, proved to be a very fine specimen of the true hydatid.

The lungs presented the usual appearances of tubercular formation, in all its stages.

CASE II.—*Inguinal Hernia—Operation—Pleuritis—Death.*

Richard Pope, aged 76, had been the subject of inguinal hernia for forty years, which had lately been supported by a suspensory bandage. On the evening of January 10th (without any apparent cause), he felt pain in the tumor, extending over the abdomen, and accompanied with constipation and vomiting. The only attempt at reduction was the employment of the taxis, which being unsuccessful, he was admitted on the evening of January 14th, under the care of Mr. Lawrence, with the following symptoms:—Tumor of the scrotum about as large as a double fist, tense, painful, and tender on pressure; the testicle situated on its anterior and inferior part; pain in the abdomen, which was soft and but slightly tender; tongue brown and dry; hiccup; skin cool and moist; bowels constipated since the 10th; pulse 90; cough (which he has had many years), with slight mucous expectoration.

The patient was placed in the hot bath until he became faint, when the taxis was again employed, but without success. The operation was performed two hours after admission. The testicle was situated on the anterior and inferior surface of the tumor, but the course of the spermatic cord could not be ascertained. An incision was made in the longitudinal direction of the tumor; and on opening the sac the mesentery first presented itself, the intestine being exposed by lengthening the incision. The protruded intestine, which, from long-continued stricture, was of a deep colour, was about eight inches in length, and situated in front of a considerable portion of thickened omentum, which was adherent to the posterior surface of the sac. The stricture was divided; but from the escape of more intestine, and the difficulty of returning it into the abdomen, it became necessary to enlarge the opening, after which, with some little resistance, the gut was reduced. The larger portion of the protruded omentum was dissected from its adhesions and removed, its vessels being secured by ligatures. The course of the spermatic cord was not evident when the sac was opened. The patient lost from six to eight ounces of blood. The bowels were freely opened by the use of injections two hours after the operation; pain in the abdomen diminished; pulse about 80, soft. During the night several stools were passed, and on the morning of the 15th there was but little pain and tenderness; the tongue was cleaner, and moist at the sides, but dry and brown in the middle; hiccup constant; cough troublesome; pulse 100, small and soft.

Linctus e. Scilla; Enema commune; Jalapa et Calomel.

7 in the evening.—More tenderness in the lower part of the abdomen; pulse 120; tongue drier; skin rather warm.

Hirudines xxiv.; Fomentatio calida; Cataplasma abdomini.

11 o'clock.—Rather less tenderness. Patient sleeps, and appears very tranquil.

January 16th.—Tenderness extended over almost the whole belly; pulse 110, small and weak; hiccup; bowels opened by the enema; tongue brown and dry; respiration abdominal; passed a tranquil night.

Hirudines xij.; Pil. Colocynth. gr. xij. Calomel, gr. iv. M. statim sumend.

℞ Magnesiæ Sulphatis, ℥ij.; Aquæ Menthæ; Aquæ puræ, pana. ℥vj. M. 4ta horâ.

Evening.—Tenderness extended and increased; bowels not opened.

Hirudines xxxvj.

℞ Calomel, gr. iv.; Jalapæ Pulv. gr. xij. M. statim.

17th.—Symptoms as yesterday, excepting that there is somewhat less tenderness, and the bowels have been very freely purged. The patient is, however, so weak, that he passes his fæces in bed, and in considerable quantity.

℞ Mist. Cretæ, ℥iss.; Confect. Aromat. gr. x. Mist. sumat. 4ta horâ si opus sit.

18th.—Weaker to-day; breathing entirely thoracic, and he has, as he terms it, a slight "catch" in his breath.

Ordered a small quantity of brandy, in arrow-root.

19th.—Continues to sink: bowels not opened since yesterday morning.

℞ Pulv. Rhæi, gr. x.; Magnesiæ Carbon. gr. xv.; Aquæ Cinnamon. ℥iss. M. statim. Enema commune.

20th.—Died this morning, at 10 o'clock.

Postmortem Examination, 28 hours after death.—Abdomen: the portion of intestine which had been strangulated was matted together by adhesive inflammation; in one

spot there was a slight collection of pus. The peritoneal covering of the liver and stomach was also slightly inflamed, having contracted adhesions with the corresponding surfaces of the abdominal parietes. The omentum was adherent to the neck of the sac, on the posterior surface of which was the spermatic cord, the various parts of which were separated and spread out. *Chest:* the upper and posterior part of the lungs were firmly connected with the pleura costalis by old adhesions; the diaphragmatic pleura on the left side, as well as the corresponding portion of pleura pulmonalis, was considerably inflamed, and covered by patches of yellowish coagulable lymph; some sero-purulent effusion existed in the cavity of the pleura. From the lung, on being cut into, there flowed a frothy fluid, of a similar character to that contained in the cavity of the pleura. A portion of this lung sank when placed in water. The pericardium contained about three ounces of a turbid fluid, in which floated small shreds of lymph. The pericardium itself presented no morbid appearance.

Head not examined.

The inflammation of the pleura in this case was far more severe than that of the peritoneum, whilst the symptoms of the latter were the only ones which existed during life, unless we may consider the thoracic breathing, which occurred during the last days of the patient's existence, to have arisen from an inability to effect the usual actions of the diaphragm. I am disposed to think that the frequent occurrence of acute inflammation, coming on, almost without any symptoms, in the serous membranes, during the last few days, or even hours, of a patient's existence who has long laboured under some chronic disease, has not been so generally noticed by practitioners in this country as on the continent; and I hope, by calling attention to the subject, that we may be soon furnished with symptoms by which we may with more certainty detect its existence. Many cases of this kind may be found in the works of Louis, Andral, Rostan, &c. &c.

ROYAL INSTITUTION.

Friday, February 15.

Dr. Ritchie's Method of conveying Elementary Information.

THERE is nothing new in this method: it is practical, indeed, but almost wholly mechanical. The chief recommendation which it must have for pupils, is its perpetual reference to utility: at every step they are taught the application of what they have learned, and put in the way of finding out rules for themselves. Dr. Ritchie's illustrations were taken from arithmetic, and the elements of geometry. He explained the principles of fractional notation expertly enough, but his mode of laying down the doctrine of triangles was as inelegant as can well be conceived. He shewed how the pupil might be convinced that the three angles of a triangle were equal to two right, by moving a straight stick over the three angles of a good sized wooden triangle, and then observing that the said stick had described a semicircle; which, to be sure, was very demonstrative, how little soever mathematical. It struck us as being an exchange of the reasoning process for a clumsy appeal to the senses.

ST. GEORGE'S HOSPITAL, AND THE MATERNITY CHARITY.

A VACANCY has occurred in the office of physician to St. George's Hospital, by the resignation of Dr. Hewett. The candidates put in nomination are Drs. Hope, Macleod, and Dunlap.

In the Royal Maternity Charity there has also occurred a vacancy, by the resignation of Dr. Dennison: for this, Drs. Borrett, Ryan, and T. Blundell, are announced as the candidates.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 19, 1833.

Abscess	1	Hæmorrhage	2
Age and Debility	34	Heart, diseased	4
Apoplexy	5	Hooping-Cough	23
Asthma	12	Inflammation	30
Childbirth	2	Bowels & Stomach	8
Consumption	61	Brain	7
Convulsions	23	Liver, Diseased	3
Croup	2	Measles	8
Dentition or Teething	4	Paralysis	1
Dropsy	11	Small-Pox	15
Dropsy on the Brain	19	Spasms	1
Erysipelas	3	Thrush	2
Fever	4	Unknown Causes	69
Fever, Scarlet	5		
Gout	3	Stil born	9

Decrease of Burials, as compared with the preceding week . . . 56

METEOROLOGICAL JOURNAL.

February 1833.	THERMOMETER.		BAROMETER.	
Thursday . 14	from 38	to 48	29·14	to 29·21
Friday. . . 15	32	44	29·06	29·29
Saturday . 16	28	43	29·31	29·41
Sunday . . 17	29	45	29·66	29·51
Monday. . 18	34	48	29·46	29·56
Tuesday . 19	35	47	29·72	29·81
Wednesday 20	33	43	29·49	29·13

Wind variable; S.W. prevailing.

Except the 16th, generally cloudy, with frequent rain.

Rain fallen, 1 inch and ·15 of an inch; of which ·625 fell during the night of the 14th, and caused a greater flood than has been for some years.

CHARLES HENRY ADAMS.

NOTICE.—Mr. Spence's paper has been received.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 2, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

PARALYSIS.

The next disease, gentlemen, to which I shall call your attention, is one which very often follows apoplexy, and is the result of that state which in the first instance is apoplectic—viz. paralysis.

Definition.—It may be defined to be a loss or diminution of sense or of motion, or of both, independent of any stiffness of the part, or of inflammation, or any mechanical impediment; but dependent entirely upon the condition of its nerves, or some other part of the nervous system.

This disease, paralysis, which I need not say comes from παραλυω, to loose or weaken, frequently begins with sopor, even with coma, and downright apoplexy. If it begin with a great degree of heaviness, it is called *sopor*, sleepiness.

Varieties.—The disease is usually divided into three varieties: *hemiplegia*, affecting one-half the body divided vertically; *paraplegia*, affecting one-half the body divided horizontally; and *partialis*, affecting only one particular limb, or one particular sense. The partial paralysis may be of the eye, *amaurosis*; of the smell, *anosmia*; of taste, *ageustia*; of the touch, *anasthesia*; or of hearing, *dysecœa*. There is no particular name for paralysis of one leg, one arm, or one side of the face.

The disease may not vary according to the part it affects, but of course it may vary in its degree, so that the person shall have no use whatever of his senses, or of a portion of his body, or he shall have a use of them, only that it is impaired. Then the paralysis may differ according as it affects sensation, or motion, or both. It is very common to see paralysis only affect sensation; of course, this must be the case where there is no motion; if such a part be paralysed, it must be paralysed only in sensation. With respect to the internal part of the nose, the paralysis which affects it must clearly be a paralysis of sensation; so with respect to the internal part of the ear and likewise of the eye. If the paralysis be within the orbit, so that motion is affected, it is not the fault of the eye, but of the muscles which move it; but paralysis affecting the eye, properly speaking, must be of sensation.

Sometimes, however, in the extremities we have a loss only of sensation, but that is rare. Sometimes you will see a person lose the sense of touch in particular parts of the body, but it is not of frequent occurrence; for generally where a part is endowed with both sense and motion, the part either has motion only affected, or sensation and motion together.

There is still another variety. When a part is paralysed both as to sensation and motion, the proportion of the two is very various. Sometimes a person shall be powerless entirely in a limb, or in one-half the body, and yet he will feel a little, while he cannot move at all; and sometimes the paralysis will be so perfect in both respects, that you may pinch him as hard as you please, and he may endeavour to move as much as he will, and yet both will be in vain.

There are some still rarer varieties than these. What I have now mentioned is almost of daily occurrence, but there are some variations not so common; for example, a person will sometimes lose sensation on one side of the body, and motion

on the other; he may lose sensation as to a leg, and motion as to an arm, and *vice versa*. There is a more minute variety than this; there will be a perfect loss of sense and motion in one limb, and then in another limb on the same side the loss of either sensation or motion is imperfect. The patient will feel a little with his arm although he cannot move it; and in his leg he can neither feel nor produce the least motion. Nay, what is still more curious, this state has sometimes alternated; the part which could not feel has become motionless, and the part which was motionless has by and bye lost sensation.

Sometimes, when half the body is paralysed, the other half is in a state of great agitation and convulsions. These are cases of rare occurrence, but you will find them mentioned by the most respectable authors, so that there is not the least doubt as to their truth, but, in general, they are cases you will not meet with. Occasionally there is an opposite state to the loss of sensation—the senses become morbidly acute; so that a person is quite powerless as to an arm or a leg on one side of the body, and yet he will have such a morbid sensation that the creeping of a fly along the arm will give him great uneasiness. I have seen many persons who could not use their arm the least, or tell you if a fly lighted upon it; but occasionally there has been such morbid sensibility as that the descent of a fly upon them has been most uncomfortable.

You will, I dare say, meet with cases where there is a morbid sense as to temperature in the paralysed parts. Some persons whose limbs are paralysed, cannot, in the paralysed parts, bear the slightest breath of cold air: it has often been known to excite convulsions. But more frequently the sensation varies as to heat: patients will feel parts which are only of a moderate temperature exceedingly hot. I have met myself with several cases of this description. I recollect that the first of the kind which occurred to me took place in a gentleman, who, I think, first noticed that there was any thing the matter with him by going to the water-closet. When he took his seat, he felt one side so hot that he thought some old woman, in a burning fever, must have been there before him. He wondered how the heat could be on one side, and he soon found that if he clapped his hands against the part it felt hot: he tried the other side, but no such sensation was experienced. It excited his astonishment, and he soon found that as he walked along he shook his toe about. After a time, giddiness and hemiplegia occurred, and subsequently paraplegia of the lower extremities, of which he died. Some not only feel every thing hot in this way, but they have a constant burning sensation, whether the parts are touched or not. This is very different from what you often see; for some persons (many indeed) have so little feeling that a red-hot iron has been applied to the paralysed parts, for medical purposes, and yet not the slightest heat has been felt. Many paralytic persons have sat near a fire, and their legs have been charred, and yet they have known nothing about it at the moment.

I have, however, seen many cases such as that which I first mentioned respecting a morbid sensibility to heat, and it is a thing which has long been mentioned. You will find it adverted to by old authors as well as modern: the cases are by no means uncommon. Dr. Heberden mentions a case of hemiplegia, where there was a morbid sensibility of the sense of smell—where the patient smelt every thing so acutely that any strong odour gave him great pain; reminding one of Pope's line,

> "Die of a rose in aromatic pain."

This I have never seen; but I have had two or three extraordinary cases of paralysis, where persons had a morbid sensibility to cold. I made a note of one which occurred in December 1823. A man, aged 56, had been for twelve years so sensible to cold that he had worn four flannel waistcoats regularly; and his wife once put her foot against him in bed, when he had rigors, which made the bed shake, and lasted for a whole hour. Once, he said, his granddaughter put her cold hand upon him, and he felt an icy coldness in that spot for a month. Three years and a half before I saw him, he had a fall on the back of his neck, and from that time he had been considerably worse as to all these sensations. He had vertigo, and laboured under a loss of the power of attention: he could not fix his attention, and his spirits were much depressed. I found him thirsty and flushed, and frequently he had general heat all over him, but, notwithstanding that, he always felt cold: but though he felt cold, no one else, on touching him, could discover that he was so. I had another patient under my care in 1829—a man 40 years of age. He had a morbid sensation of coldness—a morbid sensibility to low temperatures throughout his trunk and along his arms, as low as his elbow, but no farther. He said that things of an ordinary temperature felt cold to him, and when he put on a calico night-shirt it felt, at first, as though it had been dipped in cold water, and the sensation remained a quarter of an hour. The sensation of putting it on next to his skin would have been intolerable, and therefore he was obliged to ease himself in flannel, and he

kept his flannel waistcoat on as long as it would stay. He said that hot things felt hot, but any thing of low temperature felt exceedingly cold.

Now it was owing to observations of this description that Dr. Darwin imagined (and perhaps others did the same) that there must be a particular set of nerves for temperature. Seeing that persons sometimes lost the sense of touch, and yet had a morbid sensibility of temperature—sometimes feeling things very hot, and sometimes very cold—he drew the conclusion to which I have just referred. It was analogous facts to these that led persons, ages ago, to imagine there must be a distinct set of nerves for motion and sense; and the fact has since been proved by Sir Charles Bell, and still more fully established by Magendie. A French surgeon, who published in 1780, states, that there must be distinct nerves of sense and motion, because sometimes the function of motion only was affected, and sometimes only sensation. That has been proved to be the case, but it has never been proved in regard to temperature.

Respecting the temperature of paralysed parts, I may mention that it generally follows the temperature of the surrounding parts. It is said that the temperature of the paralysed parts is generally below what it ought to be, but that is not a proper expression; and I think Dr. Abercrombie's statement is the most correct—viz. that the temperature of the paralysed parts follows the temperature of the surrounding parts; that is, they will get hot sooner than other parts, and cool sooner than usual. Now the temperature around is almost always below the temperature of the body, and the paralytic parts follow the temperature of circumambient things more like inanimate parts than parts endowed with life. You will find this expression in Dr. Abercrombie's work, and it appears to me to be correct.

Mode of Invasion.—Paralysis sometimes may invade very slowly, quite imperceptibly, or it may attack very suddenly. After it has once begun, it may extend or not; and it may proceed very slowly or speedily, and may likewise increase in intensity or never increase at all: the patient may live many years without any further increase. It may, therefore, take place suddenly or very slowly—it may remain stationary or it may cease—or, if it do not cease, it may remain stationary, or it may extend—or, on the other hand, it may become more intense. Sometimes one organ becomes affected after another. Occasionally it is intermittent, and even periodical. I had read of such cases in authors, but I never met with an instance of it till last year, and then I met with a case which was decidedly intermittent, and, indeed, in some measure periodical. The attacks always came on about half-past ten or eleven o'clock in the morning. They did not always occur at one particular interval, though sometimes they did; but the hour at which the invasion took place was always the same. After the lapse of many months the disease became less, ceased to be periodical, and appeared more of the form of fixed paralysis.

Frequently united with other Diseases.—Paralysis is very frequently united with other nervous diseases—particularly with mania and epilepsy. Persons who are epileptic, frequently at last (though, perhaps, if they be adults, not till after many years have elapsed) become paralytic; and insane persons, too, frequently are seen to be paralytic.

When recovery takes place it is in general very slowly; but sometimes, though rarely, recovery is sudden.

Causes.—This disease may be induced by any thing which compresses a portion of the nervous system—which divides any portion of the nervous system—or by the disorganization of a portion. It is obvious, that whether a part of the nervous tract be compressed, so that the function cannot continue along it, or whether it be divided, so that function cannot continue along it, or whether it be disorganized, the result must be the same. Accordingly, if a nerve be divided, the parts below are paralysed; if the spinal marrow be divided, or completely compressed, or softened at any spot, the parts below are necessarily palsied. The compression may arise from fluid effused around—from fluid effused in the substance—from a collection of blood—or, in fact, from any thing whatever capable of producing pressure. But sometimes the disease would appear to arise independently of compression, division, or disorganization; in a state the nature of which we cannot exactly ascertain, but the part is unfit for its functions. Lead will have this effect; and arsenic, together with various other poisons, will deprive a part of the power of continuing its functions, so that paralysis takes place without our being able to say what is the exact effect produced by these agents. Cold, likewise, will produce paralysis. If a part be exceedingly benumbed, it produces common paralysis for a longer or shorter time afterwards.

Extent of the Disease dependent on the part affected.—Although I am not aware that any difference would be discovered by the eye of an anatomist in examining the parts, yet the higher the source of the disease the more extensive are the effects; so that palsy of the lower part of the spinal marrow, compression, division, or disor-

ganization of the lower part of the spinal marrow, does not produce so extensive a paralysis as the same causes acting higher up; and if the cause be within the head, or in one of the hemispheres, or one of the thalami, nervorum opticorum, or one of the corpora striata, patients generally have paralysis of the upper part of the body. The cause of hemiplegia, therefore, is in the brain. If both sides of the brain be compressed to an intense degree, then you have apoplexy: apoplexy is evidently double hemiplegia. If the cause, on the other hand, be very slight pressure within the head, you have an exceedingly slight paralysis—merely a little numbness at the ends of the fingers. Many persons who have a little fulness of the head, will have a numbness at the end of the fingers, and tingling; and on bleeding them it will go off. You have every degree of paralysis according to the pressure. If the pressure be inconsiderable, you have no more than an affection of the nerves at the most opposite part of the brain.

HEMIPLEGIA.—I shall speak now of the particular forms of paralysis, and, in the first place, consider hemiplegia.

Symptoms.—In this disease, one half of the body, divided vertically, is paralysed. There is generally no loss of sight, no loss of smell, no loss of taste, nor of hearing; indeed there is one case put on record by Dr. Heberden, to which I before alluded, where an individual labouring under hemiplegia had an extraordinary acuteness of smell. But, in general, when you see paralysis down one half of the body, it is not perfect paralysis, in so far as the eye and the ear of that side, half of the nose, and the tongue, have their senses acutely enough. This form of paralysis very often is united with more or less delirium and phrenitis. It frequently attacks those who are fatuitous, or who labour under mania. It may be a mere hysterical affection, and soon recovered from. The other forms of paralysis may be hysterical; but hysteria, when accompanied by paralysis, is perhaps more frequently accompanied by hemiplegia than any other form.

Left side more frequently affected than the Right.—In regard to the side affected, Sir Gilbert Blane says, from some comparative observations made by him when physician at St. Thomas's Hospital, that he found three cases of hemiplegia on the left side for two on the right. I have not myself made any comparative observations.

Influence on the Pulse.—The pulse in the paralytic side is smaller than on the other.

A sequela of Apoplexy.—Hemiplegia is very commonly a sequela of apoplexy: when a fit of apoplexy is over, and paralysis is left, the form is usually hemiplegic. Generally, when hemiplegia occurs suddenly, there is a degree of apoplexy, an imperfect apoplectic fit, a degree of drowsiness and sleepiness. There may be no stertorous breathing, but the person generally gently loses himself for a time. I think hemiplegia more frequently commences in that way than any other; but where a person has a downright attack of fully formed apoplexy, the disease is very likely indeed to follow. Serres, the Frenchman to whom I formerly alluded, says, that of one hundred cases of apoplexy which he examined, seventy-nine of them were complicated with palsy; so frequently is apoplexy followed by palsy. Occasionally there is not only no real perfect apoplexy, but no sopor, no loss of the individual to himself for a time; but merely vertigo—a little confusion—and then, to his great astonishment, he finds an arm or a leg palsied.

Generally commences in bed.—An attack of this description more frequently, I think, occurs in bed than at any other time. Many persons who lose the use of one side suddenly, and who have no decided apoplectic attack, tell you that it happened in bed—that they woke in the morning, and found themselves in this situation, or that it occurred late at night or very early in the morning.

May commence gradually.—Occasionally, however, this form of the disease begins very slowly, in the fingers or in the toes, and creeps up; and occasionally, where it does begin suddenly, the person first loses the use of a leg or an arm, and then, an hour afterwards, or a day, or a week, he loses the other member of the side which was not previously affected.

General Effects.—From the voluntary muscles of the whole half the body being more or less deprived of the influence of the will, the face is usually drawn to the opposite side. From the muscles losing the influence of the nerves connected with the brain and spinal marrow, they are more or less powerless, and the muscles of the opposite side, which are in due connexion with the brain, get the better of them and master them completely, so that the face is drawn to the healthy side. The tongue, if it be drawn at all, is usually drawn to the same side, on account of the operation of the muscles. From the impaired state of the muscles of the mouth and tongue, the person does not swallow his saliva as soon as it is formed: we are always getting rid of it more or less insensibly, but, for want of this voluntary action, it amounts to a certain extent, and then runs out of the corner of the mouth, so that the patient slobbers. If the disease affect the mouth with any intensity,

from the affection of the muscles of the throat the voice is thick; you observe the patient's utterance is altered, he clips the king's English, as people say, and perhaps he can scarcely pronounce his words with sufficient distinctness to be understood. If the paralysis be perfect, the face and gait of the person at once shew the nature of the disease, without your asking a question. You observe that the mouth is drawn to one side, that the saliva runs out, the arm hangs useless, and, if the patient attempt to walk, he drags the affected limb in a sort of semicircular manner, bringing the ball of the great-toe for the most part in contact with the ground.

When the disease continues any time, the limbs waste, they become flabby to the feel, and they waste in size. The mind, too, generally suffers a little; the patient does not find his attention as good as before, nor his memory. His feelings are much affected, so that he is disposed to burst into tears without any evident external cause; and he is for the most part very peevish. I mentioned, when speaking of tetanus, that Sir Gilbert Blane informed me of a case accompanied by pleasurable twitches; and Dr. Cook, in his work on Nervous Diseases, mentions the case of a person who had been very captious, but after a fit of palsy he became the most good-natured person possible. The symptoms which occurred at the time of the fit, or preceded it—such as vertigo and headache—may continue afterwards, and may increase. You will find a great variety as to the effects of sense and motion in the affected part. Sometimes the person retains his feelings perfectly, but he loses all power of motion; and in other cases a person loses both, but it is a very rare thing indeed to see a loss of the sense of touch. You usually see motion impaired and destroyed, and sensation more or less so or not at all.

Frequently followed by Apoplexy.—This disease very frequently does not follow apoplexy, but is itself followed by apoplexy. You may well imagine that if the cause be in the brain, although, at first, it may be so inconsiderable as only to be just sufficient to produce hemiplegia, yet it may, if the morbid process go on, become more considerable, and at last be sufficient to produce apoplexy. While apoplexy sometimes leaves hemiplegia, hemiplegia is sometimes followed by apoplexy.

Progress of Amendment.—When the disease diminishes, I believe, for the most part, you will find the arm mends last—that, after the patient has begun to walk tolerably even with the affected limb, his arm long remains useless at his side, and sometimes it never recovers. There is a variety in this, but, more frequently than not, the arm recovers last, and very frequently it does not recover at all. Some persons recover both limbs at once, but if there be any difference it is in favour of the leg. While you will see in some persons complete recovery, you will see in others no recovery at all; and while some will get worse, others will remain stationary. Some persons will live ten, or perhaps fifteen, years in the same state. You will see another difference: they will mend up to a certain point, perhaps for a year or two, and then never advance again.

Liability to Recurrence.—This is a disease which may occur again and again; recurrences of it are frequently seen. It is a disease which I have seen several times in children, and I believe more frequently than not they recover from it.

Causes, and Morbid Appearances.—The cause of this particular form of paralysis is sometimes mere fulness about the head—fulness which is often transient, and therefore the disease is transient. Frequently there is found after death serous effusion, and that perhaps in a very inconsiderable quantity, even where the paralysis is very great; and perhaps the effusion is rather the effect of the morbid cause which induces the paralysis, than the cause of the paralysis itself. Effusion, however, is often the cause of paralysis. The most frequent state of the brain which I see, and therefore I suppose which other people see, is a softened state of some one spot. It is curious how small a portion is sometimes sufficient, when softened, to give rise to this disease. Occasionally the softening is very great, extending over a great part of one of the hemispheres, or the corpus callosum. This softening in many cases is clearly the result of inflammation. A chronic inflammation of the brain certainly often precedes this softened state, and very frequently it follows an acute inflammation of the brain. You will see persons seized with acute inflammation of the brain become paralytic, and afterwards find the brain more or less softened. You will sometimes see patients the subjects of this disease, and the disease will increase; they become delirious; perhaps have epileptic fits; the head is very hot. All the time they are delirious they are complaining of great pain of the head; and on opening them you find a portion of the brain softened, and around it you find the vessels red, and the red vessels even running through the softened spot. There can be no doubt in such a case as this that the disease is the result of inflammation. I have frequently noticed, and others have done the same—but I bear my testimony to the fact which is perhaps well enough established by others—that after paralysis has begun, although there is no great af-

fection of the head, the head will sometimes become affected. You see patients gradually complain of more and more pain, gradually have the head more and more hot, gradually they become more and more delirious, and then they will die. It appears as though at first there had only been softening enough to produce paralysis, only enough to produce inflammation, and the latter has then gone on to a far greater extent. It is said by some, but I do not know whether they have good reason for it, that when there is softness of the brain, it is analogous to the gangrene of other parts. This is supposed to be the case by Dr. Hooper, and others suppose the same thing; but whether it is the case I do not know. A part may be softened without our supposing it to be gangrenous —without there having been symptoms of gangrene; but it is the opinion of some that the softening is analogous to gangrene. There can be no question, that sometimes this softening of the brain is not inflammatory; for it is accompanied by paleness, not only in one spot, but all around. If there be inflammation, it shews itself in a very odd way, for the part is white all around. I can suppose that the brain may break up without inflammation, just as the coats of the stomach may sometimes be found perfectly pulpy, and perfectly pale.

Occasionally the paralysis has been induced in hemiplegia by a coagulum of blood, and this may be of all sizes. When paralysis comes on in a moment, without any previous inflammation, I imagine that in general there is an effusion of blood. Apoplexy may be the result of the effusion of blood; but when the apoplexy is over—when, I presume, that general state of congestion of the blood-vessels which was sufficient to produce apoplexy, has gone off, then there remains a clot just sufficient to produce hemiplegia; and you will recollect the process I mentioned as then taking place. The blood becomes absorbed, sometimes leaving a cavity, and sometimes not; the parts then all become contracted together; a cicatrix is formed, and around this spot the brain is generally softened. I mentioned this circumstance as taking place in apoplexy, and it also occurs in paralysis. The paralysis arises, I believe, from what remains after the clot has been absorbed. The brown dark-coloured substance which you saw the other day, and which I stated was taken from a hemiplegic patient, I should imagine was the remains of blood. The blood was nearly all absorbed, but the brown softened part left behind was quite sufficient to produce paralysis.

I may mention, that Dr. Abercrombie says a cyst will form round a clot of this kind even in a fortnight. Whether extravasated blood can be absorbed from a ventricle, if effused in any quantity, I do not know, but I should think not, because in most cases of that description the blood has lacerated the brain externally—has forced its way from the substance of the hemisphere into the ventricle. Four ounces of blood have been found in a cavity formed in the brain after paralysis. When the brain has been softened and produced hemiplegia, or only an aberration of the mental faculties, or fatuity rather, sometimes the vessels will suddenly give way, and then you have apoplexy—an effusion of blood suddenly takes place into the softened part. Softening is by some supposed to resemble *gangrena senilis*, that gangrene which takes place in the toes of old people, from ossification of the small vessels. Some will have it that it is not the result of inflammation, but of disease of the vessels which affects the circulation. I should imagine the truth to be, that it is the effect of different circumstances, just like every thing else. That inflammation will soften the brain there can be no doubt; and if the vessels be obstructed, so that the part is not nourished perfectly, it will become soft too.

Of course pressure from an abscess—pressure from various tumors formed upon the surface of the brain, whether they be encysted, carcinomatous, melanotic, or whatever else—may have this effect. It has sometimes been occasioned by the pressure of an exostosis, from the bone growing too much in one particular spot, so as to compress the brain. Excessive thickening of the membranes has given rise to the disease; white tumors, reddish tumors, scrofulous tumors, hydatids, and tumors of all descriptions, have been seen pressing upon the brain, in different parts, in this disease.

Disease occurs on the opposite side to the cause.—It is a well established fact, I think, that the disease occurs on the opposite side to that in which the cause of it resides. The observation of this fact is so universal—so many persons, who have extensive opportunities of examining patients, assert that they never met with an exception to it, that I cannot but think the few exceptions on record must have been mistakes. Serres says that he opened 170 cases of apoplexy united with hemiplegia, and in all those cases the affection was on the opposite side; he opened 47 cases of mere hemiplegia, and there the affection was on the opposite side; and that in about 150 cases of paralysis given to him, the results were the same. I never saw an exception to it, and many authors say the same. There are a few instances to the contrary on record, some of which I

have looked over, and to me they are any thing but satisfactory; because in some of these there could be no doubt but that other morbid appearances were found at the same time, so that in all probability a sufficient attention was not paid to the opposite side. In general the brain is sliced very rapidly, and morbid appearances in the brain, I know, are every day passed over.

On the other hand, when the spinal marrow suffers compression, or any cause sufficient to induce paralysis, the disease occurs on the same side.

Cause generally situated in the substance of the Brain.—The cause of hemiplegia is *generally* within the substance of the brain, and pressure of the brain usually produces apoplexy, so that I conceive we have a reason for apoplexy occurring so often first, and leaving hemiplegia behind. Apoplexy generally arises from a mere temporary fulness of the vessels of the head: it goes off, and then some injury occurs at one particular spot, and is sufficient to produce hemiplegia. Local pressure, however, on the surface of the brain may likewise produce the disease; and local pressure on any part of the brain, if it be very intense, will produce apoplexy, because pressure in any one spot of the brain, if it be intense, will necessarily compress the whole.

Loss of Verbal Memory.—A very curious symptom is sometimes observed with hemiplegia, and that is a loss of verbal memory. This is quite distinct from a loss of the power of utterance. Persons, in general, in this disease do not speak well, because they have not full power over the voluntary muscles of articulation; but sometimes, if they can speak well, they have not a proper word in their mind, and they cannot make themselves understood. Some forget entirely the meaning of words, some forget entirely the meaning only of names, and some do not forget these *entirely*, but the moment the proper word is mentioned they say "right, thank you." They know it directly. This affection of the mind occurs sometimes without any hemiplegia, and sometimes for a period, and then hemiplegia supervenes. Some have an abundance of words, but do not know their proper meaning; they distribute them about very incorrectly, so as not to express their wishes. Others have only a few words, and with these they endeavour to say every thing. Dr. Pritchard, in his work on Diseases of the Nervous System, to which I have so often referred, mentions the case of a lady who forgot the names of all persons, and another who forgot the names of some things, and who likewise forgot that she had ever been married. Dr. Currie mentions the case of a man who forgot the Hebrew language only out of several with which he was acquainted. Mr. Abernethy used to mention the case of a man who, after an injury of the head, though he knew English very well, could speak nothing but French: he had been equally acquainted with both languages, but after the injury he had sustained he could only speak French: he also thought he was only sixteen years of age. Dr. Rush mentions the case of a lady who forgot her English, and spoke nothing but French for a month. A French writer on hemiplegia, mentions a case of this disease in which, after the stupor ushering it in went off, the patient recollected neither persons nor words, and when he recovered the words again, he forgot their meaning. He lost all his language, could not utter a single word, and at last, when he could, he forgot their meaning, and he preferred Latin to his own native language, which was German. He could read any thing a few words at a time, and he wrote both Latin and English in elegant characters, but without knowing the meaning of a word. The end of the case was, he died apoplectic. Some persons, however, forget only proper names. Sir Alexander Crichton mentions the case of an attorney, who in his 70th year married a young miss, and being very excitable, he also every evening saw his mistress, so that between both his ribs he must have been in a high state of excitement. Under all this, not as a consequence, but as consequent upon the excitement of his brain, he was seized with vertigo and insensibility, and these were followed by a loss of memory; so that instead of asking for bread he asked for his boots, and if they were brought him, as he wanted something to eat, he was very angry, but he still kept asking for boots or shoes instead of bread. Instead of asking for a tumbler, he inquired for a chamber-pot, and when he wanted a chamber-pot he asked for a tumbler or dish, and yet he was conscious he was wrong, and recognized the right words when they were spoken by others, and then pronounced them by imitation. Dr. Abercrombie mentions having seen a case in which the same wrong word was always used in the same wrong way. Whenever the patient missed the name—the name of a particular object, he applied the same incorrect word, whatever it was, to the same thing. In the Pyschological Magazine, which is quoted by Sir Alexander Crichton, in his work on Disorders of the Mind, a case is mentioned where a person, after much tiresome business, one morning on attempting to write a receipt, could not write

more than the two first words. He wrote on slowly letter after letter in the most deliberate manner. He found that he spoke words different from what he meant; he saw that he was wrong, but he could not set himself right; and instead of writing, "Received fifty dollars for half a year's rent," he wrote, "Received fifty dollars through the salvation of the Bible." This state lasted an hour or two, and then nothing of it remained. I have seen two instances of this description. The one occurred in a lady who was not hemiplegic, but said she had a violent pain above each eye, and as long as that lasted she could not tell the name of any thing, but when the name was mentioned she knew it. This continued for some hours, and then the pain went off, and she knew every thing as well as before. After a short time a second attack occurred; she had been taking digitalis. I know an instance of a medical man at this moment, who makes a dead pause and says, "I cannot tell the word; I want to tell you what is the name of such a thing." It will occur every thirty or forty words. Dr. Currie, formerly of Guy's Hospital, says that he knew one person who began his words in English, and ended them in Latin, during an attack of this description. There was a Welchman at St. Thomas's Hospital, twenty years ago—before my time—who had forgot his native language; but while suffering from an injury of the head he spoke nothing but Welch, and then when he recovered he forgot it entirely, and talked only English. Dr. Rush mentions an instance of a student who through a fever lost his Latin, and began learning it again, when one day it suddenly returned, just as the power over paralysed parts of the body will occasionally do. He mentions that a French Countess, during the excitement of fever, spoke the language of Lower Brittany, which she had learned when young. Dr. Abercrombie, one of the most recent writers, mentions a case in which, after fever, an individual forgot all names; and after learning the names, he was taught to read, and began his Latin; and after a little progress, suddenly he had a strong sensation in his head; he applied his hand to it, and said, that he found all he had been learning he knew some time before. Now these things are very curious; they occur under different circumstances, but they are no doubt of the nature of paralysis, and very frequently they are united with it.

ON INVAGINATION OF THE INTESTINES.

By Benjamin Phillips, Esq.

Read to the Harveian Society, on January the 21st, 1833.

To treat this subject in such a manner as its importance demands, would require a number of observations, made with an exactitude, and a number of post-mortem examinations, conducted with a minuteness and detailed with an accuracy, which have not yet been applied to this important class of diseases.

In the absence of the assistance which would be thus afforded me, the ground upon which I stand is difficult, the task which I have undertaken may be beyond my power; but as trifles make the sum of human things, so will my contribution of facts assist in constituting a foundation upon which the history of the disease may some day be reared.

Observations accurately, honestly, and judiciously made, are in all sciences imperishable; opinions and theories may, and daily do, change, while the facts upon which they are based remain. Mine then, such as they are, will perhaps serve as a portion of the materials necessary for the history of a dreadful disease, which is variable in its degrees, obscure in its characteristic symptoms, and capable of producing a violent death, without our being able with any certitude to establish its existence.

Only two cases of invagination of the intestines have been brought under my immediate observation, and these I shall shortly detail.

Case I.—The first case which occurred to me was that of a man of 28, admitted into the hospital on the 21st of June, 1829. His frame was emaciated, and bore the appearance of his having undergone much suffering. He had lived in a district where miasmatic diseases were frequent, and had on many occasions suffered from intermittent fever, for the cure of which purgatives and preparations of bark were employed. He had suffered occasionally for weeks from some obscure affection of the digestive system, presenting symptoms of subacute irritation of the stomach. When he came into the hospital the symptoms were—emaciation, yellowness of the skin, tongue moist, with a thick white

coat on the centre; edges not very red, neither were the papillæ much developed. The mucous membrane of the fauces was red and relaxed; abdomen hard and tympanitic, but not at all painful upon pressure; frequent nausea, but rarely any rejection of the ingesta; thirst considerable; alvine evacuations sometimes frequent and fluid, at other times natural. A constant tendency to sleep had been for some time manifested.

22d.—The impression to-day is, that there is some chronic inflammation of the stomach.

Eighteen leeches to the epigastrium.

23d.—Symptoms unchanged; continual nausea.

24th, 25th.—More anxiety; more nausea; greenish alvine evacuations, which were very fœtid; pulse small, weak, 92.

Haustus effervescens, cum Tinct. Opii, gt. j. quâque horâ.

Nausea relieved by the effervescing mixture; diarrhœa continues; stools mixed with blood. A lavement of starch and opium was prescribed, only a small portion of which passed up.

The following day all the symptoms were aggravated. In passing the hand over the abdomen, we found in the left iliac fossa an elongated mass, which had become more evident to the touch in consequence of there being no corresponding tumor on the opposite side. As to the nature of this tumor, doubt still existed whether or not it was fæcal matter.

27th.—Diarrhœa increased; stools almost incessant. On the evening of this day the patient died, with all the symptoms of some profound but rather obscure visceral inflammation.

On the 28th the post-mortem examination was made. The exterior presented nothing remarkable, except the emaciation and the yellow tint. As there was no particular indication of disease in the cerebro-spinal system, it was not examined. The thoracic viscera were healthy. The abdomen was the grand focus of disease; here were found evidences of acute peritonitis, with red points, and some thin laminæ of false membrane, which attached a portion of the colon to the abdominal parietes. The extravasation was inconsiderable; the tympanitic appearance had been produced by the immense gaseous distention of the small intestines.

It was intended that the examination of the small intestines should be commenced at the cœcum, but this organ was not to be found, neither was the ascending colon. In searching for these organs we found a large elongated tumor in the left iliac fossa, which occupied the descending colon, and we immediately saw that this was a case of invagination.

The external character of the tumor was as follows: — The cœcum, the ascending portion of the colon, and the right half of the transverse portion of the colon, did not appear to be present—at least they were not to be found in their usual places; so that the larger intestine did not seem to commence until we arrived at the arch of the colon. The tumor presented a length of eleven inches, and a diameter of between four and five; it was hard, round, and resistant, and terminated abruptly in the left iliac fossa.

On minutely examining this tumor, it was found to be produced by an invagination of the terminating portion of the ileum, and the greater part of the colon, which were impacted in the sigmoid flexure of the latter organ. The tumor, when cut through, exhibited three intestinal parietes, before we arrived at the centre of the mass; the first formed by the descending colon, which had retained its usual position and direction; the second layer formed by the ascending and transverse colon, which were found firmly impacted in the first portion; so that the cœcum, which formed the greater part of the first portion, and which was transported to the sigmoid flexure of the colon, was turned upon itself, forming a conoid termination to the invagination. At the summit of this conoid termination we found two openings, one at the left, which led into the cavity of the appendix vermiformis; the other at the right, leading into the small intestine. This latter portion formed the third of those parietes to which I have just alluded, and was contained within the cœcum.

On the external face of the first of those parietes, about the middle of the descending colon, we found two large gangrenous perforations, one almost as large as the palm of the hand, the other less extensive; these disorganizations

comprised the greater portion of the three parietes. In passing from the circumference to the centre of this mass, we found between the first and second layers two mucous membranes in contact with each other, a blackish sanguinolent fluid alone separating the one from the other. Between the second and third we found two serous membranes, upon which were deposited accidental membranes, by means of which they were adherent the one with the other. After passing through the third, we got into the cavity of the doubly incarcerated small intestine, the parietes of which were almost entirely destroyed for the extent of four inches.

After separating the adherences, which were very firm, it was not difficult to restore the intestines to their natural situations. In the other portions of the canal the following alterations were presented. Stomach large, and containing a quantity of a greenish bilious fluid; the mucous membrane of the organ appeared to be macerated in, and tinged by it; in consistence this membrane was much softened, not being much superior to mucus. The small intestine was much distended by gas; at some inches above the invagination its capacity was greatly increased; it contained much fæcal matter, as well as a considerable quantity of a yellowish fluid, and here and there it presented ulcerations. The portion of colon situated below the invagination was narrow and contracted, containing a sanguinolent mucous fluid; the other viscera were in their natural state.

Here then we had old gastric and intestinal derangements, hardness of the abdomen, tension of the muscles which formed the parietes of this cavity, and a strange unusual projection in the left iliac fossa, as prominent and well-marked symptoms. A question of great importance interrupts us at this point—had this invagination existed long? or did it make its appearance after the man had become a patient in the hospital? I do not know that we can answer in the affirmative either of these questions. The extent of the displacements, and the resistance offered by the new adherences, would induce a belief that the disease had been produced slowly, and that its origin should be dated at a period considerably anterior to his death; but it is at the same time certain, that the disease had not proceeded to such an extent as to prevent the passage of any matter until a very short time before death, so that the inclination of opinion would be, I think, in favour of a recent origin. Still this disorder is sometimes unaccompanied by any marked symptoms, for we find it existing in subjects who, during life, exhibited neither pain, constipation, nor vomiting, nor indeed any of the symptoms which characterise intus-susception, and where no trace of inflammation, adhesion, or constriction, was presented.

In such cases the disease appears to be produced by the vermicular action of the intestine alone; and I am disposed to believe that it is produced in the last moments of life. What strengthens in my mind this opinion is, that we very frequently see that the mere exposure of the intestinal cavity of an animal to the atmosphere will produce the phenomenon in two or three points simultaneously, but generally in the larger intestine.

Case II.—In the second patient, aged 31, an intestinal derangement extremely similar to that of the last patient, had existed for many months, and a consequent emaciation had been produced. There was, however, in this case, an acute pain present along the whole of the transverse and descending colon, and extending to the anus. Pressure produced pain, and the symptoms of peritonitis were more marked than in the former case. The same resistant, remarkable tumefaction, existed in the sigmoid flexure of the colon; so that some persons who saw the patient attributed this tumefaction to an accumulation of fæcal matter; the same depression existed on the right side. The symptoms preceding death, and their sequence, were similar in kind, but greater in degree than in the last case.

In the examination made after death, the following were the appearances:—Emaciation, yellow tint of the skin, and tympanitic state of the abdomen; the cephalic and thoracic viscera were in their natural state. The peritoneum was uniformly inflamed, and many adhesions were produced by the deposition of false membrane, which united the convolutions to each other, and to the abdominal parietes. The cæcum and ascending colon were in this case not visible; their absence produced at first a very odd appearance. In the left iliac fossa was a cylindrical tumor, about ten

inches in length—in volume similar to the preceding; the inferior extremity presented a conoid form, and a dark brown colour. This extremity was formed by the mucous membrane of the cœcum invaginated in the sigmoid flexure of the colon, and making a considerable projection in the left iliac fossa. On a minute examination we found that two inches of the small intestine had penetrated into the cœcum; this, turned upon itself, was introduced into the ascending colon, which in turn had passed into the transverse colon; and all these parts thus disposed had reached the left iliac fossa. Here too there existed the same relation as to surface; and upon separating these parts we found three perforations, one at the sigmoid flexure of the colon, sufficiently large to admit of the projection of the mucous membrane of the cœcum into the cavity of the peritoneum; the two others were less considerable, and subjacent—one situated near the middle of the transverse colon, and the other in the ascending colon. All the membranes were blackened and thickened, and the adhesions were considerable.

The portion of small intestine immediately superior to the invagination, contained a quantity of yellowish matter; the stomach contained a greenish liquid, similar to that found in the last case; the other viscera were not diseased, neither was there much fluid in the cavity of the peritoneum.

Although we find in authors a number of remarks on, and a number of cases of invagination of the intestines, yet the greater number of them are either so vaguely described, or the circumstances attendant on them are so marvellous, that we can make little use of them in a paper like the present. Yet there are a few which are thrown out in bold relief from their compeers, and among these stand those of Alexander Monro; they are described with his wonted accuracy in his Pathological Anatomy of the Alimentary Canal. Among these is the case of an infant of four months, who had lately been inoculated, and to whom he was called on the 23d of January, 1793. He learned from the infant's nurse that it had had during the morning an abundant evacuation of fæcal matter, which was passed suddenly, but after great efforts. The child appeared to be suffering, and cried much. After some hours the pains were relieved, and fresh desires to go to stool were manifested; but in spite of its efforts, only some bloody mucus was evacuated.

Purgatives and injections were prescribed without any good result. Monro remarked that these lavements did not pass far, and thought that an intus-susception existed. This idea was strengthened in his mind by the fact, that the strongest purgatives were without effect. The very small quantity of fluid which penetrated per anum further induced him to conclude, that the affection could not be far removed from the anus. He made many useless attempts to replace the intestines, by forcing into the tube emollient injections. The resistance, however, could not be vanquished, and the child died after sixty-eight hours of suffering.

At the post-mortem inspection a very extensive invagination was found, with tumefaction and thickening of the intestine. The termination of the ileum and the cœcum had been pushed into the ascending colon; this had been pushed into the arch of the colon, and the latter into the rectum, so that the right half of the colon, with the cœcum, and the termination of the ileum, were found in the left moiety of that portion of the digestive tube. A representation of this case is given in his work.

There is another case described by Mr. Thomas Blizard, in the Medico-Chirurgical Transactions for 1815; it was that of an infant of five months, who was suddenly seized with vomiting, accompanied by constipation. The next day blood, nearly pure, was passed by stool; the abdomen became tympanitic, and, on passing the hand over it, a tumor the size of an egg was found on the left side. On the third day hiccup was manifested, which continued until its death, which occurred on the fifth day.

On inspection after death, the tumor on the left side was found to be an intus-susception. About six inches of the ileum, the cœcum with its appendix, the ascending and the transverse colon, were contained in the sigmoid flexure of the colon and the rectum. All were in a state of strangulation, and black.

Here then are four well-marked cases, presenting such a uniformity in their

general character, that, in the remarks I am about to offer, I shall speak of them collectively.

With respect to a definition of this disease, we may say that it is an introduction of a portion of intestine into the cavity of another portion of intestine, which is usually situated nearer to the anus than the first. We may exactly imitate the state which is produced, by passing back through itself the half of the finger of a glove.

The characters of the disease are as follow:—There must be three parietes, or three layers, superposed the one upon the other; first a central, which is continuous with the portion of intestine which is above the invagination; second a median, which is properly speaking the invagination; and the third, or exterior, which receives into its cavity the other two portions. At the centre of the invagination we have a mucous membrane, then two serous in apposition the one with the other, between which we may find either effusion or adherences; after these we get two mucous surfaces applied the one against the other.

To attain a complete knowledge of these diseases, it is absolutely necessary to study with care these dispositions; they explain to a certain extent how the invaginated portion of intestine, having become gangrenous, may be separated from that portion which contained it, without being succeeded by an immediate death. We see that between the first and second layers which form the invagination, two serous surfaces are in contact; these surfaces have a great tendency to form adhesions, the one with the other, and thus to preserve the continuity of the canal, even when large portions of gangrened intestines have passed away by stool. This law of nature—the tendency which serous surfaces possess to form adhesions—was happily seized by Jobert, who has founded upon it a new operation, applicable to cases where a solution of continuity has been produced in the intestinal tube, the principle being merely to place in contact the serous surfaces of the injured intestine.

The situation in which invaginations are usually found comes next in order in our inquiry. Although they may be found in almost any portion of the intestinal tube, yet from its great mobility, the small intestine appears particularly exposed to the affection. The quantity of intestine implicated is not less variable; some cases are mentioned where the invagination included the duodenum and the whole of the small intestine. It occurs too at any age, and infants at the breast indeed are particularly subject to it, most probably in consequence of the frequent intestinal derangements which they suffer, in consequence of worms, dentition, and other causes. In the Hôpital des Enfans, Billard has particularly noted the frequency of the disease.

Invaginations occurring in the small intestine are not extensive, and appear to possess little gravity, and there would be much difficulty in affixing to them characteristic symptoms, for their existence appears to have little influence on the state of the functions. It is even probable that they are produced under various circumstances, without the knowledge of the individual affected, in health as well as in disease; and that they disappear with equal facility.

The irritation produced in the intestine by many mineral poisons of an acrid nature, immediately occasions the disease; and in these cases, if we examine the animal, we find the effect produced in two or three portions of the small intestine at the same moment. It is therefore extremely probable that irritation of any other kind may excite a like disease in the human being.

But when the large intestines are affected, the disorder is not dissipated with the same facility, for the colon does not possess the same mobility; its power of contracting upon its contents is more energetic, and each contraction serves to increase the intensity of this affection; and as we might have expected, the greater part of the cases of fatal invagination of which we read, have occurred in the larger intestines.

The number of invaginations is variable; in a few cases five or six have been detected in the small intestines; but the invaginations of the colon, those which commonly produce fatal results, are usually unique.

Invaginations whenever and wherever they occur, are not primitive diseases, but ordinarily a consequence of other affections. We know that the intestinal tube possesses a peristaltic action, which is ordinarily, perhaps always, exercised from the stomach towards the anus—a movement the object

of which is, to submit the contained alimentary matter to the action of the absorbent vessels, and to reject that portion which is unfit for nutrition.

In a state of health this movement is feeble, but in some states of disease, dependent on certain kinds of irritation existing in the mucous membrane of the intestinal tube, it becomes energetic and irregular; and it is in these cases that invagination is produced.

If each portion of the muscular tissue of the canal were contracted uniformly, this disease could scarcely occur; but as, under irritation, their characteristic is the irregularity of these contractions, we have little difficulty in conceiving that there will be a tendency to the insinuation of the contracted portion into that which is at rest.

I think, then, I may lay it down as a principle, that all irritations of the mucous membrane of the intestines, produced either by the action of violent purgatives frequently administered, or by any other cause, excite partial and exaggerated action in the digestive tube, and may occasion invaginations: and, in the two cases I have described, purgatives were frequently administered.

As far as regards the symptoms of this disease, I feel some difficulty in describing them so as to give any thing like a marked individual character to the disease. The conclusion to which I have come with respect to the small intestines, is, that invaginations here are scarcely ever mortal, and are rarely placed under medical care; but in the larger intestine the case is different, and I believe, that in the latter there are certain symptoms by which we may be more or less guided. I think that an invagination of small extent may exist for a short time without occasioning very urgent symptoms, and may give us a certain number of data by which we may be able to form a diagnosis of the disease.

We shall find embarrassment in the passages, from place to place, of the gas which is always produced in the intestines, but which, in this disease, is much more considerable in quantity than in a state of health; fæcal matter is arrested, nausea is produced, hiccup, vomiting, and obstinate constipation, with frequent desire to go to stool, also occur. The patient suffers much pain, which is exasperated by the slightest errors in regimen; digestion is imperfectly performed, and the patient is constantly annoyed by flatulent eructations; he loses flesh, and his countenance takes that particular character which so frequently marks abdominal disease.

These symptoms are particularly marked in the two cases I have detailed.

It is true that, to a certain extent, these symptoms are common to some other abdominal affections—such as an organic contraction of a portion of the digestive tube, either in consequence of the development of schirrus, or a chronic follicular enteritis.

In such a case, then, how are we to determine upon the existence of the particular disease? There is one mode by which it may be done, but it is necessary to use much attention when we adopt it. I do not allude to the local pain and tenderness, because these can have little value unless joined to others which are more distinctive; and these others were present in the two cases I have described, as well as in that of Mr. Thomas Blizard.

The displacement which had occurred in the intestines had given a peculiar and remarkable character to the abdomen; and this is, I believe, a decided and usual symptom of this disease.

The absence of those organs which are naturally found on the right side of the abdomen, had occasioned there a marked depression, which was sensible to the eye, and could not be mistaken on the application of the hand; while on the left side we might detect, even with the eye, a considerable elongated tumor, produced by the mass of invaginated intestine. Here, then, is a character which, joined to the other general symptoms, renders our diagnosis of this disease much more certain than, in the absence of this symptom, it could be. The sense of touch ought decidedly to discover a marked difference between the two flanks. It is true that even this symptom may give rise to error; an accumulation of fæcal matter in the sigmoid flexure of the colon, or a tumefaction of the spleen, may occasion an elongated tumor on the left side, but it cannot, at the same time, give us a sensible depression on the right side; and the symptoms in those two affections I have mentioned would not be very similar to those of invagination.

The [illegible] characters, very

serious character, we may add two others: the one is an invariable obstacle to the passage of injections; the other, that the strongest purgatives are entirely ineffective. If these several characters be present, the presumption may be strong; indeed, quite as strong as that which can exist in the diagnosis of almost any disease (but, I am free to confess, not unerring) that invagination exists. It is, however, a presumption sufficiently strong to justify us in taking any measures for relief which the necessity of the case may demand.

In the recommendation of a mode of treatment of this disease, I feel some difficulty. Much has been written on the subject, and the uniform conclusion of each discussion has been, that the resources of art are entirely powerless in the treatment of invaginations generally.

This is the conclusion of Monro, of Baillie, of Hunter, of Whately, and of Langstaff; each of whom has very fully considered the subject, but their details have not been uniform; and in no science should contradictory evidence be so narrowly weighed as in medicine.

Beyond all other sciences, medicine offers a great number of variable opinions.

An opinion, or a system, has for a time broken down every barrier, and become widely prevalent; but soon new ideas and opposite systems have arisen, and changed the aspect of our acquired knowledge. Similar revolutions may, and no doubt will, succeed without number; for our decisions are not irrevocable, and our principles will not acquire stability and certitude until many fundamental truths shall be well established. Then only, like the physical sciences, will medicine advance with a forward and firm step—slow, no doubt, but never retrograde.

With respect to the use of enemas forced into the intestine, Monro gave a hesitating opinion; the other persons of whom I have spoken believe them to be useless. With respect to the use of mercury taken into the stomach, it is equally abandoned.

The object of either of these systems of treatment is to force, mechanically, the contained out of the containing intestine. In the consideration of this subject we meet a difficulty in our way, for the question occurs, how should this force be applied? The rarity of the passage of an inferior [illegible] tion of intestine would induce us, supposing it were necessary to create a rule, to say that the force should be from below upwards. But I apprehend that here no such rule is necessary; for, by the time the symptoms afford us any thing like conclusive evidence as to the nature of the disease, such remedies would be worse than useless—they would merely aggravate the affection.

By the time the symptoms are marked, tumefaction and thickening are so great as (even in the absence of adhesion) to prevent the success of any such force, however considerable it might be; but when to these we add those invariable attendants upon the disease, firm adhesions, no more need be said to dissuade any one from the use of means which, when carried to any considerable extent (without which it is utterly useless), cannot fail to produce great aggravations in the sufferings attendant upon the disease.

The next question which arises in the consideration of a mode of treating this disease, is one of great difficulty: it is the question of gastrotomy.

The object of gastrotomy would be threefold: first, to enable us to remove the invaginated portion from its receptacle, by drawing it out forcibly, which would imply that no considerable adhesions or constriction existed; secondly, to remove the invaginated portion entirely, by means of the knife, and to bring the serous surfaces of the two free portions into intimate contact, by passing the superior to a certain distance into the inferior portion of intestine, for the purpose of procuring adhesion and perfect continuity in the intestinal tube; thirdly, to bring both serous surfaces into contact with the abdominal parietes, and by this means procure adhesion and form an artificial anus; thus securing the patient against the possibility of an extravasation of fæcal matter into the peritoneal cavity.

In a case of such importance as the present, it behoves us to be extremely careful in coming to any decision. I have, therefore, collected together, indiscriminately, a large number of cases of this disease, for the purpose of forming an estimate of the proportion of deaths which have occurred in persons suffering from it. Of seventy-three authentic cases of this disease, nature has effected a cure of two by producing a separation of the invaginated portion;

in three others a similar separation occurred, but life was not saved. Here, then, is a proportion of such a character as to justify me in stating that the disease is almost uniformly fatal in its termination.

If this be the case, any mode by which a fair prospect of relief may be obtained (provided experience demonstrated that it was less frequently fatal than the disease when left to itself) should at once be resorted to.

Gastrotomy is not in itself a fatal operation. I have collected three hundred and thirty-two cases in which the cavity of the abdomen has been placed in free communication with the exterior; and of these, death has been produced in forty-four only: so that, unless any other circumstance be present to increase its fatality, this operation should not be held in so much terror as a means of relief in this and other similar diseases.

The operation of gastrotomy, for the purpose of relieving invagination, was performed by Bonnet upon a Baronne de Lanté, and by Nuck; both of which are said to have been successful. Whether or not Praxagoras performed the operation, appears doubtful; but he clearly describes it. But in these cases, the operation of gastrotomy was performed simply for the purpose of applying a sufficient force to draw the contained from the containing portion of intestine.

Some years since, Dupuytren performed a similar operation, but it was unsuccessful; yet I think this may be attributable to the following circumstance. Considerable pain was felt at a point in the left flank, upon which point he wished to make the incision. The medical men with whom he consulted were averse to this, and he was obliged to make his incision in the linea alba; and so much difficulty was experienced in getting hold of the intestine, that acute inflammation was developed in the peritoneum, and the patient died.

Supposing, then, that in cases of intus-susception we may be justified in cutting into the abdomen; should we remove the invaginated portion of intestine, unite the free ends by passing one portion into the other, and thereby establish the continuity of the tube; or should we bring the invaginated portion through our incision, effect an adherence between the parietal and enteric portion of peritoneum, remove the diseased portion, and form an artificial anus?

I incline to the latter method; for if we bring the gangrened portion to the orifice, false membranes will be developed, will be organized with much rapidity, and will frequently be found perfectly solid at the end of twenty-four hours. Little anxiety need be felt about securing the intestine at the orifice, for, when once brought there, it will be maintained in the situation by the contraction of the abdominal muscles and the diaphragm; but we should still employ the suture as a measure of precaution.

In gangrened intestine, when brought into contact with the external orifice, for the purpose of forming an artificial anus, I have collected, indiscriminately, forty-two cases treated after the manner of Dupuytren; of these, three only were mortal. Here, then, is a proportion which, I submit, entirely justifies the performance of such an operation in the cure of invaginations of the intestine.

If we employ the mode of Randhor, which is practised by passing the superior through the inferior free portion of intestine, we shall employ a method which, with perhaps one solitary exception, has uniformly failed; for here we have a mucous and serous surface in contact, and the chances of union in these cases are very remote.

The change proposed by Lembert and Jobert, is to effect the perfect apposition of two serous surfaces; which certainly gives us a greater chance of success than that proposed by Randhor: but I cannot hide from myself the conviction that this operation requires for its performance great tact and experience in the performance, and even then is surrounded with much difficulty. It is effected by turning down the edges of the inferior portion, by which we are certain of securing a contact. I shall not stop here to inquire whether priority of suggestion of this operation attaches to Faure, to Denans, to Lembert, or to Jobert.

For any inaccuracies contained in this paper, either in its style or the arrangement of its matter, I might urge some circumstances in arrest of judgment. It has been put together at intervals, when I was subjected to much interruption and anxiety, in consequence of

my canvass for the vacant office at the Middlesex Hospital.

Every one, however, will form his own opinion as to the best mode of treatment of this disease; he will give to my suggestions any weight which may appear fairly to attach to them, and no more. If they occupy the attention of any one to such an extent as to induce him to consider them more at length—if, after having done so, he becomes convinced of their rationality—and if, fortified with that conviction, he apply them, and with success, to practice—the end I had in view in the composition of this paper will be entirely accomplished, and any of its inaccuracies will be, in my mind, completely redeemed.

DISLOCATION OF THE PATELLA.

To the Editor of the Medical Gazette.

SIR,

IN your Gazette of the 9th inst. is the report of a singular case of dislocated patella brought to St. Bartholomew's Hospital. The following case occurred in my practice about a month back, and from its resemblance, in some points, to the one related in your periodical, I send it, without comment, to publish or not, as you may determine.

Richard Gilbert, aged 35, by trade a stockinner, was brought to the hospital of St. Mary's parish workhouse of this town, having dislocated the left patella by falling over another man's leg, with whom he was playing. The attending surgeon made many well-directed attempts to reduce it, without success, it was so firmly fixed in its new situation. On my arrival I found the patella resting with its external margin in the centre of the articulating pulley of the femur; its inferior or posterior surface directed towards the opposite limb, and its superior or anterior one outwards. I attempted its reduction by laying the patient on his back, with the trunk elevated, and raising the limb upon the pelvis, with the leg resting on the shoulder of an assistant; and with all my force I endeavoured to bring the internal margin of the patella down to its proper situation, but without effect; for although I succeeded in depressing this projecting margin in a slight degree, it immediately returned to its abnormal position on the force being removed. These efforts were repeated, at the same time forcibly flexing the knee-joint, but with no better success. Foiled by repeated attempts of this kind, I placed the limb on the bed, and with my whole strength and weight bore inwards upon the projecting bone, but still unsuccessfully. I then requested my patient to let his limb lie quietly, without making any muscular effort; and placing each hand laterally and posteriorly upon the knee-joint, with my thumbs resting upon the tibial extremity of the patella, by gentle pressure in an upward direction towards the trunk of the body, at the same time depressing a little this extremity, so as to cause a slight circular motion of the bone, after the manner of a wheel, it very readily regained its natural position; although the motion communicated must necessarily have been very trifling, considering the tense state of the tibial ligament.

Your correspondent having very accurately described the rarity of this dislocation, and quoted authorities for its *almost impossibility*, I shall merely state, in opposition somewhat to his opinion, that my patient was totally free from any deformity, and exceedingly well proportioned.

HENRY OLDKNOW.

Nottingham, Feb. 17, 1833.

FUNGOID DISEASE OF THE CRANIUM.

To the Editor of the Medical Gazette.

SIR,

SHOULD you consider the following case, with the accompanying drawings*, calculated to afford any interest to your numerous readers, probably you will oblige me by giving it insertion in the pages of your valuable journal.

I am, sir,
Your obedient servant,
W. DAVIES, Surgeon,

——, Surrey, Feb. 11th, 1833.

On the 16th day of March, 1832, John Banbury, footman in a gentleman's family, aged 23 years, was admitted into Guy's Hospital under the care of Mr.

* We have only availed ourselves of one of them.—E. G.

Morgan. He was of a sallow complexion, but had previously enjoyed good health. Never had any injury of the head inflicted—except a slight scalp wound fifteen years ago.

Five months since, he first felt a tenderness over the inferior posterior angle of the left parietal bone, and had occasional shiverings, yet was free from headache, and enjoyed good general health. Three months since, a small moveable tumor appeared over the parietal bone, causing a sharp pain.

Two months ago, when of the size of a walnut, the tumor was opened, and some bloody serum escaped from it. This operation has since been twice repeated; and on the last occasion the bone was felt bare by means of a probe.

On admission to the hospital there was a tumor above and behind the left ear, of the size of half an orange, with a broad base, and the surface divided into three lobulated cysts, one of them more prominent, red, and tender than the others. The tumor was very elastic, and at times was attended by much aching pain—so much so, indeed, as to prevent sleep. A slight deafness was experienced, and the sight of the left eye was occasionally impaired.

On the 26th (ten days after admission to the hospital) the dimness of sight and pain in the head having increased, leeches were applied to the tumor with much relief of the symptoms. A small quantity of opium was given, which procured some sleep.

April 3d.—The surface was much inflamed and tender.

12th.—The disease extended, so as to reach the upper part of the ear, and raise it from the scalp; less pain was felt, but an increase of deafness.

14th.—Ulceration was completed in the night, and about half a pint of bloody serum escaped from a small opening; several cervical glands enlarged.

May 10th.—The tumor had at this time gained a considerable size, nearly to that of half the head, with the base considerably extended.

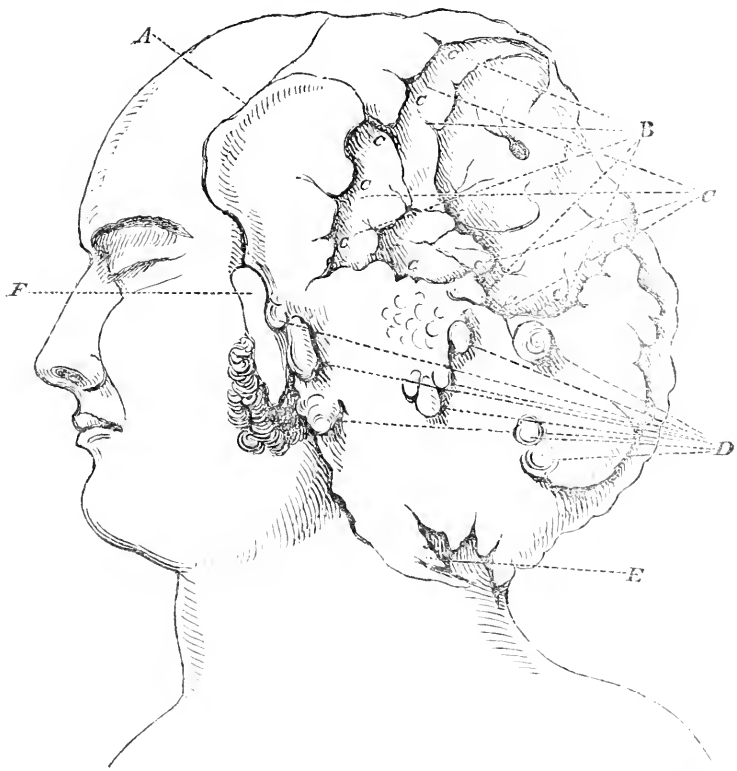
June.—The patient left the hospital, as his parents were anxious that he should be brought home for the purpose of placing him in the hands of a quack. When on his journey, a large abscess burst, (in consequence, as they suppose, of the jolting of the waggon) and from which a great quantity of highly-offensive fluid escaped, mixed with blood. He had previously suffered a good deal of pain; but as soon as the discharge took place, he felt immediate relief. The quack used powerful escharotics, the application of which always gave him excruciating pain, and greatly accelerated the ulceration. After the dismissal of the quack, nothing more was employed than anodynes and soothing applications to the tumor, with an occasional aperient. Anasarcous swellings came on about a week after leaving the hospital, which continued with him. His appetite was generally very good, sometimes ravenously so. Urine for the most part scanty. Troubled with faintings, especially on raising his head from the pillow if not well supported. The sight of the left eye became more impaired, particularly when the head was raised, but the deafness somewhat increased. He remained sensible to the period of his death, and would frequently converse with those around him. The discharge for two or three weeks previous to his death was very great, of a dark colour, mixed with bits of bone, and exceedingly offensive. As the ulceration spread, the vessels of the head were laid open, and he died (no doubt from hæmorrhage) on the morning of the 22d August, 1832.

The inferior boundary of the tumor terminated at the lower edge of the occiput, and its lower portion hung loose over the neck.

The tumor measured from the os frontis of the left side to the os parietale of the right side, eighteen inches; and from the centre of the head to the bottom of the tumor, ten inches; its weight was estimated at about six pounds.

No internal post-mortem examination took place.

[See in the next page an engraving and description of the tumor.]



A. The superior boundary of the tumor.

B. A large and deep excavation, extending to the bones of the left side of the head, partly containing a thin dark corroding matter, ulcerating the surrounding substance of the tumor, and causing considerable caries of the bones.

C. The parietes of the tumor very thick, and of the consistence of macerated cartilage. The internal solid portion of the tumor, when cut into, had a greyish appearance, and exhibited a great number of white cross-bands.

D. Abscesses of various dimensions, containing a thin ichorous fluid.

E. Extensive ulceration from the bursting of a large abscess.

F. The posterior margin of the ear. The ear seemed, as it were, lifted up and thrown forward by the tumor, so that this portion only could be seen.

ON THE VARIOUS REMEDIES FOR CHRONIC BUBO.

To the Editor of the Medical Gazette.

Sir,

My inquiry respecting chronic bubo has met with several answers; and compression, blisters, mercurial frictions, and iodine, have been strongly recommended. Some of the gentlemen who have replied to my communication wish me to enter more into detail; and this it is which has induced me to write to you again upon the subject. I am well aware that chronic buboes are produced by several causes quite independent of venereal infection. But the cases to which I alluded evidently appeared to be produced by gonorrhœa; and yet they were not to be removed by ordinary modes of treatment. It is well known that scrofulous tumors are frequently very indolent,

and very little influenced by medicine. A patient may have scrofulous enlargement of the submaxillary gland, and, if he has patience to submit to it, the medical attendant may employ all the various means, local and general, which have ever been recommended for such affections; and it may so happen, after some months spent in this manner, the tumor remains precisely in the same state as it was previous to medical treatment. In this respect, the chronic buboes to which I allude strongly resemble scrofulous tumors; but I have met with them in patients who appeared to have no scrofulous taint in their constitution.

I was not ignorant of the virtues which have been attributed to iodine in glandular affections. But among those medical men who have employed it extensively, there appears to be a great difference of opinion. Sir Astley Cooper and Mr. Brodie entertain a very low opinion of iodine as an internal remedy; at least they have been reported to say so in their published lectures. Now, instead of trying all the methods of curing glandular affections which have been extolled as invariably successful, I wished to avail myself of the experience of some practical man who had already tried all the suggestions of others, and who was enabled to say which he had found the most efficacious. It is not very desirable to try a number of useless remedies in private practice. Patients expect to be cured speedily, and lose all confidence in a surgeon who keeps them two or three months under his care, trying every thing which has been recommended from the time of Hippocrates down to the present period. I was anxious, sir, to arrive at the best plan of cure by "a royal road," if possible, instead of proceeding in the beaten track.

Mr. Judd recommends keeping the patient confined. But in private practice the young men, who are the principal subjects of venereal affections, have engagements which render confinement extremely inconvenient. And even when they are not engaged in any business or profession, they are generally desirous of concealing such a complaint from their friends and relatives. They very naturally wish to avoid the suspicion to which they would be exposed by confinement. But some of the other recommendations of Mr. Judd may be tried without inconvenience. I have merely to add that I am much obliged to those gentlemen who have answered my communication, and I will endeavour to make a good use of their advice.

I remain, Sir,
Your most obedient humble servant,
MEDICO-CHIRURGICUS.

January 30th, 1833.

ANALYSES AND NOTICES OF BOOKS

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

New Views of the Process of Defecation, and their application to the Pathology and Treatment of Diseases of the Stomach, Bowels, and other Organs, &c. &c. By JAMES O'BEIRNE, M.D. &c. &c.

DR. O'BEIRNE is fearful lest his professional brethren should take umbrage at the delay of a work on tetanus, which, we are informed, has long been promised; "many (he says) will be surprised, if not disappointed!" It will be satisfactory to him to be assured, that the mortification to which he alludes will be entirely confined to his own side of the Irish channel; and we should not be much surprised to learn, that even his own countrymen bear the privation with becoming resignation: at all events, no blame can be attached to the author, after the very full and satisfactory explanation he has offered of the causes which led to it. The truth is, that, considering the importance which the learned author attaches to the contents of the present volume, it would have been criminal on his part to have postponed it—but for an hour. "Believing this work to contain original matter of the highest importance to the science of medicine," how could he delay its publication? And again, "as this work purposes to accomplish a task of no ordinary magnitude and pretension," could he enter on the task too soon? Expressions such as those just quoted may perhaps be regarded as unusual to be applied by authors to their own productions, but, says Dr. O'Beirne, "I should only be suppressing my real sentiments if I did not assert, that it [the vol. before us] contains some principles and modes of

treatment which are immutable, and likely to lead to no mean improvement and alteration both in the theory and the practice of medicine."

The opinion entertained by the author of the result of his labours must thus be pretty obvious to our readers; perhaps, however, they will not be much surprised to find that we purpose reducing our analysis within a very short compass. Dr. O'Beirne's "new views" consist in attributing to the rectum a very strong contractile power, by which it is kept always empty, resisting the passage of alimentary matters from within, and the introduction of foreign matters from without. This is the gist of his pathology, while his treatment consists in the introduction of an elastic gum tube far enough to lodge the extremity of it in the colon, clear of the contracted rectum, in constipation, dysentery, and other analogous disorders. The reader is now in possession of the whole secret.

We do not mean to say that the author is wrong in his recommendation to have purgative clysters injected through a tube introduced to a sufficient extent to clear the mechanical obstruction of the lower bowel; neither do we mean to deny, that an open tube passed into the colon may enable *fluid* or *gaseous* matters pent up there to escape; but we do say, that it does not require two hundred, thirty, and odd pages (including the preface), to propose, expound, and demonstrate this. If the subject of the entire volume had been condensed into a paper of three or four pages in the Dublin Journal, it might have excited favourable notice; as it is, the object of the author will be lost in the multitude of words, unless the exposition we have given above should save it.

Dr. O'Beirne is about to write another work. Let him be advised to condense his style if he desires to become a popular writer; and however favourably he may think of his productions, to leave it for others to praise them. He has blamed a writer in our respected contemporary the Medico-Chirurgical Journal (p. 175), for having hinted that "indeed he is rather too prolix;" and no doubt we shall incur his sovereign contempt for our present notice of his work; but he may rest assured, that persons who are wholly unconnected with him do not make such remarks without some foundation. He must put his thoughts into one hundredth part of their present space, else will his pages remain as "immutable" as his principles, for they will never be disturbed even by the reviewers.

Demonstrations of the Nerves of the Human Body. By Joseph Swan. Part III. Price 3*l.* 12*s.* 6*d.*

These magnificent plates continue to be published, with intervals between the Parts as short as can reasonably be expected. It is one of the most elaborate and splendid anatomical works which has ever issued from the press in this country. The dissections are made, with great labour and inimitable skill, by Mr. Swan, the drawings by West, and the engravings by Finden; the combined result being of the most effective description.

The first part contains the cervical and thoracic portions of the sympathetic nerves of the thoracic viscera; the second contains the lumbar and sacral portions of the sympathetic, and the nerves of the abdominal viscera; the third (that before us) gives the cerebral nerves; and the fourth is to represent those of the spine. The work is, perhaps, beyond the reach of the student, but ought to be in every medical library, and possessed by every teacher of anatomy in the kingdom, as well as by all who desire to patronize an undertaking from which the enterprising author will derive fame, but cannot hope to reap profit.

MEDICAL GAZETTE.

Saturday, March 2, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

LUNACY COMMISSIONS.

We have been favoured with an early copy of the bill which is now in progress through parliament—having passed the Lords, and being ordered to be printed by the Commons. The object of this measure is to abate the crying

grievance, so long complained of by the public, regarding the expensive nature of inquisitions *de lunatico*. Few arrangements connected with the administration of justice have for years back more loudly demanded reform: the proceedings on some of those inquests—as, for example, in the Portsmouth case—Davies's case—and several others—not forgetting Miss Bagster's—excited, and with reason, no small portion of the public displeasure; for they seemed to be most inordinately protracted, not apparently in proportion to the difficulty of the question to be settled, but the amount of property to be disposed of.

The new bill, however, does not go far. The chief alteration which it proposes to effect is in modifying the constitution of the court, by issuing the writ to one commissioner instead of three; the single commissioner being endowed with all the powers and privileges which he had before only in conjunction with his colleagues. The preamble of the bill states that this change is owing to the "great inconvenience and expense" which have been experienced from directing writs *de lunatico inquirendo* to three or more persons therein named as commissioners; and the first clause empowers the Lord Chancellor, or other chief guardian of lunatics, by virtue of the King's sign manual, to confide the inquisition to one or more persons, who are to make the due return, and for that purpose shall be authorized to issue precepts to the sheriff to summon a jury, and to compel the attendance of witnesses and the production of the alleged lunatic. The remainder of the document purports to provide for the appointment of three persons who are to act as visitors, during pleasure, and whose business it is to be to look after the care and treatment of lunatics, and persons of unsound mind, who are in charge of the Court of Chancery, and to report the circumstances of their actual state. It is to be further enacted, that the Lord Chancellor shall appoint a substitute for any of these visitors who shall die or resign; that none of the visitors shall be, or become, directly or indirectly interested in keeping a house for the reception of lunatics; and that the Lord Chancellor shall be vested with the appointment of a fit person to be secretary to the visitors for the purposes of the act.

Such is the amount of this not very lengthy measure. What we have principally to notice with regard to it is, that it goes but a short way towards the requisite reform: we cannot see, in fact, what alteration for the better it makes, except inasmuch as it reduces the triple head of the court to a single one; and, of course, thus to a certain extent diminishes the amount of the enormous expenses attending those inquisitions. The two or three-and-twenty jurymen are still to be in requisition—the sheriff and sheriff's officers are still to be in attendance—no limit is set to the summoning of witnesses—and the duration of the sittings may be protracted *ad libitum*. Under such circumstances we do not think that the diminution of the charges can be very considerable, and there still would seem to be wide room left for further improvement.

Now, with reference to the further reform which we think might be suggested, it seems to us not a little extraordinary that the present numerous and expensive jury should be kept up. We cannot see why, when a jury of twelve fit and proper persons are, in *nisi prius* cases, for instance, entrusted with a power of deciding in matters of liberty and property—and in criminal cases, in matters of life and death—a jury of about double the number, and paid at an extravagant rate, should be maintained for the purpose of solving a difficulty comparatively trifling. There is an anomaly here which is surely too obvious to need fuller exposure. We have even heard it argued, and with good

shew of reason, that such questions as those relating to sound or unsound mind, might very well be disposed of in the mode in which similar causes are settled in the Vice-Chancellor's, or the Consistory Court. We are not sure that the main source of complaint—the expense—would be much remedied by this change; but without going the length of dispensing with a jury altogether, we are strongly disposed to adopt the opinion, that no arrangement of those lunacy commissions can be perfectly satisfactory which does not materially abridge the present unlimited powers of the commissioners, and tend to simplify the form of the court, and to discountenance the egregious tediousness which has marked much of their late proceedings. In these several respects the lunacy commission bill, unless it undergo many important changes before it be passed into a law, will fall far short of the good which it ought to effect.

LONDON UNIVERSITY.

The statement of the affairs of this establishment, which has been published during the week, has surprised some people. We will not affect to be of that number: our surprise, if we really do feel any such emotion, is chiefly confined to the astonishingly cool and deliberately delusive practices of certain parties, who would have the world believe that all other places were as nought in comparison with the University of London. The extravagant pretensions set forth in behalf even of the least objectionable part of the institution, we took leave to reduce to their proper standard a few months ago—and forthwith we were supposed to be no friends of the University—and to be actuated by we know not what motives; whereas if our pages—our volumes—be candidly examined from the period of the foundation of the place, it will be found that we were its most candid friends. We wrote articles of encouragement, and hailed the prospects of the institution at the outset—we tendered wholesome advice as its machinery was set in motion—we acted as impartial mediators when dissnion, discord, disturbance, were within its walls—and, finally, we pulled down the overweening vauntings of certain rash and ill-advised advocates who were doing it most material injury. All along we have given the utmost publicity to the proceedings, especially of the medical part of the establishment; and perhaps it is in our pages alone that the truest history of the London University, as a medical school, can be traced from the period of its commencement.

We think it right to say thus much by way of doing ourselves justice; for there are those abroad who would deprive us of the credit which we deem our due. To feel any thing like exultation or satisfaction at the present deplorable state of the University, we should hold to be utterly unworthy of us, but we repeat that we feel no surprise at that state. We have looked calmly at some of its late proceedings, and we have noted the conduct of many of its pseudo-friends who have been ruining it by their ill-timed support and foolish fanfaronades: we could, in short, augur what has happened. But our deductions, we confess, have fallen considerably short of the facts. We did not anticipate so speedy and so astounding an appeal to the proprietary: after the retrenchment so prudently adopted not long ago, we did not expect so soon to read a report announcing the approach of actual bankruptcy—stating distinctly that at the end of the present session the place will be 4000*l.* in debt—that it will be impossible to proceed without an immediate subsidy of 1000*l.*—and that, further, the said subsidy must be repeated annually; the proprietors being expected to come forward in this emer-

gency, and to lay down their sovereign a-piece,—"the sum of 20*s.* annually would not be felt by any one!"

Now here are facts; let us just add one more. At the opening of the present session, when with much flourishing of trumpets we were told of the prosperity of the concern, the foundation of which would form an æra in the history of the country, and that all that was then wanting to raise it to a state of absolute perfection was an *hospital*, what was the actual, the true, state of the place at that very moment? Why, the present report, which professes "the most open dealing," informs us, that the University was even then 2946*l.* in debt, and was at the moment borrowing 1100*l.* to enable it to proceed,—and this after having expended the enormous sum of 158,882*l.* 10*s.* subscribed from the pockets of the proprietors!

Just a word more—about the "hospital" scheme. Some of the managers, we understand, are holding out hopes that the affairs of the University may yet be retrieved by the erection of an hospital. How shall we characterise this proceeding? Is it infatuation, or wilful delusion? Have they formed a faithful estimate of the expenses of a building suited to the purposes of an hospital? And supposing it erected, have they calculated the expenses of keeping it up? And what amount of profits do they hope to *net* by the speculation? This is, in our humble apprehension, one of the most unblushing proposals laid before the public for many a day. To build an hospital—if the money can by any means be raised—for the avowed purpose of propping up a sinking educational establishment! From the very earliest moment that we were apprized of the scheme of adding an hospital to the London University, we could not cordially support the project, on the simple ground that not a benevolent motive, but one of joint-stock speculation, was at the bottom of it. But when now, out of very desperation, it is proposed to set an hospital on foot, with the unseemly avowal that the project is chiefly had recourse to as a means of mending broken fortunes,—when, instead of at least the decent profession of wishing to establish an hospital for the alleviation of human sufferings, the design is openly advocated as the only method of keeping a large medical school afloat, we can hardly find terms strong enough to express our unqualified displeasure.

May we offer a word of advice to those who have a purer motive in this business of an hospital? Let them, before they squander their money in the erection of a new one, consider whether it might not be better laid out in the support of an excellent institution in the same district of the metropolis—we mean the Middlesex Hospital—an appeal from which to the benevolence of the public we were sorry to see in the public prints within the last few days. Here is a well-conducted establishment, complete and capacious in all its departments, yet failing for want of funds,—in the very neighbourhood of the London University. Let the mere money-broking speculators look to this last fact, and see whether they had not better be wise in time.

MIDDLESEX HOSPITAL.

The election for the assistant-surgeoncy took place on Thursday last, and terminated in favour of Mr. Tuson. The number of votes for each candidate was as follows:—

Mr. Tuson	248
Mr. Shaw	230
Mr. Phillips	62

CLINICAL OBSERVATIONS,

By Baron Dupuytren,

ON CYSTS FOUND IN THE SUBSTANCE OF THE BONES, AND ON THEIR DIFFERENT SPECIES.

From the "Leçons Orales," published, periodically, under the Baron's inspection.

A considerable period has elapsed, said M. Dupuytren, since I pointed out, for the first time, that in the bony tissues there are frequently developed tumors of a fibro-cellular character, which, in their growth, raise and reduce the thickness of the bone, so as to attenuate it to such a degree that it resembles a plate of metal beaten into foil by the hammer. If the patient die, and an examination of the parts be made, there is found in the bone a cavity which often contains a fibro-cellular substance. This appears to be a new formation; but what is remarkable, the bone is neither swollen nor softened—it is merely extended and thinned away. This point is of the greatest importance to be borne in mind, as we shall hereafter perceive, when treating of the diagnosis of these diseases.

I shall mention to you a remarkable case, which will afford us some valuable considerations, and serve as an introduction to the ideas which I entertain regarding cysts with bony parietes.

Case 1.—A little girl, æt. 7, well formed, and of sufficiently good constitution, came to the Hotel Dieu, in June 1832, to be treated for a swelling in the superior maxillary bone. She stated, that having received a blow on the cheek, she was soon after seized with pain in the injured part, followed by tumefaction, which, at the time we saw her, had attained the size of one's fist. The right nostril was flattened and obstructed; the palatine vault displaced laterally and superiorly, and the eye distorted forwards. During the preceding month, emaciation had made sensible progress.

At first sight, continued the Baron, this disease might readily have been considered an osteo-sarcoma. In fact, it was developed at the expense of the superior maxillary bone, which appeared to be softened; whereas we know that it is a characteristic mark of cancerous diseases to produce a swelling and softening of the bones. Nevertheless, a symptom I am about to point out created a doubt in my mind, and gave me reason to believe that we might make a rational attempt to cure the disease. I remarked, in pressing the anterior and superior part of the tumor, that a little plate yielded to my finger. It returned, and went, and returned again; and in these movements produced a sound of friction like that caused by a leaf of parchment. I observed the same crepitation in the palatine cyst; from which I inferred that we had to do with an osseous cyst.

But is this child fortunate enough to labour only under the development of a fibrous substance in the superior maxillary bone? I venture to hope so. If this be the case, we must attack the disease by an internal incision which will divide the mucous membrane down to the tumor, and permit us to seize the foreign body with the pincers of Musseux. Hæmorrhage sometimes happens on these occasions, but it is arrested by the introduction of pledgets. I should not be astonished, however, if the tumor have changed its nature; for these fibro-cellular substances are extremely prone to degeneration, and the cases then become very embarrassing. We shall examine the patient again, cautiously avoiding the too-frequent touching of the cyst, which might put a stop to the crepitation. But crepitation is not the only sign upon which we should proceed; there are others which should have weight with us. The adjoining parts are not degenerated. The displacement of the neighbouring organs is due to the development of the cyst. It would doubtless have been better if this child had been brought to us some months since, but the enormous size of the tumor does not permit us to lose further time. If left to itself, the complaint will inevitably degenerate into carcinoma. I may add, that the surgeon who first attended the patient mistook the nature of the affection, and, supposing it to be an abscess, applied the caustic potash.

Two days after these observations were made, M. Dupuytren, at the patient's bedside, made a slight incision along the trajeet of the diseased parts. The bistoury was then plunged in, and some black blood was discharged. The hæmorrhage, however, soon stopped: the operator then introduced his finger into the cyst, and, instead of fibro cellular substance, found a soft, readily lacerable body, by which the bone had gradually been distended, but with which it had not been confounded. The finger further ascertained that the cyst was bony, and that its parietes were hard in some parts and softened and thin elsewhere. Next day, the patient was taken into the theatre; an incision was made within, on the lowest portion of the tumor, and about two ounces of blood were discharged. M. Dupuytren detached with his finger a portion of the substance which filled the cyst. During the day no hæmorrhage occurred. To prevent putrefaction, injections of quinine were thrown in by means of the syringe invented by M.

Charrette. Gargles with honey were also prescribed.

Ten days after the operation sensible improvement had taken place. The parietes of the cyst had approached each other, and the tumor had lost much of its volume. If the pouch continues thus, said M. Dupuytren, to contract upon itself, and the child does not swallow the pus, there is reason to hope a cure.

The products contained in cysts of this kind, continued the professor, are very various. They may be either solid or liquid; generally they are formed by a fibro-cellular substance, mucosity, adipocire, hydatids, purulent serous or gelatinous matter, teeth, &c.

Case II.—A young man destined for the church, but refused admission into the clerical seminary on account of a voluminous tumor which elevated his cheek, presented himself, several years since, at the Hôtel Dieu. M. Dupuytren examined the tumor with care, and was convinced that its seat was in the right horizontal branch of the inferior maxillary bone. In pressing on the parietes of the cyst, which was of an oval form, a slight crepitation was felt, like to that produced by rubbing paper or dry parchment between the fingers. The absence of fungosity and lancinating pain, the excellent state of health of the patient—his ardent desire to be rid of a disease which would constitute an insurmountable obstacle to his vocation—the conviction that there only existed a cyst with bony walls—all these considerations combined in determining M. Dupuytren to attack the tumor.

The labial angle was accordingly freely divided, and an incision was made along the ramus of the jaw, and on the interior of the mouth. On opening the osseous cyst, a little reddish serosity escaped, and a fibro cellular mass was perceived, which was partly extracted with the pincers and a scoop. Suppuration removed the rest, and by repeated injections the cure was quickly completed. The edges of the osseous cyst by degrees became approximated, and the patient only retained a slight degree of deformity—namely, a trifling projection of the jaw, and the minute cicatrix of the incision.

We have just now said that teeth may exist in cysts with osseous walls. A case for which we are indebted to Dr. Loir, leaves no doubt on the subject. The osseous cyst was developed in the palatine apophysis of the left superior maxillary bone. Its parietes were formed by two compact plates of this apophysis. The immediate cause of the disease was evidently an inverted tooth. In fact, the left canine tooth, instead of piercing by its crown the alveolary border of the corresponding superior maxillary bone, had opened itself a passage at the internal side of that bone, and had given rise to a cavity, at least triple its own volume, in the diploid tissue of the palatine apophysis. Here it became developed, as it would have been in its natural situation.

Case III.—With regard to the *liquid product*, the following case affords us an example. Towards the end of April 1828, the sister of a physician in the vicinity of Tours, a young lady above twenty years of age, consulted me respecting a tumor, the size of a hen's egg, which existed in the right horizontal branch of the lower jaw. She believed herself affected with osteo-sarcoma; but the absence of all cancerous symptoms, such as lancinating pain, varicose degeneration, &c. combined with the crepitation which was distinctly heard on pressing the parietes of the cyst—all these led to a better opinion of the case. Encouraged by the opinion which I ventured to give, the patient eagerly requested the operation. The tumor projected more into the interior of the mouth than externally. It pushed aside the tongue. Its formation appeared to have been determined by the incomplete extraction of a carious tooth. An incision was made within the mouth on the parietes of the cyst, and a great quantity of sanguinolent serosity escaped. A solid mass was then perceived, which was readily extracted, and found to be perfectly analogous to adipocire: this mass was doubtless formed by the adipocirous change of particles of animal food, which at various times entered into the cyst through the alveolar opening. A few injections, poultices to the cheek, bleeding, and restricted diet for a few days, sufficed to complete the cure, and neither tumor nor deformity remained.

Causes.—The causes which favour the development of bony cysts are in general extremely obscure. Sometimes they shew themselves under the influence of external violence: a blow of the fist thus, in one case, appeared to have induced the tumor. The incomplete extraction of a carious tooth was, in the case we have just cited, the origin of the disease. Alterations in the roots of teeth give rise to serous cysts, which develop themselves most commonly in the alveola of the upper canine teeth, and sometimes acquire a very great size. We have seen, in the superior maxillary bone, a cavity open anteriorly, which might have been taken for the maxillary sinus; with which, nevertheless, it had no communication. On examining such a diseased tooth, its extremity is found altered, circumscribed by an osseous fold, bathed in a liquid contained in the cyst, formed on one side by this bony fold and on the other by the floor of the alveola. This

cyst usually follows upon the extraction of the tooth: if it remain in the alveola it occasions a tedious suppuration. It contains a liquid, sometimes very thick, sometimes serous. Its internal surface is smooth, like a serous membrane. In other cases the origin of the malady altogether eludes our scrutiny.

Symptoms.—The first signs which reveal the existence of osseous cysts, said the professor, are pain and uneasiness in moving the part affected: the pain, sometimes dull, sometimes acute, is rarely accompanied with lancination. After a certain period tumefaction is perceived, which, at first trifling, eventually may either equal the size of a clenched hand or not exceed that of a musket bullet. This swelling of the bones depends on the separation of their plates by the intrusion of the foreign substance. The plates thus become thin and weak; they yield under the finger, and afford the crepitation which I consider as pathognomonic of the disease. This symptom deserves particular attention. In some cases it happens that too frequent touching puts an end to the crepitation, by forcing inwards the little plate of bone which produced it. When doubt is thus excited, let an exploring puncture be made: this puncture and the previous crepitation are two symptoms, which together can leave no doubt of the presence of cysts of this description.

These tumors, we have said, have their seat in the substance of the bone. They are observed in the extremities of the long bones, in the bodies of the vertebræ, but most frequently in the bones of the face. It is thus they are seen to develop themselves in the horizontal branch of the inferior maxilla, in the ascending branch, in the alveolæ of the superior maxillary bone, in the sinuses, and the nasal fossæ. Their form is generally ovoid, sometimes oblong, and occasionally flattened. Their volume is not subject to any constant rule: sometimes it is that of a musket bullet, while others present the dimensions of an egg, or a closed hand. Their parietes are always formed at the expense of the bones within which they grow.

Diagnosis.—The diagnosis of bony cysts requires much skill and experience, but the difficulty is partly removed when osteo-sarcoma is concerned. It is right, then, to insist here on the diagnosis of this kind of tumors, and especially to establish the differences which exist between them and the osteo-sarcomata, with which, on a superficial examination, they may be confounded, and from which it is withal so important that they should be distinguished.

Osteo-sarcoma, from the very first, declares itself by lancinating pains, by varicose tumefaction, by the simultaneous alteration of the soft and hard parts in the vicinity, by their fungous degeneration, and numerous inequalities of surface. In the osseous cyst, on the contrary, the surrounding parts do not participate in the disease; their surface is smooth and equal, and their progress is altogether indolent. Osteo sarcomata grow rapidly; their bony cysts are slow in their formation; the former are internally traversed with scales and fragments of bones: these fragments never occur in tumors of a different description.

As to the practical consequences which I derive from this diagnosis, they are these: first, osteo-sarcomata and osseous cysts differ essentially from each other; secondly, osteo-sarcomata is a cancerous degeneration of the bones; the osseous cyst is but the development of the bone, usually owing to the presence of fibrous substances like those of the womb; thirdly, when there is no degeneration, we may, by a simple incision, arrive at the tumor, remove it, and feel no apprehension of relapse. But such is not the case with the osteo-sarcoma. In vain you go even to the centre of the tumor—in vain you extirpate even the tumor itself. In this affection you have to deal with cancerous disease.

The progress of the osseous cyst is generally slow. In some few instances, nevertheless, they acquire a great development in a few months; others remain stationary for several years. After an uncertain length of time they pass into the cancerous degeneration, especially those whose products are of the fibro-cellular kind. The materials of the cysts, when not entirely destroyed, repullulate with great facility, and have been known to be renewed two or three times.

Case IV.—A young lad, ætat. 15, presented himself in July 1832, with a tumor at the anterior part of the alveolary border of the superior maxillary bone. Examination with the finger detected sensible crepitation. An exploring puncture gave issue to a gush of liquid. A large incision was then made for a sufficiently obvious motive. The lad had recently been operated on. His father stated that a large quantity of water issued from the wound on that occasion; nevertheless, the malady returned. What was the reason of this? Because the part which gave origin to the secretion was preserved, and a new product was consequently formed. What was to be done, then, to prevent a new reproduction? The destruction of the cyst could alone ensure it, and this should be done by exciting inflammation and suppuration therein—by charpie, and irritating injections. The patient, however, left the Hôtel Dieu immediately after the incision was performed.

Case V.—In 1813, a boy of the same

age as the former, came to the Hôtel Dieu on account of a tumor in the superior maxillary bone.

This tumor occupied all the right side of the body of the bone, and apparently extended into the ramus of the same side. It was about the volume of a turkey's egg, passed beyond the base of the jaw, had displaced the teeth inwards, and made continual progress. At first it was thought to be an exostosis; but in feeling it carefully, it was found to yield to pressure in several points. The operation was decided on. The boy himself, indeed, courageously solicited it.

The tumor was attacked through the opening of the mouth. The mucous membrane was divided down to the base of the tumor. The base itself was separated with the gouge and mallet. A thin bony plate was divided, and it was soon found that there existed a bony shell surrounding a tumor of another kind. The shell removed, a fibrous substance was perceived, a considerable portion of which was cut away. The patient was then put into bed, he being too much exhausted to permit the continuance of the operation. The remains of the tumor again vegetated rapidly, and it soon acquired its original volume. A second time every perceptible particle was removed, and the actual cautery applied to its minutest branches. But again repullulation took place, and a third operation became necessary. This time the lower lip was divided from the commissure of the hyoid bone. The flap was turned aside, and a fibrous round unattached mass was disengaged by the tenaculum from an immense cavern found in the substance of the ramus of the maxillary bone. The portions of bone in contact with the tumor were then completely cauterized. This patient was radically cured. The fibrous substances separated in the three operations had absolutely the same appearance as those often found in the substance of the womb.

Prognosis.—The prognosis of these osseous cysts is not unfavourable. They are always cured by the operation. They may repullulate, as we have said, when the materials of the secretion are not entirely removed. It is sufficient, however, to know of this tendency to relapse, in order to combat and prevent it. But it is not so when the fibrous substance has undergone the cancerous degeneration, and when the surrounding parts participate in their alteration: the termination is then fatal. In some cases hæmorrhage may be dreaded. The exploring puncture, however, affords us the means of avoiding this accident, and remedying it when it occurs. If the tumor have occasioned considerable deformity, the most skilfully conducted operation will not prevent some traces of the effects of disease from remaining. But this slight inconvenience cannot be balanced with the consequences of the malady when abandoned to itself.

Treatment.—The nature of the osseous cyst being determined, the best mode of cure consists in the destruction of the disease: we must then act as follows. In the majority of cases, an exploring puncture is to be made, in order to determine the nature of the contents of the cyst. An incision is next practised over the extent of the tumor. In the osseous cysts of the face, this incision should be made within the mouth. Arrived at the centre of the disease, it should be completely extirpated, especially in the cases in which the products are solid. Here it is occasionally necessary to use the actual cautery, as in the case last related. The effects of the disease being removed, we must next pay attention to its cause, inasmuch as these products, as we have seen, have a strong tendency to reappear. To obviate this event, charpie should be introduced into the wound, and injections thrown into its cavity. These injections should be either emollient or irritating, according to circumstances. These means constantly determine an inflammation of the parietes of the cyst, and the destruction of its lining membrane. The walls then fall in upon themselves, and the cure is sooner or later completed. Sometimes it is necessary to practise counter-opening, and to place a seton in both apertures.

Case VI.—A man had a tumor of the lower jaw at the left side, which was recognized as an osseous cyst. The exploring puncture had given issue to a discharge of liquid. The opening was enlarged; and as it could not but be expected that this orifice would equally admit the entrance of saliva and particles of aliment, a counter-opening was made inferiorly and externally. The fingers could then penetrate into the interior of the cyst, and a semi-liquid substance was felt within. A seton was passed through both openings. In a month the tumor was reduced one-half. The time occupied in the cure was, however, of little consequence. The essential object was to acquire a certainty as to the nature of the disease, and to ascertain that it was not of the osteo-sarcomatous kind. I shall cite one more case, which presents us with several interesting particulars.

Case VII.—A young woman came to the Hôtel Dieu in July 1828, to be treated for a tumor in the inferior maxillary bone. It was of an ovoid form, and of the magnitude of a hen's egg. Its growth had been slow, and unaccompanied by lancinating pains, by fungosities, or by any change of

colour in the skin. Moreover, it projected externally, and its position was such as to occasion a variety in the mode of operation. As in the other cases, the crepitation was distinct. Several persons touched the tumor, and perceived the noise, but the latter soon became indistinct, from too much handling.

An incision, about an inch long, was made along the posterior edge of the masseter muscle, commencing a few lines beneath its middle, in order to avoid any injury of the vessels or facial nerve. This incision extended quite to the angle of the jaw. The edges of the wound were separated; the parietes of the cyst were now distinctly felt and seen; they were covered by a membrane, probably of a serous character, soft, and velvetty to the touch; no inequality of surface or fungosity was detected on the surface of the cyst; the surface, on the contrary, was soft and equal on all points; the tumor was of the form and dimensions of an egg.

A bistoury was now drawn across the anterior osseous wall of the swelling. A reddish, sanguinolent, fluid was discharged, and no solid substance could be detected within. A pledget of charpie was now introduced between the lips of the wound and of the cyst; emollient injections were repeatedly thrown into the cavity, and cataplasms were daily applied to the cheek.

After the operation, the patient experienced no accident. The wound remained open; and whether by the contact of the air, or by the irritation of the pledget, or by the combination of both these causes, abundant suppuration took place in the interior of the cyst. At each injection, the water impelled by the syringe was at first returned from the wound intimately mixed with thick and healthy pus; but towards the end the fluid reissued quite transparent, shewing the evacuation of the cavity. Slight redness and swelling supervened about the orifice of the wound, but not to such an extent as to lead to any apprehension of an erysipelatous attack. Pain was not experienced in the interior of the cysts, the parietes of which gradually collapsed. No artificial means of compression were employed to hasten this contraction, inasmuch as the situation of the swelling sufficed to accomplish the reduction of its walls. In fact, pressed on as they were on one side by the pterygoid, and on the other by the masseter muscles, it could not be doubted but that the powerful and continued action of these muscles, combined with the suppurative inflammation of the interior of the cyst, would soon determine the reunion of the parietes, and efface every deformity except the mark of the external incision.

MEDICO-CHIRURGICAL SOCIETY.

February 26, 1833.

THE reading of Mr. Hawkins's paper was resumed*, "On Encysted Tumors of the Liver."

PART II.—*On Hydatid Encysted Tumors.*

The aqueous encysted tumor, in any part of the body, is very commonly spoken of as an *hydatid*, but, as Mr. Hawkins thinks, very loosely and vaguely; so that two diseases, which in reality are quite distinct from each other, are confounded together. The resemblance which has given rise to this error, is the circumstance of there being in each case, in general, a cyst containing water; but the author holds that it would undoubtedly be much better to confine the term hydatid to the parasitic animal—the *hydra hydatula* of Linnæus; which may become deposited and increase, in some mysterious way, in any part of an animal body.

It is much to be regretted, also, that the term hydatid is employed indefinitely even by those writers whose experience teaches them how different the diseases are which are frequently spoken of together under the name of hydatids.

Sir Astley Cooper, for instance, in deference to this common but erroneous practice, speaks of four different species of hydatid tumors, one of which he denominates the animal hydatid, to distinguish it from the other diseases to which he has given the same name: it is, then, to this only that the term ought to be restricted, in order to avoid those errors, both in theory and practice, which have arisen from the three or four different meanings which are attached to the same word.

In the Hunterian collection, the term *spurious hydatid* is employed by its great founder, to describe the *aqueous encysted tumor* in the liver and other parts of the body; but this, though shewing his knowledge of the different natures of the two diseases, I would also wish to discard from medical language, to avoid the possibility of misconception.

The cyst in which the hydatids in the liver are embossed, varies in its thickness and texture like that of the aqueous tumor; being sometimes thin and transparent, sometimes thick and firm, and at other times having been in part converted into cartilaginous or osseous matter.

The fluid which is secreted by the cyst of the *encysted hydatid tumor* also differs in different cases; being sometimes thin and watery and nearly colourless, and not coagulable by heat; more frequently mucila-

* A notice of Part I. will be found in a former No. of the Gazette.

ginous, and of a yellow or greenish-yellow colour; and when the cyst has been much changed in texture, the fluid becomes sometimes quite thick and tenacious, and there is often found on its interior a quantity of greasy secretion, like butter in consistence. The number and appearance of the hydatids themselves will be found to vary very much. Sometimes there is a single large hydatid almost in contact with a thin cyst, with scarcely any secretion between its coasts and the cyst itself; at other times there is a large quantity of thin fluid, in which a few globular hydatids, seldom larger than a small walnut, are seen floating, or a great number of smaller hydatids with thick mucilage only between them, of a dark colour; or again, in other cases the cyst does not appear to have yielded proportionately to the rapid increase of these singular bodies, and the cavity is filled by a great mass of soft membranes composed of the remains of hydatids broken down by pressure, and looking like half-dissolved isinglass.

Mr. Hawkins thinks it probable that the state of the hydatids in the liver causes a material difference in the symptoms produced by the tumor, and that the greater the quantity of fluid in proportion to the number of hydatids (*i. e.* the more resemblance it bears to the aqueous encysted tumor) the less urgent will be the symptoms occasioned by it. It is certain, at least, that the hydatid encysted tumor is invariably fatal, long before the tumor has grown to any thing like the enormous size which the aqueous encysted tumor is capable of attaining before it occasions the death of the patient

It would appear, however, that if the increase of the tumor is not very rapid, it may attain a considerable magnitude without producing more inconvenience than the sense of weight and pressure, the impediment to respiration, and slight irritation of the liver, which attend the aqueous encysted tumor, and which are indicated by nearly the same symptoms—viz. the difficulty of breathing, the inability to lie in particular positions, the cough, with pain in the right shoulder, pain and tenderness in the right hypochondrium, nausea and vomiting, and slight jaundice. So that, in this comparatively innocent condition, several years may elapse before much inconvenience is experienced; till, at last, emaciation and general disturbance of the system, sometimes anasarca and ascites, undermine the patient's constitution and cause his death, before the further consequences of inflammation ensue.

The fact is, that wherever hydatids are situated little suffering is experienced except from the bulk of the tumor, as long as there is no great inflammation; and even then, provided an exit is afforded by the natural passages, or by ulceration, or by surgical operation, little danger need be apprehended, except in the important internal organs; and even in them the occurrence of hydatids is by no means to be regarded as invariably fatal, in which light they are looked upon by many persons; still less are hydatids to be considered as an evidence of malignant disease.

If there be *no* exit for the discharge of the hydatids, and especially if there take place inflammation of the cyst, a small tumor becomes dangerous, and frequently fatal. In the brain, for instance, they will necessarily be fatal at an early period; and even in the orbit—*i. e.* near the brain—the irritation is sometimes so great as to destroy the patient.

So also in the liver, the peculiar situation of the tumors may render them fatal at an earlier period than they otherwise would have been. They are usually met with, like the aqueous encysted tumor, on the anterior and convex part of the organ, or partly in its substance, in which situation a good deal of pressure can be borne with impunity.

A young man was in St. George's Hospital, under the care of Dr. Young, who had for some time expectorated bile, while none whatever seemed to enter into the intestinal canal, and it was found that the common biliary duct was completely obstructed by an hydatid just at its entrance into the duodenum. A considerable cavity was also found in the right lobe of the liver, communicating freely with a still larger one in the lungs, the whole being full of bile and pus, with hydatids of various sizes, all, however, empty and flaccid, except a very few.

In this case the absence of bile was a symptom different from what is generally observed; but jaundice did not occur; no doubt because the bile escaped by the lungs instead of being accumulated in the system.

The means of diagnosis afforded by manual examination is not very satisfactory in the hydatid encysted tumor, unless the proportion of fluid is considerable, though sometimes the sense of fluctuation is very distinct, almost as much so, perhaps, as in the case of an aqueous encysted tumor, which I mentioned in the first part of this paper, before the fluid was evacuated. In general, however, the fluctuation is less evident, so as to render it more difficult to distinguish the tumor from a solid enlargement of the liver, except by the negative signs, which arise from the absence of those other symptoms which ought to characterize a structural change of a decided character; the ascites and

deep jaundice, for instance, which seldom arise from the hydatid tumor.

It is clear, however, that as many of the symptoms in either case arise from the same cause, viz. the increased size of the organ, it will often be difficult to form a positive opinion, unless the fluctuation is perceived. It has been said that there is a kind of trembling in the hydatid tumor, which differs from the sensation of mere fluid, but it is evident that the number and condition of the hydatids must naturally alter the sensation communicated by the touch.

When this point is decided, and the existence of fluid is perceptible, there arises the further question, whether the fluid is formed by a chronic abscess or by hydatids. In the uninflamed state of the hydatid encysted tumor, the question can generally be answered by the difference in the preceding history, and the absence of the usual signs of such inflammation of this organ, as could have produced an abscess, and by the non-occurrence (when the fluctuation becomes apparent) of rigors and perspirations, and other symptoms of the formation of matter.

The origin of the hydatid, as well as of the aqueous encysted tumor, from a blow or injury, is another circumstance which is very frequently found to have been the case in the human subject, whatever else may be the cause of its prevailing so extensively in certain seasons in sheep.

Another singular circumstance in the history of hydatid encysted tumors is the appearance of several such tumors in succession in different parts of the body, and their coinciding with aqueous encysted tumors.

With regard to the question of opening an hydatid tumor in an inflamed state, Mr. Hawkins is of opinion that unless the tumor was very large, or the health was much disturbed by it, or the local symptoms were severe, the danger would not, probably, be much increased by waiting till suppuration had been established, since suppuration would not probably be prevented by an earlier opening; still, however, the question would require consideration, for there is the same danger of rupture of the cyst as with the aqueous encysted tumor.

Undoubtedly, when symptoms of suppuration have occurred, or there is such a degree of irritation and suffering as to render suppuration probable, or the patient's life is endangered by pressure only, an operation is called for. The symptoms of suppuration in the hydatid tumor in the liver will generally present the same difference, from those of a simple abscess in this organ, which I pointed out when speaking of the inflammation and suppuration of the aqueous tumor; so that a careful attention to the previous history of the case, and the local appearances, and state of the system at the time, will at least create a strong suspicion of the nature of the disease.

A woman was admitted into St. George's Hospital, under the care of Dr. Hewett, with a tumor apparently attached to the liver, and containing fluid. The patient, however, had such a modification of the usual symptoms of abscess, that Dr. Hewett believed the tumor contained hydatids. She was kept quiet a short time with the view of procuring adhesion of the suppurating tumor to the abdominal muscles, after which it was punctured with a trocar by the late Mr. Rose. There was discharged through the canula a wash-hand basin full of broken down hydatids, mixed with thick yellowish green watery pus. The woman, however, experienced only temporary relief, and died shortly afterwards.

I may observe, that when an abscess in the liver coexists with an hydatid tumor, or has been produced by it, an instance of which Mr. Hawkins has seen, the danger of the case must be infinitely greater, and the diagnosis very much more difficult, since there will now be added to the usual symptoms of such a tumor those of inflammation of the substance of the liver, and those indications of suppuration which are usually absent, or scarcely apparent in the common suppuration of the hydatid cyst. Instead of ulcerating into the intestinal canal, an hydatid encysted tumor of the liver sometimes makes its way through the diaphragm into the lungs, and the hydatids are discharged by coughing. In the Medical Transactions is a case of this kind in which hydatids of various sizes, from that of a pea to that of a pullet's egg, were thus coughed up for several months, the hydatids having sometimes appeared to obstruct the air-vessels, so as to produce the most urgent symptoms of impending suffocation.

Mr. Hawkins is not acquainted with any fact which establishes the occurrence of unhealthy and fungous ulceration after an hydatid encysted tumor of the liver. It is very possible, however, that they may resemble one another in this respect also, since there is no doubt that unhealthy ulcers, which are sometimes called malignant, are now and then formed after hydatid tumors in other parts of the body have been opened, especially if there is a small opening into the cyst, which contains the hydatids, or if the cyst has been irritated by passing a seton through it; the appearance, in fact, resembling a similar change sometimes seen in bursal encysted tumors.

The author of the paper thinks that too

much stress has been laid on inflammation of the liver in cases of this nature.

A case lately occurred in St. George's Hospital in which the tumor was much lessened, and ascites and other symptoms got rid of by iodine. The disease was ultimately fatal nearly a year afterwards.

With regard to the treatment of the aqueous encysted tumors, Mr. Hawkins thinks that the best method of proceeding when they contain water, or water with a little serum, or lymph, *i. e* when they are nearly uninflamed, and the cysts are thin and membranous, is to puncture them with a trocar, taking care that no undue pressure is made which might induce too much inflammation, but that moderate pressure is employed the whole time the fluid continues to flow, as well as when the canula is withdrawn, so that no air can enter the sac. If the contraction of the abdominal muscles and diaphragm does not seem to empty the cyst readily, the use of a cupping-glass over the canula is a better method of proceeding than using undue force with the hands. The great object after the evacuation is to heal the puncture, which readily takes place, and to keep the sides of the cyst in contact by pressure, which may be done by means of long straps of adhesive plaister round the abdomen, and a moderately tight bandage.

An objection is made by some persons to the employment of a cutting instrument in abscesses of the liver, lest there should not have been such a degree of adhesion between the covering of the abscess and the abdominal parietes as to prevent the passage of some of the contents of the abscess into the peritoneal cavity; and hence, if there is not obvious adhesion, they employ caustic potash to open the cavity, instead of a surgical instrument. It is clear, that if such a method is right in cases of common abscess, it must be doubly so in the abscess in a cyst, as there is usually much less adhesion than attends suppuration in the cellular membrane. Mr. Hawkins, however, does not see the propriety or advantage of adopting this proceeding in opening any tumor containing fluid in the liver or other parts of the abdomen.

Another method is recommended in a paper by Dr. Graves, in order to obviate this, the author of the paper thinks, imaginary danger, viz. the making an incision through part of the abdominal parietes, leaving the remainder to be opened by ulceration.

Mr. Hawkins conceives the same plan to be best, whenever it is determined to open an hydatid encysted tumor, whether in a simple or uninflamed state, unless the previous confinement of the contents of the cyst had so much disturbed the health, or the contents were so decidedly purulent as to make a larger opening at once necessary. It might be thought, perhaps, that with these bodies the orifice made by the trocar would not be sufficient to give exit to them, but their figure becomes so altered, or they are so readily broken and burst, that they will pass through a very small opening. In one case mentioned by Mr. Hawkins, which was spontaneously ruptured, more than three hundred hydatids were propelled with considerable force through an opening which is described as not having been larger than a crow-quill.

If a large opening be made at once, and kept open, there is necessarily a suppurating cavity, which in so important an organ as the liver, is, of course, not a little dangerous.

If the fluid, however, be at all purulent, the propriety of attempting wholly to close the orifice is doubtful, and it will probably be less hazardous to leave it open, lest dangerous symptoms should be produced by confinement of matter*.

NATIONAL VACCINE INSTITUTION.

COPY of the last Report from the National Vaccine Institution to the Secretary of State for the Home Department.

S. M. PHILLIPS.

Whitehall, Feb. 19, 1833.

To the Right Hon. Lord Viscount Melbourne, Principal Secretary of State for the Home Department.

National Vaccine Establishment,
Russell Place, Jan. 21, 1833.

MY LORD,—The Board of the National Vaccine Establishment has executed the benevolent purposes of Parliament this last year with its usual zeal, and with all possible success.

The number of persons vaccinated in the metropolis and its suburbs by its own immediate agents, within the last twelve months, has exceeded that of any former year by 3000, and the means of giving the protective process have been distributed by us to more than 100,000 others in various parts of the world. To maintain such a supply of the vaccine lymph, and to be prepared to answer on the instant the incessant demands which are made upon us for it, nothing less than a national establishment is adequate; and accordingly we have found that where the charity of individuals, however abundant and well organized, has been appropriated to in-

* *Erratum.*—In our abstract of Dr. Sims's paper (p. 604), *for* "brotile," *read* "brittle."

stitutions having the same objects in view in the country, such institutions have always failed.

The opportunity of taking the lymph from a vesicle in progress, in order to be most successful, should be taken between the seventh and eighth days, which is so limited a period, that, unless there be a large number of vaccinators to contribute continually their respective quotas of authentic lymph into a common depôt, there is danger of the store failing when it is most urgently wanted.

The small-pox has been prevailing, with its usual fatal results, in various parts of the country, since our last report; and magistrates frequently write to us to express their regret that they cannot prevent ignorant persons from going about the country to inoculate; but we still live in hope that the good sense of the people will discover the superior advantages of vaccination when it is repeatedly stated to them as a fact, that, of an equal number of persons vaccinated and inoculated, only so many of the former will be capable of taking the small-pox afterwards, and that in a safe degree of the disease, as are found to die by the latter.

HENRY HALFORD,
President of the Royal College of Physicians.
THOS. HUME, M.D. Censor.
JOHN PAINTER VINCENT,
President of the Royal College of Surgeons.
CLEMENT HUE, M.D. Registr.

ANNUAL RETURN

From the Small-Pox and Vaccination Hospital, King's Cross, St. Pancras, for 1832.

Small-pox patients		330
Died	97	
Discharged	233	
Patients vaccinated		3701
Charges of Vaccine lymph supplied to medical practitioners, and to foreign parts		1443

UNWHOLESOME FOOD.

M. CHEVALIER, of Paris, lately met with an instance in which six persons, in two different families, after having partaken of sausages, were seized with alarming symptoms, such as long-continued vomiting, acute pain in the bowels, and severe purging. Suspicion of poisoning having arisen, the food was subjected to a chemical analysis, but without leading to the detection of any deleterious agent. The mischief, therefore, is supposed to have arisen from the spontaneous changes which such articles undergo if badly prepared, or kept too long. M. Labarraeque saw the same effects result last summer from eating a paté, which had been purchased at a cook-shop, and kept only four days after. Minute examination led to the detection of no copper or other mineral poison. A still more remarkable illustration of the bad effects of certain kinds of food, which have undergone certain changes not yet well explained, is related by Dr. Paulus, of Sulz. Seven persons who ate some Italian cheese were taken ill with violent disorder of the stomach and bowels; three of them perished.—*Gazette Medicale.*

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Feb.* 26, 1833.

Abscess	2	Gout	1
Age and Debility	43	Hæmorrhage	1
Apoplexy	6	Hooping-Cough	26
Asthma	35	Inflammation	31
Cancer	1	Bowels & Stomach	6
Childbirth	4	Brain	3
Consumption	56	Lungs and Pleura	5
Convulsions	37	Liver, Diseased	8
Croup	3	Measles	9
Dentition or Teething	4	Mortification	5
Diabetes	1	Paralysis	2
Dropsy	16	Small-Pox	20
Dropsy on the Brain	18	Stone and Gravel	1
Dropsy on the Chest	3	Thrush	1
Erysipelas	1	Tumor	3
Fever	15	Unknown Causes	2
Fever Intermittent or Ague	1	Stil born	12
Fever, Scarlet	8		

Increase of Burials, as compared with the preceding week 14

METEOROLOGICAL JOURNAL.

February 1833.	THERMOMETER.		BAROMETER.	
Thursday . 21	from 35	to 47	29·64	to 29 77
Friday. . . 22	39	45	29·81	29·94
Saturday . 23	30	44	29·84	29·71
Sunday . . 24	29	43	29·67	29 58
Monday . . 25	29	43	29·42	Stat.
Tuesday . 26	33	50	29 34	29·24
Wednesday 27	36	47	29 12	29·06

Prevailing wind, N.E.

Except the 23d, generally cloudy, with frequent rain.

Rain fallen, ·85 of an inch.

CHARLES HENRY ADAMS.

TRANSLATION OF RAYER.—As we announced one version of Rayer to be forthcoming, Mr. Culverwell, of Lothbury, wishes us to say that he is preparing another.

NOTICES.—Dr. Rigby's paper, in our last, was an abstract from one of his lectures at St. Thomas's.

Will "T." favour us with his name? The facts and statements in his paper require to be authenticated.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 9, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

PARAPLEGIA.

In paraplegia, or that form of palsy which affects one half the body horizontally divided, generally both sense and motion are lost. There is very frequently constipation and retention of urine; at last, however, the sphincter becomes paralysed, and there is neither retention of urine nor costiveness, but both fæces and urine pass involuntarily.

In this form of paralysis it is very common for the affected parts to experience spasmodic twitches and catches, infinitely more common than where the parts are affected with hemiplegia. This occurrence is comparatively rare in hemiplegia, whereas in paraplegia nothing is more common, and very frequently too there is violent pain. In hemiplegia you sometimes have pain, but by no means so frequently as in paraplegia. The urine too in this disease is sometimes altered in quality; it is not sufficiently acid. It is perhaps alkalescent, but when it is not, still there is a deficiency of acid, and soon after it is made it becomes exceedingly alkalescent. This is more particularly the case when the paralysis has arisen from an injury to the spine.

Progress.—When paraplegia does not come on suddenly, it usually commences in the lowest part, the toes, and extends upwards: its extent is various, but it generally reaches a little higher than the hips.

Causes.—Paraplegia is very frequently produced by a fracture of the vertebræ, and of course the higher the vertebræ are in which the fracture takes place, the higher is the paralysis, and the sooner does death take place, if death do occur. Caries of the vertebræ also frequently produces this affection. Any disease of the spinal marrow, and many diseases of the membranes, produce paraplegia. In some instances you will see the spinal marrow softened into a pulp at one particular spot; sometimes you will see it exceedingly hardened, and sometimes you will see the membranes also exceedingly diseased. Sometimes there is suppuration producing compression, and sometimes an effusion of serum, or an effusion of blood.

All the diseases which I mentioned as occurring in the brain, and producing hemiplegia and other forms of paralysis, may occur in the spinal marrow, and produce paraplegia. Sometimes a clot of blood has been found, sometimes considerable hæmorrhage compressing the spinal marrow, tumors of various descriptions, exostosis of bone, as well as a mechanically altered position of the parts diminishing the canal locally. I had a very striking case of this a few months ago, in a boy who died of peritoneal disease. His peritoneum was filled with tubercles, and besides symptoms of mesenteric disease, he had lost the use of the lower extremities, and he died of peritonitis. The paraplegia was at once explained by finding one scrofulous tubercle, as large as a nut, in the centre of the spinal marrow. The disease has frequently arisen from mechanical injury, when the bones appear to have sustained no violence, and in such instances I have seen recovery take place. In all probability, an effusion of blood had occurred, which was afterwards absorbed, or the parts received such a shock as was

equivalent to concussion of the brain. I can conceive that as an affection of the brain may be induced by mere concussion, which will last for a day, or a month, or months, so a mere concussion of the spinal marrow may unfit it for its functions for a time, and the person eventually recover, at least one sees patients frequently recover from paraplegia produced by a fall or a blow upon the spine. The softening which you observe is sometimes the result of acute or chronic inflammation, and sometimes it is not the result of inflammation at all, but a morbid change not well understood.

But besides all these causes of paraplegia in the spinal marrow, there can be no doubt that the disease arises sometimes from an affection of the head, because occasionally you will find no uneasiness whatever in the spinal marrow, but you find great symptoms in the head, such as giddiness and drowsiness. Dr. Baillie wrote a paper in the Transactions of the College of Physicians, to show that in the greater number of cases of paraplegia occurring in adults, the cause was situated in the head. However, he did not prove the point at all; he gave but one dissection, and that was not seen by himself. I think, whoever reflects on all the cases which he has seen of this kind, will find that in the greater number of instances the cause was evidently situated in the spinal marrow. He will arrive at this conclusion, from the cause having been applied to that part; from the uneasiness being felt there; or the morbid appearances presented there on dissection: but occasionally there can be no question that the disease arises from an affection of the head. I have this moment come from seeing a case of this description. The gentleman was a little poorly, and confined to his bed, but he had no great ailment. It was discovered one day that he had lost the use of his lower extremities, and no cause whatever could be assigned for it. He could not stand on his lower extremities. His water had not passed, nor his fæces. No cause had been applied to the spine, nor to any other part that he was aware of, and he bore striking all down the spine. Pressure of the most violent kind gave him no pain. He told me, however, that he had had symptoms of giddiness, vertigo, a day or two after he was first seized, and delirium came on. The cause in this case is evidently situated in the head, but I am satisfied that for one case where you will find the cause of paraplegia situated in the head, you will see eight or ten, or perhaps a dozen, where it is situated in the spinal marrow.

Morbid Appearances.—Sometimes after paraplegia nothing is to be found, exactly as is the case after apoplexy and hemiplegia. In the two latter diseases I stated that frequently nothing was to be found in the brain; and in the former occasionally nothing is to be found in the spinal marrow.

Cause of the Spasms, &c.—The reason why you have spasms, twitchings, and considerable pain in this disease is, that it is so frequently produced by a certain degree of inflammation of the spinal marrow—an inflammation that softens it; or by some cause pressing on the spinal marrow, or at any rate producing great irritability. The cause which compresses the spinal marrow also irritates it at the same time, and the irritation produces such an affection of the roots of the nerves that a sense of pain is felt, and if it be a nerve of motion, a spasm occurs. When the part is found compressed by a bone, and this compression is only partially established, then you have considerable twitchings. Paraplegia sometimes arises from cold. Not long ago I had a man under my care who had lost the use of his lower extremities from working in cold water in a ditch, digging the foundation of a wall, or something of that description, being continually hard at work in wet damp cold places. You rarely see hemiplegia produced in this way, the reason of which is evident: cold is continually applied to the lower extremities horizontally, but it is very seldom indeed that it is applied to the upper extremities vertically: the lower extremities are frequently in water, while the upper are not.

TREATMENT OF PARALYSIS.

I will now consider the treatment of paralysis in general, or at least the treatment of hemiplegia and paraplegia. If there be a local cause evident and removable, our first plan is to attempt its removal. Suppose the cause be a fracture of the bones of the cranium, of course surgical means should be immediately adopted for removing such a source of irritation. If there be suppuration from a carious bone, or injury of a bone, of course measures should be taken, so far as it is right according to the best surgical discoveries, for letting out the pus. I have seen pus let out by trephining the head and opening the dura mater, but success in such a case must be very doubtful. The removal of a portion of fractured or carious bone is always to be attended to when such serious effects take place as paralysis.

If the cause be any thing taken into the stomach, we should endeavour to remove it.

Antiphlogistic Remedies.—Suppose the disease appear to be of an inflammatory nature; suppose the head be hot, and there be violent pain there, and delirium, and things of that description, then, of course,

common antiphlogistic treatment should be put in practice, such as bleeding, purging, leeching, and mercurializing as quickly as possible, applying cold, and starving the patient. This is the proper treatment of a number of cases of paralysis. In the first instance you must treat the complaint according to the symptoms of congestion or fulness; but as, in the case of apoplexy, you must be on your guard not to go too far, for if you do not attend carefully to the patient's pulse every time you visit him, and do not visit him frequently, you may be surprised some day to find the pulse low, and the patient sunk irrecoverably. It is possible that paralysis may remain long after the inflammation is over, when the effects of inflammation only continue, when there is mere effusion left or suppuration, or the brain is softened, and no inflammation, no congestion, at least all the patient's strength is gone, so that you would not be justified in severe measures, even if they did exist. Great care is necessary in this disease not to push matters too far; and when there appears no danger of life, but the disease still continues, we have in general to carry on a certain degree of antiphlogistic treatment; to make the patient abstain from wine, and, of course, from distilled liquors, and frequently from animal food; but you must not starve the patient too much—not bring him too low in this chronic treatment. Mercury is very useful at first, but after a time it would only impair the powers of the patient; and when you have given it a fair trial, it is a pity to have recourse to it again. Iodine has been strongly recommended, and it will act as well as mercury, but it is only proper when rubbed in in the form of ointment, and given internally in combination with potassa. It is said to do good, and I have occasionally seen it useful; but when you consider that the disease may arise from so many different causes, you cannot expect any one thing to be of general use. The plan most generally useful is antiphlogistic treatment, because it removes congestion, removes inflammation, and prevents the parts from being pressed upon by an excessive quantity of blood. If any thing by chance supervene that ought to be absorbed, antiphlogistic treatment will cause absorption better than almost any thing else; and should there be some morbid growth, this may also be diminished by antiphlogistic treatment. Local means and counter irritation near the part affected, are very proper—that is to say, in the nape of the neck, where the head is affected, and down the spine, where the cause is situated there, as in paraplegia. But while you are doing these things, it is often very necessary, although you would not give wine, to give good food, and occasionally even tonics, and after a time they are often to be given rather freely.

Narcotics and Stimulants.—If there be great debility, you must not be afraid of giving wine; patients will sink without it, and it will do no harm. To lessen the twitches and violent pain, opium is sometimes proper. If you attend to keeping the bowels open, and restrict the patient from improper stimuli, you may give opium, for it is a great advantage to lessen the pain and lessen the spasms. I have often done it, and I cannot say that I ever saw it do any harm, but, of course, I have always given it very cautiously. Though I am not habitually fearful with respect to medicine when I know my way, and know what the medicine is, yet I am at the same time very careful in watching the effect of every dose, that I may stop before any harm takes place. There is no occasion to be *rash* because you are *bold*. Where there are no signs of inflammation left, and the patient is languid, when you cannot fear inflammation at all, or excitement, then stimulants may be given. On this account strychnine has been particularly recommended; for although it is a narcotic that will destroy life, it is a powerful stimulant to the nervous system: it will cause parts to twitch, and while it stimulates the nerves of sensation, and the central parts of the nervous system connected with them, it at the same time stimulates those of motion, and produces spasm, twitching, and a tingling sensation. You must, however, see, *à priori*, that it cannot be of universal or general use. If a part of the nervous system be softened, and disease is induced by it, how can you expect strychnine, or all the stimulants in the world, to cure the disease? You cannot by such means make a soft part hard. You may stimulate the part for a time, and make the most of it, by exciting it violently for a time, but that will not cure the disease. If the disease arise from pressure, how can any stimulant whatever remove it? It cannot have the effect of removing an exostosis or a tumor. I cannot say that I ever saw a case cured by it except the disease arose from mere torpor. Where it arises from cold, then you may suppose before-hand that stimuli will do good, and I think I have seen strychnine serviceable in such cases. In common cases of paralysis, arising, as they often do, from disease of the brain, as I shewed you a few days ago, and where the parts have been softened in consequence, you might give strychnine till the patient jumped out of bed, but it would only be to lie on the floor. I have given it freely, but I am not satisfied with it. Nux vomica, camphor, cayenne pepper, musk, and ammonia, have been had recourse to, and have failed.

Electricity and galvanism, I should say, stand upon the same level in point of utility with strychnine and other stimulants. They may do good if the disease arise from mere torpor; but if it arise from an organic cause, or from compression, or obstruction, or alteration of structure, you cannot suppose that they will do good according to the extravagant idea which some persons have formed of them. There can be no doubt of the occasional efficacy of strychnine; but if you look at the pathological state of the disease, you must perceive how futile it often must be.

Spontaneous Cure.—Paralysis will sometimes cease when the cause is in the brain. If it arise from effusion, the effusion may be absorbed, and by proper treatment you may expedite the absorption; but after a time, if you do nothing, it will be absorbed, just as congestion will cease after a time. A clot of blood may be absorbed; and whatever had been used, whether electricity or strychnine, of course, it would have the credit of it; but if you try a series of cases, and treat them with one particular remedy, you will see that every one must fail in a great number of instances. After all, the antiphlogistic treatment is evidently more successful than any other, only it is necessary to remember that after a time it must not be pushed too far.

LOCAL PALSIES.

I now proceed to more limited palsies than these—to what are called *local* palsies. The most common local palsies affect the four organs of sense—the eyes, the ears, the nose, and the taste; the side of the face as to motion only; the upper eyelid as to motion only; a leg or an arm as to sense or motion; and the hands as to motion only.

The cause of these local palsies is more frequently situated in the course of the nerves after they have quitted the cerebral mass, or at the ends, than any where else. If the cause of palsy be in the brain itself, or in the spinal marrow, then you generally have more than local palsy. You have either hemiplegia or paraplegia; but if the nerves be affected in their course after leaving the brain, or only at their extremities, then you generally have local palsy.

Amaurosis.—The first of these of which I will speak, is one of those affecting an organ of sense—affecting the optic nerves; and is called *amaurosis*.

Symptoms.—In this affection, which is also denominated *gutta serena*, there is dimness or loss of sight, without any fault of the humours, or the capsules, or the cornea, or in the conjunctiva. Frequently, on looking into the eye, you see at the bottom that it is lighter coloured than it should be, or rather greenish. On observing the pupil, you notice that the iris is sluggish or immoveable, and generally it is dilated. Sometimes, however, it is contracted—the pupil is exceedingly small—and when that is the case, the palsy of the optic nerve irritates the third pair, and this causes the iris to fall into this condition. Indeed, from an affection of the third pair, you will sometimes see the iris motionless—not obedient to the light.

Causes.—The cause of this disease is in the expansion of the optic nerve, in the retina, or in the course of the nerve itself; perhaps at the very origin or termination—the corpora quadrigemina. Sometimes this arises from the softness of the nerve, sometimes from extreme induration, sometimes from tumors pressing upon it. I knew a young lady who was amaurotic from seven years of age till the time she died, which was between twenty and thirty. A tumor was found pressing on the optic nerve. Disease of the corpora quadrigemina frequently produces this affection, and so also does disease of the thalami nervorum opticorum: you see the latter continually softened, however, without any affection of the eyes.

May arise from an Injury of another than the Optic Nerve.—In this disease there is very frequently headache, vertigo, and evident signs of cerebral congestion; but a very curious point in this disease is, that it will sometimes arise from an injury of another nerve than the optic. It has been known to arise from a wound of the supra-orbital nerve, and various nerves of the face. You will find many cases on record where amaurosis arose from an injury of some other nerve. In Mr. Wardrop's book on the Morbid Anatomy of the Eye, you will see several cases. It there appears, that where the nerves of the face (the supra-orbital, for example) have been only half divided, the complete division of the nerve has restored the sight; so that imperfect division produced amaurosis, and complete division cured it. It once happened to me to see an instance of this description. In 1815, a woman came to me, aged 27, who could only see one portion of objects. In her it had arisen from arteriotomy in the temple. There could be no doubt that, in performing the operation, a twig of the nerve was injured, and from that moment she partially lost the sight of the corresponding eye.

This is a very curious circumstance; one with which I was not acquainted when I began practice, and one with which many persons, I believe, are still unacquainted. It is very singular that an injury, or division, of a nerve of sense or motion of the face, should give rise to paralysis of the optic nerve. I presume it is sympathy. Diseases will frequently arise

from the sympathy of the head with the stomach; and so I believe that, in this case, the circumstance arises from sympathy, and not from any connexion of function between the parts.

Nyctalopia.—Amaurosis is singular in another respect: it is very frequently a temporary or periodical paralysis. Some persons become amaurotic at night, though they can see well during the day; and this is called *night blindness*, or *hemeralopia*, or *nyctalopia*. It is common in hot climates, and especially occurs in new-comers. It is said to be produced there, in that particular instance, from the great glare of the sun, just as sheep are amaurotic in the spring, from being exposed to the glare of snow during winter. It is observed that in some places, in mountainous parts, the sheep do not see till the commencement of summer—till the snow has disappeared for some time. None of us can see at first, when we enter from the light into a dark room, and that is the same occurrence, on a small scale, which takes place in sheep which have been exposed to the glare of the snow. This has been observed by some persons to take place on board a ship. It has been noticed on the sea-coast, in the West Indies, in negroes and in sailors, sailing near the equator. It is described by Mr. Bampfield, who wrote on Dysentery, as very common, and Sir Gilbert Blane mentions having seen it in connexion with scurvy. In general it will yield with the other symptoms of scurvy; and when it will not, Mr. Bampfield says that in all cases it yielded to blisters applied to the temples. Dr. Heberden mentions an instance of night blindness in a person who never had it except on board ship. On the other hand, day blindness is mentioned by various writers, as occasioned by a dilated pupil, and occurring in Italian peasants. Regularly, at sun-set, persons in this situation become either perfectly blind or very nearly so; the light which occurs then not being sufficient for them. I had a case of this kind in a woman, who had been suckling four months; she said that she had always dimness of sight at five o'clock in the afternoon: this was in the neighbourhood of London; and after lying down and putting out the light, she gradually saw more clearly as the night proceeded, but when midnight arrived it became duller, and remained so till nine the next morning. She had nausea in the morning. I never saw her again: but this woman was suckling, which might be too much for her. At five o'clock her sight began to be impaired, and she went to bed early. She had what is called *ptosis*—a dropping of the upper eye-lid.

Dysecœa.—The hearing is continually lost, but more frequently from other causes than paralysis. Smell and taste are more rarely affected; but it is not uncommon for smell, hearing, and taste, to be paralysed when there is other paralysis. Sometimes in hemiplegia, sometimes in paraplegia, you see a person lose smell and taste, or smell and hearing. It is rare that smell and taste are paralysed, except in conjunction with other paralysis. When there is cerebral disease, you will see several kinds of paralysis, as well as epilepsy, and other nervous diseases.

Anæsthesia.—Paralysis of the sense of touch, which is called *anæsthesia*, is also very rare. It is common enough for persons to lose sensation and motion in hemiplegia, but to lose the sense of feeling only is very rare. You will find a case which arose from cold described in the third volume of the Medico-Chirurgical Transactions, I believe, by Dr. Bostock. It affected the surface, and indeed the substance of the hands. If needles and pins were passed into the flesh, the patient could not feel them. The surface and substance of the hands were paralysed as high as the wrist, and not only could not needles be felt if moved about, but electric sparks and shocks gave not the least sensation. Paralysis also took place in the lower extremities, and extended half-way up the legs, yet in all other respects the person was in perfect health. A blister was applied, and produced its usual effects, some vesication; and pressure on the ulnar nerve gave its peculiar tingling only about half-way down the arm—no farther than the parts were not paralysed. This came on from sleeping with the window open after a hot day. You will find a case in the fourth volume of the American Repository, where the hands and feet were affected in the same way. The man was looking another way, and cut off his thumb without knowing it, and when he looked at his hand again it was gone. This man frequently met with accidents from treading on things which he ought to have avoided. He had burns, wounds, and so on, in his hands and feet. He continued in this state for two years. There is an instance mentioned by Laennec in his second volume, where the right arm was broken, but the patient knew nothing about it, till he found he could not use it as before. All these persons were in the middle period of life, between forty and sixty years of age. I have never seen an instance of it.

Paralysis of the Face.—The most common partial paralysis, which affects motion only, is that of the face; and this chiefly arises from an affection of the portio dura. When this partial paralysis

occurs, you cannot mistake it for a moment. The face is drawn to the opposite side; the eye of the affected side is unclosed; the patient cannot close it, and it remains wide open while the other is shut. The consequence of this is, the tears are not directed towards the inner canthus of the eye, and they fall over. There is an inability to laugh, so that if the patient attempt it, he laughs on the wrong side of the mouth. If you give him a looking-glass, and make him laugh, he sees what a figure he is, and avoids it in future. There is an inability to distend the cheek, and an inability to whistle or frown. If you tell him to frown, he frowns with only one carugator supercilii; and as to whistling, he makes all sorts of noises out of the other corner of the mouth. Sense is in this case unimpaired. The portio dura, you are aware, is a nerve of motion, and not of sense, and therefore motion only is paralysed.

Some have thoughtlessly proposed to divide the other part of the portio dura, to paralyse the other muscle. This would do very well if it were antagonised, but unfortunately the orbicularis palpebrarum is a distinct muscle, stands on its own bottom; and therefore the effect would be, to prevent the patient from shutting either eye. It would prevent the affected muscles from being drawn to the healthy side, but both eyes would remain staring wide open, and hereafter the patient would be unable to make use of the muscles at all; he could neither whistle nor laugh.

Causes.—This affection generally arises from cold, but not always. Very often you find a person deaf at the same time, and he has a discharge from the ear. This you may conceive from the situation of the portio dura; indeed, it often occurs in persons who have been exceedingly deaf. Sometimes it arises from caries of the bones, and sometimes it has appeared to arise from an enlargement of the gland behind the ear compressing the nerve.

Sometimes this paralysis is evanescent, and if you give the patient a stimulating liniment, it soon disappears. It will disappear spontaneously, but I dare say it disappears much sooner by stimulating the part. Occasionally, however, you find this tedious and incurable. I have seen cases in which it has been much improved, but I hardly recollect a case where the cure was quite perfect. It would be very wrong for you to suppose, as has been intimated too much, that this is a sort of paralysis which has no connexion with an affection of the head. It *may* have no connexion, because it may be external to the brain, external to the foramen ovale; but in many cases, if you examine minutely, you will find patients complain of fulness of the head, of giddiness, of sleepiness, and other symptoms, which clearly shew that there is an affection of the head as well as this of the nerves. The nerve, no doubt, may be compressed within the head itself; the portio dura may suffer compression, and become softened within the head, as well as in the bones of the cranium, and after it has left those bones. It is not by any means a trifling complaint, and one of which there is no fear that it will be connected with other serious affections, because very often it is connected with a more serious affection.

Treatment.—The proper mode of treatment would be, to ascertain how far there is internal affection or not. If you find symptoms of drowsiness, you must treat these the same as in other cases; but if you find nothing of that description, still there may be a propriety in applying leeches over the portio dura, about the mastoid process, rubbing in mercury and iodine, stimulating the parts well, and applying blisters. I have done all this, and with a certain degree of success: but as I just now said, I hardly recollect a case which, after continuing some time, was perfectly cured; but repeated leeches, blisters, mercury, stimulating applications, and frictions, I believe, are the best things that you can employ.

It sometimes happens that the nerve of sense of the face is affected. The portio dura is a nerve only of motion, but there is another nerve, you are aware, which gives sense, and not only to the face, but, as it would appear, to the nose and the other organs of sensation in the head. Paralysis in this case is much more rare than in the other. You will find an instance of this kind very accurately described in the *Medical Gazette* for Feb. 14, 1829. There the fifth pair was diseased within the head; and the consequence of this was, that the eye remained open and the muscles were drawn to the other side. The effect was, that the pupil was dilated and the iris immoveable, but yet the patient could see. He could not move his eye, except in the way of abduction. When the portio dura is affected, the person can move his eye as before; he cannot close his eye, but he can move the ball as before: but in this case there is a loss of motion of the eye, except so far as it regards abduction. The abductor will exercise its power as well as before, so that the patient will constantly squint outwards. There was likewise a dropping of the eyelid—there was what is called *ptosis*, and of course a loss of sensation in the face, and even in the eye. In an affection of the portio dura the patient feels as before; but

as, in this case, there was disease of the fifth pair, there was no sensation in the face; it might be pinched and scorched, the eye might be rubbed, the internal part of the nose might have substances introduced, but yet no sensation was experienced. There was, however, no distortion of the face—no want of power over the muscles of the face; shewing clearly the distinct use of the portio dura and the fifth pair. I must mention, however, that the temporalis and the masseter were paralysed, because the fifth pair is not altogether a nerve of sensation; there are branches in it of motion likewise. This particular case arose from mechanical injury.

You are aware that if this particular nerve be divided intentionally — which may be done by practice and dexterity — within the cranium, that the external parts which it supplies lose their sensation, and, after a time, the eye becomes muddy and the cornea becomes opaque. This result both myself and many others have witnessed. I saw it when the experiments were made by Magendie in this country.

Treatment.—Respecting the treatment of a case of this kind, it can only be conducted on the general treatment of paralysis, exactly as is the case in disease of the portio dura.

Causes of Local Paralysis.—Now the diseases of the nerves which give rise to this partial paralysis, are precisely the same, though different in situation to those which give rise to hemiplegia and paraplegia. In some instances it is entirely mechanical compression. You may have hemiplegia from the compression of a tumor on the brain; paraplegia from the compression of a tumor in the spinal canal, or the pressure of a bone that is fractured; and so you may have amaurosis, partial paralysis, from the pressure of a tumor on the optic nerve. Any cause that will produce paraplegia or hemiplegia, will produce local paralysis when differently situated. Occasionally you have this local paralysis from local inflammation of a particular nerve, and the inflammation may be of so intense a character as to be seen after death; and, indeed, you may see ecchymoses. Sometimes there is softening of a particular nerve—even ulceration of it; and a decided effusion into the sheath of a nerve. These, you will recollect, are precisely the same things that I mentioned as causes of hemiplegia and paraplegia. Tumors have frequently been found resting on particular nerves; and when there are these circumstances of inflammation, softening, ulceration, and tumors, there is often besides paralysis, violent pain and spasmodic convulsive action of the muscles which these nerves supply.

Paralysis of an Arm only.—You will find some interesting and curious cases of partial paralysis of sense and motion which occurred rather suddenly, and in only one extremity. It is well to know these cases. I have never seen one, but they occur from time to time. The extremity has been the arm, in almost every case. It has become suddenly cold, motionless, and senseless, and it has then mortified; not from inflammation, but becoming paralytic first it has presently mortified; so that frequently the whole case has not lasted more than a few days. One of the earliest instances with which I am acquainted is mentioned by Dr. Wells, in the Transactions of a Society for the Improvement of Medical and Surgical Knowledge; a work which only consists of a few volumes, but contains papers by Dr. Baillie, John Hunter, and others, of the highest importance. In that case it took place in the left arm, but the arm was not examined. Another case occurred in the right arm, and was followed by death in a few hours. It was observed before death that the arm was only pale, and it is said that nothing was seen at the autopsy. There is another case mentioned of both the arm and leg, in hemiplegia, losing the pulse entirely, and death there took place in five days. But you will find that the nature of such cases has now been pretty well cleared up. It appears that some have taken place after external violence: the external violence has lacerated the inner coat of the artery, and an effusion of lymph has blocked up the vessel, so that the part has been deprived almost immediately of all blood, and the consequence of it, in the first place, was a loss of sensation and motion, and afterwards mortification. In the Edinburgh Medico-Chirurgical Transactions, Vol. iii., Part i. there is a paper well worth reading, communicated by Mr. Turner, a surgeon, who found a laceration of the internal coats and complete obstruction. In other cases there appears to have been no external violence, but the artery has been previously diseased and has suddenly given way in the inner coat, so that inflammation has been set up, lymph effused, and obstruction produced in that way. Occasionally the obstruction takes place from an accumulation of pus. These cases were mysterious before the arteries were examined.

These, I believe, are almost the only cases of partial paralysis in which the pulse is lost in the paralysed part. In most paralysed limbs it is weaker than in other parts of the body; but where it

ceases altogether it arises from a disease of the artery, such as I have now mentioned. Respecting these diseases of the nerves, I may state that there is a case mentioned by Magendie of disease of the fifth pair, producing such symptoms as I have stated; and after death the fifth pair was found swollen with a greyish yellow coloured matter.

MORBID APPEARANCES. — I have spoken sufficiently, when adverting to inflammation of the nervous system, of softening, suppuration, effusion, and all those things. I mentioned that when pus was formed, it might be found in a cyst, or it might be diffused; that sometimes the surrounding part is in a state of irritation, sometimes it is perfectly healthy, and sometimes by the presence of pus the surrounding parts become diseased. But besides this, we frequently have tumors of a scrofulous nature in the brain and nerves. These are by far most frequent in infancy, but they are not so often found in very young infants as in those a little older. They are so much more frequent in infants than adults, that even in phthisical adults you seldom see them. They are most usually observed in the hemispheres of the brain, and they are found more frequently in the cervical than in other portions of the spinal marrow. You may recollect that I mentioned, in the last lecture, a case which happened a year ago, of paralysis of the lower extremities, and in that case a scrofulous tumor was found in the cervical region of the spinal marrow. It is a constant observation, that scrofulous tumors of this kind are found more frequently in that situation than any other. They frequently appear to have originated in the pia mater, both in the head and spinal marrow, which corresponds with the cellular membrane in other parts of the body. They are not numerous in the nervous system, for it is common to find but one. You see them, like the tubercles of other parts, of all sizes; and they agree with them in another respect, that is, they are sometimes inclosed in a cyst, and sometimes they have none. I have seen many preparations with a large mass of scrofulous deposit in the cerebellum. There was a man in Bethlehem Hospital, who was an idiot, and laboured under St. Vitus's dance, and besides that he was addicted to the vice of masturbation; and in his brain there was this appearance, a scrofulous deposition in the cerebellum.

Of course, the symptoms of a scrofulous tumor can only be inflammation, paralysis, and convulsions. It can make no difference what the substance deposited is; if it produce irritation you may have convulsions of various kinds, epilepsy, St. Vitus's dance, and so on—any convulsions, or spasmodic diseases, and any sort of paralytic affection, together with pain in the head, delirium, and symptoms indicating inflammation.

We sometimes find in the head scirrhous tumors, and they are sometimes enormously large, so as to occupy the greater part of the hemisphere; and they have been seen to occupy the entire cerebellum. Sometimes they are seen in the membranes of an exceedingly hard character; sometimes there is a cartilaginous, or fibro-cartilaginous, change. You may recollect that I mentioned that this sometimes proceeds even to bone, so that bony tumors are found within the head, within the brain, and upon the membranes; and there are bony tumors likewise in the cerebellum. You know that it is common to find plates of bone along the longitudinal sinus, and sometimes a spicula of bone has been seen growing to the inner plate—an exostosis.

The symptoms of all these are the same.

Occasionally you have encephaloid tumors in the brain, you have that deposition of new matter which is not seen in the healthy body, and which being like brain, but different in its nature, has been called *encephaloid*, and very frequently hæmorrhage takes place from it, so that it becomes a bloody tumor, and used to be called *fungus hæmatodes*. This most frequently occurs in young subjects; it was supposed to be the cancer of young subjects. It is called by Dr. Hooper *hæmatoma*. If you cut into it, it is like the brain, soft and white, and in some parts it is red.

Sometimes when there are tumors in the brain, you may have that black deposit which I mentioned as being called *melanosis*. This is an innocent thing, not a malignant disease, and does no harm except mechanically by its bulk; but it frequently co-exists with scirrhus, and with encephaloid disease. Scirrhus, that is to say, fibrous formations, transformations, and ossifications, are found much more frequently in the membranes than in the brain itself; but encephaloid, melanotic, and scrofulous deposits, are found most frequently in the brain.

Encysted tumors of all kinds are found in the head, and in the spinal canal. Sometimes these common encysted tumors, or serous cysts, called hydatids in common medical language, though they are not so, are found in the plexus choroides, and they are just the same on either side. You frequently see small cysts in the membranes, as well as in the plexus choroides, and sometimes they are found in the substance of the brain itself. Dr. Hooper has

given some very admirable representations of these.

Besides these encysted tumors there are real hydatids occasionally found both in the substance of the brain, and in the spinal marrow; and on the exterior of these parasitical animals you find occasionally an appendage approaching to a tail. These are also frequently found in the brute creation. The contents of the serous cysts—not hydatids—are very various. Like the contents of serous cysts in other parts of the body, they are sometimes clear liquid, sometimes soft pultacious substance, and sometimes blood.

Now no one beforehand can tell the existence of any of these things. You see some of the diseases present of which I formerly spoke; you see delirium, or convulsions, or paralysis, or pains in the head—all sorts of uneasy sensations; sensations of coldness and of heat, and you suspect from the continuance of these that there must be organic disease; and also when you find paralysis you suppose that organic disease is coming on, but it is almost impossible to say what it is. If you see organic disease in another part of the body—for instance, fungus hæmatodes in the extremities, and then the patient becomes paralytic, and has convulsions—you may suppose that the same disease which has taken place externally is coming on in the head; but the symptoms will only enable you to say, you *presume* there is organic disease.

All these things—schirrus, encephaloid matter, melanosis, and scrofulous formations, which occur in the head and in the spinal canal, are also frequently found in the distant nerves, where they cause but partial palsy.

Besides these tumors, the nerves are subject to the disease of hypertrophy, which I formerly spoke of as existing in the brain, and giving a tendency to apoplexy and paralysis. You know that after amputation the ends of the nerves will become hypertrophied; sometimes much enlarged, and exceedingly sensible and painful; and they have been seen hypertrophied in fungous ulceration. Sometimes you will see a partial enlargement, like a pea, a large hypertrophy here and there in particular nerves, and these have been seen when the brain and spinal marrow have shewed none at all.

These hypertrophied portions of a nerve sometimes give rise to great pain, and sometimes they become exceedingly hard; indeed, hard tumors, which perhaps ought not to be called hypertrophy. Sometimes they are so exceedingly painful, that when they are touched the person has an electric feeling along the course of the nerve below the part.

Cysts are found in the nerves, and occasionally ossification; and nerves, like the brain, will sometimes waste away. I shall speak particularly of atrophy of the brain when I come to speak of insanity and idiotcy, but I shall have no other opportunity of speaking of atrophy of the nerves. If they be pressed upon they will waste away the same as other parts. If the nerves of the eye waste away, the cornea will frequently become opaque.

You see, therefore, that the brain, the spinal marrow, and the nerves, are all subject to precisely the same organic diseases; they are all subject to inflammation, and the common effects of inflammation, and to the same description of organic diseases, whether they are of a malignant nature or not.

LECTURES

ON

DISEASES OF THE EYE,

Delivered at the Birmingham Eye Infirmary,

BY RICHARD MIDDLEMORE, ESQ.

GONORRHŒAL INFLAMMATION OF THE CONJUNCTIVA.

[Concluded from page 696.]

WE have now to consider how far gonorrhœa is capable of affecting the constitution. The iris sometimes becomes inflamed after chancre; and when this is the case, we say that part is inflamed in consequence of some change in the constitution effected by the agency of the syphilitic sore. Can the absorption of gonorrhœal matter take place, and effect a change in the constitution capable of producing gonorrhœal ophthalmia, independently of the direct application of the urethral discharge to the conjunctiva? This is, indeed, an important and interesting inquiry, and I must confess that although my attention has been frequently directed to this subject, I am by no means prepared to state positively that the occurrence may not take place. Persons have fallen under my care with gonorrhœal ophthalmia, and have assured me that they have not for some time previously incurred the slightest risk of having gonorrhœal matter applied to the eye; and in one instance the peculiar circumstances of the case rendered it most improbable that the patient could have been affected by any cause of this nature; yet not only had he a decided at-

tack of gonorrhœal ophthalmia, but one of so severe a nature that his vision was totally destroyed. On the other hand, females who are affected with gonorrhœal inflammation of the vagina, are very seldom indeed affected with gonorrhœal inflammation of the eye. We know that they suffer equally with men from the secondary symptoms of syphilis; and if we admit that gonorrhœa, like syphilis, is a constitutional disease, it requires some ingenuity of argument to explain the cause of this anomaly: indeed, this circumstance would at once decide the question in the negative, if we did not occasionally meet with instances such as have been now alluded to—instances in which gonorrhœal ophthalmia has occurred in an individual some time after he has had gonorrhœa, under circumstances rendering it almost impossible for the individual to have contracted the disease of the eye from the application of gonorrhœal matter to that organ. If you can reconcile these facts—namely, 1, the extremely rare occurrence of gonorrhœal ophthalmia in females compared with the frequency of its occurrence in males; 2, its almost invariable limitation to one organ; 3, its occasional simultaneous occurrence with gonorrhœal inflammation of the urethra—with the idea of a constitutional disease of this nature (strictly so called) you may conclude that the absorption of gonorrhœal matter may occur, and give rise to a state of constitution adequate to the production of gonorrhœal ophthalmia.

If the conjunctiva were capable of assuming that pathological condition which we term gonorrhœal conjunctivitis, in consequence of merely the absorption of matter proceeding from the inflamed urethra into the constitution, we should certainly expect that when gonorrhœal ophthalmia occurs from the positive contact of gonorrhœal matter, the urethra would, on the same principle, and in the same proportion of cases, become affected with the true puriform inflammation. But no such circumstance has been stated to occur by those who, from entertaining the foregoing opinion, would have been glad to avail themselves of so strong an argument in support of their doctrines, if the circumstance on which it is founded really existed.

You will not understand me to say that the absorption of a morbid secretion, possessing, when absorbed, an ability to contaminate the constitution, and dispose it to develop the existence of such contamination by the establishment of some local disease, must necessarily give rise to a malady similar to that whence the disease originated. The absorption into the constitution of the secretion from a chancre may give rise to many and very various local maladies, which have no resemblance to each other, at least in their external character; and such also is the case with respect to many other diseases and their consequences.

I have yet to inquire if there be any particular kind of constitution, or any peculiar state of health, necessary to the development of gonorrhœal ophthalmia, independently of that (as some appear to think) condition arising from constitutional impregnation with gonorrhœal virus, or that state of things which has been vaguely designated metastasis. Mr. Ware tells you that he has noticed its occurrence after the free administration of mercury for the cure of a gonorrhœa, and other persons have made observations of a similar description; as though, indeed, it were excited by the previous administration of mercury; but I do not think there is the slightest foundation for this opinion. Gonorrhœal ophthalmia is known to take place in persons of different temperaments and habits of body, in every grade of health, from puny infirmity to florid and vigorous health; and although I possess the notes of many such cases, I cannot trace its connexion with any particular state of health, or any kind of subject possessing distinct and peculiar constitutional characters.

Again, can a person labouring under gonorrhœal inflammation of the eye contaminate the air for a *certain distance*, and imbue it with those exhalations by which it is rendered capable of exciting a similar disease in the conjunctiva of a person whose eye is exposed to the prolonged influence of such an impure and contaminated atmosphere? You will perceive that it is of some consequence, in reference to nurses, and even medical men who attend such cases, to investigate this subject attentively. I must, however, admit that my experience has not qualified me to lay before you any positive facts upon the subject; but let me caution you to act upon the supposition that this view of the matter is correct, and do not needlessly place your own eyes very near to those of such patients as may be suffering from gonorrhœal ophthalmia for a long period at any one time, particularly after they have been bathing or fomenting them, as at such time evaporation is rapidly and freely taking place from the surface of the eye. Perhaps this inquiry is one of curiosity rather than of practical utility. I know that the evaporation of the fluid parts of the matter proceeding from the surface of an eye affected with gonorrhœal ophthalmia, is not *likely* to communicate the same disease to the mucous membrane of a healthy

eye, when placed near to it, and long subjected to its influence; but is there any thing in the nature of these circumstances to render such communication of morbid affection *impossible?*

I think we may fairly deduce from these remarks upon the causes of gonorrhœal ophthalmia—1, that it does not arise in any instance from metastasis; and, 2, that it is extremely improbable that any individual can communicate the disease from his urethra to his conjunctiva by touching the latter membrane with the gonorrhœal discharge proceeding from his inflamed urethra; and, 3, that the more or less severe degree of the gonorrhœal conjunctivitis depends on the condition of the discharge applied; the constitutional circumstances of the individual to whose eye it is applied, and the more or less complete and prolonged application of the gonorrhœal matter to the surface of the conjunctiva.

Treatment.—It will be remembered that gonorrhœal ophthalmia is characterized by symptoms of a most acute kind; that its progress is extremely rapid, and that it frequently terminates in the destruction of vision. Hence you will be aware of the great necessity for prompt and decisive treatment. The practice of reproducing the discharge from the urethra, as its disciples termed the infliction of a clap, as already explained, is on this account most objectionable, inasmuch as it cannot fully take place in sufficient time to prevent many of the ill effects consequent on the brief existence of symptoms so severe as those of gonorrhœal conjunctivitis. Independently, therefore, of the error of considering that the suppression of the gonorrhœa excites the inflammation of the eye, the practice founded on this belief is most defective, because tardy in its operation, and quite inadequate to the removal of so severe a disease. These alone constitute important objections to the adoption of such a means of cure; but when you are assured that the disease of the eye may supervene upon that of the urethra, the discharge of which has never been either diminished or suspended, and that both may proceed at the same time with extreme violence and severity, you will be satisfied that no reliance whatever can, with propriety, be placed upon this ridiculous and mischievous practice.

The important part of any plan of treatment employed for the cure of gonorrhœal ophthalmia, must obviously mainly consist in its power of lessening general and local action, in preventing the external layers of the cornea from sloughing, in consequence of the pressure of the chemosis, and also in preventing the extension of the disease to the deeper-seated textures. You will deem it necessary, in order to accomplish these objects, to bleed at the onset of the attack most freely; it would be almost criminal to stop the flow of blood until your patient exhibited symptoms of faintness; and as soon as he rallies, and the pain returns, the operation should be repeated until syncope is again produced; at the same time you would prescribe a liberal dose of calomel and jalap, so as to act freely upon the bowels, and afterwards the tartarized antimony in sufficient quantity to maintain a state of decided nausea. You would also freely scarify the conjunctiva. Having selected for this purpose the instrument previously described, draw it firmly and steadily along, first, the sclerotic, and afterwards the palpebral portions of the conjunctiva, at distances of half a line from each other, taking care to divide the texture of the cornea at each sweep of the knife, so as to penetrate as far as the fluid effused into the sub-conjunctival cellular membrane. After you have completed the scarification of the conjunctiva, the eye should be bathed with tepid water, and the lids separated, so as to encourage the bleeding from the divided surfaces. In addition to these measures, you would direct the eyes to be frequently bathed with the alum lotion, (two or more grains of alum to the ounce of water); you would direct the exclusion of light from the eye, and limit the diet to mild fluid aliment.

Having, by the early employment of these measures, subdued the acute symptoms—that is, having diminished the redness and swelling of the conjunctiva, and lessened the pain, and removed the sense of tension of the globe—you would proceed to apply a quantity of leeches just beneath the tarsal margin of the lower eye-lid, and direct the application of a blister between the scapulæ. Lastly, it may be necessary to use tonic and stimulating lotions, and applications to lessen the distended state of the conjunctival vessels, and to contract the loose flabby condition of that membrane; and it may be also necessary to employ a restorative regimen, to re-invigorate the reduced powers—to place your patient in that state of vigorous health from which the activity of your treatment has removed him. I know that some persons of tender feelings have been shocked at the idea of saving an eye by means of the large bleedings you will often find it your duty to practise, in strong plethoric subjects, in whom this disease in its severest form may have taken place; but your conscience and your patient also will more readily forgive you for producing an ephemeral condition of feebleness, than for permitting him to retain his strength at the sacrifice of his vision.

You will more clearly understand the mode of treatment which it is my wish to

recommend for the removal of the most acute form of this disease, by the relation of a case which very recently fell under my care.

A stout young man, the relative of a medical friend, called upon me at 9 one evening, complaining of uneasiness in the right eye. He said it felt as though sand were beneath the lids, and requested me to examine his eye, for the purpose of removing these particles of sand; but although I did examine the eye most carefully, I really could discover scarcely any thing at all the matter, and therefore merely directed him to bathe the eye with Goulard water, and to take a dose of purging medicine. I was sent for very early on the following morning, and was surprised to find the conjunctiva and eyelids somewhat red and tumid, and a slight puro-mucous secretion adherent to the tarsal margins, and lodging upon the conjunctiva. He told me that his eye had been extremely hot and painful during the night; that the sensation of sand beneath the lids, of which he complained the previous evening, had much increased, and that the light was painfully annoying to him. Of course I directed him to be bled very freely, to take some active purging medicine, to keep the eye cool with Goulard water, to exclude in a great measure light from his apartment, to put a blister at the nape of the neck, and to abstain from animal food and strong liquors. Now I did not even at this period suspect the disease to be what it really was, for many reasons, but chiefly because it was improbable that he had exposed himself to the risk of contracting the gonorrhœal inflammation. However, in the course of that day the symptoms became fully developed, and the nature of the case was sufficiently evident. The bleeding in the morning amounted to twenty ounces, but the symptoms had notwithstanding rapidly increased. Directing him to assume the erect position, I freely opened a large vein in the arm, and by the time sixteen ounces of blood were withdrawn, he became so faint that it was necessary to close the bleeding orifice. That no time might be lost, I ordered from fifteen to twenty leeches to the lower lid, and prescribed for him a nauseating mixture (a dose of which, containing a quarter of a grain of tartarized antimony, he was directed to take every hour), and the other remedies to be continued, except that the alum lotion was substituted for the Goulard water. As the chemosis was considerable—so great that only a small portion of the central part of the cornea could be seen—I freely scarified the tumid conjunctiva; and as the upper lid was of a dark red colour, and much swollen, a few punctures were made into its cellular membrane with considerable advantage—with the advantage, I think, of preventing sloughing or extensive suppuration of that part; indeed, one of its distended veins was unintentionally divided, which bled rather copiously, and much relieved the tension, and tumefaction, and vascular congestion, of the palpebra.

Now although this treatment seemed to arrest the progress of the disease, it was necessary to repeat the bleeding late in the evening of the same day, in the same manner and to the same extent as before; and I then regretted that, calculating on the effects of my previous measures, leeches had been applied so early, on account of the increased advantage which the patient would have derived from their application, after the force and activity of the circulation had been still further reduced by venesection. However, this patient recovered, with an extensive opacity of the cornea, after having lost, in the short space of twenty hours, sixty ounces of blood, besides being reduced by various other means.

You will learn from the recital of this case the absolute necessity for prompt and active treatment, when this disease occurs in its most acute form, the nature of the remedies to be employed, and the order in which they ought to be used.

Some writers appear to believe that mercury has a good effect in these cases, from an idea that they bear a certain analogy to syphilis; but even presuming this notion with regard to the nature of the disease to be correct, it is scarcely possible to affect the constitution with this remedy with sufficient rapidity to prevent the loss of vision. Many surgeons recommend the local stimulant plan at an early stage, but as my experience inclines me to give a contrary opinion, I cannot recommend this plan of treatment; and I beg it to be understood, that I have given this mode of treating acute gonorrhœal ophthalmia, in its early stages, many trials, with every disposition to adopt the practice generally, if it had been found to answer the purpose for which it was employed. Of course my observations only apply to the use of strong local stimulants at the onset of this disease, for there can be no doubt respecting their utility when all active inflammatory symptoms have subsided. It does certainly appear to me, that an acute inflammatory disease of the eye, prompt in its development, and rapid in its progress, attended with a great degree of chemosis (the continuance of which is very apt to produce strangulation of the superficial nutrient vessels of the cornea), cannot be effectually subdued or removed by any local application whatever—more especially when it

takes place in the strong and plethoric—in those whose circulation is forcing into the dilated and distended, and consequently weakened vessels of the eye, a quantity of blood so considerable as to prevent them from effectually contracting upon and urging it forward.

As soon as the acute symptoms are decidedly diminished by bleeding, and the other remedies already mentioned, the discharge lessened, and the tense florid condition of the conjunctiva superseded by a palish flabby state of that membrane, I am in the habit of using with advantage a strong solution of the nitrate of silver, or the unguentum argenti nitratis, prepared according to the following formula:—

℞ Argenti Nitratis gr. ij.; Liq. Plumbi Subacet. gtt. viij.; Ung. Cetacei ʒj. Misce.

The nitrate of silver should be reduced to an impalpable powder in a glass mortar, and carefully and accurately mixed with the spermaceti ointment.

Mode of using the ointment.—Take a little of the ointment upon the blunt extremity of a probe, and having raised the upper lid from the globe, smear the ointment upon its mucous surface. Direct the patient to keep the palpebræ closed for half an hour, and then to bathe the eye with a little tepid water. There are various remedies which appear to operate pretty much in the same manner, but I prefer the nitrate of silver, used as I have now directed.

Sometimes when the disease has not been attended to sufficiently early, or has not been treated with sufficient activity, there remains a chronic state of disease, which is very troublesome, and by no means easily cured. Attention to the state of the bowels and to the diet, the use of zinc lotion, or a weak solution of the nitrate of silver, applied to the eye, with the occasional application of blisters to the temples and to the forehead, comprise that plan of treatment which has been most successful in my own practice in the management of such cases.

Some cases of gonorrhœal ophthalmia will be so mild in their character, that they will not require any approach to the activity of that treatment I have represented to be necessary when the symptoms are of an acute nature; so that in this affection, as indeed in every other, you will regulate the activity of your treatment by the severity of the symptoms such treatment is intended to remove. In many cases of the slight, or mild form of gonorrhœal conjunctivitis, nothing more will be required for their cure than the use of a little alum lotion, a blister to the back of the neck, and the administration of a few doses of purgative medicine, with a moderated diet.

REMOVAL OF A FISH-BONE FROM THE AIR-TUBE FOUR YEARS AFTER ITS ADMISSION.

To the Editor of the Medical Gazette.

Sir,

In a late conversation with Mr. Day, a highly-respectable surgeon at Isleworth, he mentioned the case which I now send you, having set down the particulars, at my request, for that purpose.

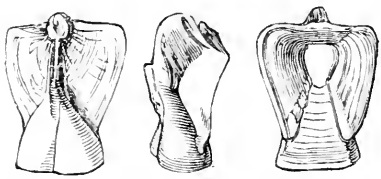
In addition to its value as a well-authenticated fact in support of an ingenious, if not novel plan of treatment in such cases, I felt an interest in it from the circumstance of my having been one of several consulted, who expressed incredulity of the lady's statement, and which, though I had forgotten it, led to Mr. Day's mention of it.

I am, sir, yours,
B. Travers.

Bruton-Street, Feb. 27, 1833.

On the 15th of April, 1832, I was requested to see a lady, in the neighbourhood of Kingston, who had been ill above four years. She had been attended by many of the most eminent physicians and surgeons in London without benefit, and for several months past had procured temporary relief from a dose of opium at bed-time. Having obtained the above information, I intimated that my attendance would be of no avail, as I had no doubt that every thing had been done for the patient that was possible. However, the husband of the lady became very urgent for me to see her, and I consented to do so on the Sunday following. I found my patient (who was about 60) lying on a sofa in a very weak and emaciated state, apparently in the last stage of bronchial phthisis, having a copious expectoration of mucus, slightly intermixed with pus; no appetite, and in a high state of nervous irritability; and when requested to take any solid food, declaring that something prevented her swallowing it. Understanding every thing else had been done that was likely to afford relief, and looking on the case as almost hopeless, I determined, as a last resource, to try the inhalation of iodine, according to the plan recommended by Sir Charles Scudamore, which I had found beneficial in diseases of the mucous membrane. Having made up my mind to the treatment, and while giving

directions for her diet, the lady suddenly said, "I have not told you a circumstance which I have mentioned to all my other medical attendants, and which it is right you should know, though I have no doubt you will laugh at it as they have done. My answer was, "I like to hear all my patients have to say." She then told me, that on the 4th of February, 1828, she had swallowed a fish-bone while at dinner, which had remained in her throat ever since, and was the cause of all her distressing symptoms. I must confess, that like my medical friends, I was disposed to consider it as a thing impossible, but her particularity, as to time and date, made an impression on my mind, and I then told her the means I should recommend her to employ would certainly remove the bone if still there. I also said that it was absolutely necessary she should take some refreshment for a few days before she began the inhaling. She at first said that was impossible; but on my stating that her case was hopeless unless she did, she consented to take some light food. In consequence of this she appeared better when I saw her again on the following Thursday, and I therefore determined immediately to begin with the iodine inhalation, which I used rather stronger than is usual in commencing the process. She inhaled for about five minutes, and it produced violent coughing and nausea. I then left her, desiring the inhaling to be repeated in the evening, saying at the same time that if there were a bone in her throat, it would come up before morning. On visiting her the following day, I was delighted to find her much better, and to my surprise, she produced the fish-bone, apparently the vertebra of a fish, which accompanies this paper*. I learned, that



during a violent fit of coughing, occasioned by the second inhalation, the bone had come up, and that she had instantly exclaimed, "I am cured." I recommended her to continue the inhalation for some days, making it rather weaker, and under this treatment her cough and expectoration gradually ceased, and in three weeks not a symptom remained of the bronchial affection.

Isleworth, Feb. 25th, 1833.

REMARKABLE CASE OF PURPLE FEVER, TERMINATING FATALLY.

To the Editor of the Medical Gazette.

North Shields, Feb. 25, 1833.

Sir,

If you think the annexed case worthy of a place in your valuable Gazette, I shall feel obliged by its early insertion.

I remain, sir,
Your obedient servant,
Edward Greenhow.

I was requested to visit Mr. H. R. about nine o'clock on the morning of Monday the 18th of February. He was twenty-two years of age, very stout, and of a full habit of body. I found him labouring under an attack of fever, having a troublesome dry cough, and incessant sneezing, accompanied with running from the nose and eyes. He complained of a dull pain in the head, and also pain across the loins; he had frequent cold shiverings and nausea, and had also vomited two or three times; he felt considerable thirst, the tongue being covered with a whitish fur. Upon inquiry I found he had been indisposed for several days, the catarrhal symptoms having existed from the first; he had notwithstanding gone about as usual, and had dined out the preceding day. On examining his face, I discovered some eruption resembling measles; but his wife assured me he had had the measles when a child, which I afterwards had confirmed to me by his family. In the course of the day the eruption appeared in various parts of the body, more particularly about the

* The bone itself was about five-sixteenths of an inch in length, and its width in proportion. We have enlarged our representations of it, for the sake of perspicuity.—E. G.

groins, axillæ, and shoulders, but still putting on the appearance of measles.

19th.—Much in the same state, excepting that the whole trunk as well as the extremities were quite covered with the eruption, amongst which appeared petechiæ thinly scattered. The treatment was strictly antiphlogistic.

20th.—Much in the same state as the preceding days.

21st.—The original eruption disappearing, and giving place to vast numbers of petechiæ, the face, neck, and extremities being considerably swollen, and having a purplish appearance, the tongue and gums being blanched. He had passed a considerable quantity of blood in his urine; his stools also contained blood; but this, I believe, arose from the admixture of urine with them, as afterwards, when care was taken to preserve them separate, they never exhibited any such appearance, being throughout feculent, and rather pale-coloured. The pulse at this time was 120, firm, and rather sharp. Dr. Smith, of Newcastle, saw him with me about the middle of this day, and continued in attendance with me until the termination of the case. I had previously given him the infus. rosæ every two hours, and, until his bowels should be well opened, a drachm of the sulph. magnes. with each dose. Dr. Smith proposed bleeding, which was carried into effect to the extent of twelve or fourteen ounces; considerable difficulty was experienced in stopping the bleeding. The blood which was abstracted, after standing some hours, presented the appearance and consistence of arrow-root jelly, the serum forming a larger than usual portion of the whole mass, the crassamentum being grumous in its appearance and texture. He now took a powder, with calomel and rhubarb, and continued the infus. rosæ and sulph. magnes.; his diet to consist of beef-tea, milk, and farinaceous food, with lemonade and orange juice as drink.

22d.—Has passed a restless night; continues to pass bloody urine; the tongue and gums still blanched. He complains much of soreness in the throat, which is covered with petechiæ, and expectorates large quantities of mucus tinged with blood; pulse 120, and small; his body, face, and legs, thickly covered with petechiæ, but his hands, arms, and feet, now covered with hard pale elevations, running into each other; these elevations were permanent, and did not again resume the appearance of petechiæ, nor were they mixed with any such appearance.

23d.—Has slept a good deal during the night, but swallows with great difficulty, and continues to expectorate large quantities of bloody mucus; he also still passes blood in his urine, which, however, has lost its florid appearance, being now grumous; pulse 120, and small; has had no stool for twelve hours.

> To take an aperient draught, with rhubarb and infusion of senna, and being unable to continue the acid on account of his throat, was ordered a preparation of bark every two hours, and to continue the beef-tea, and also to have sago and port wine.

Had a single watery evacuation in the evening; urine having the same appearance as in the morning; pulse 120, and feeble. Has taken repeatedly the beef-tea, and also the sago and wine. The face, body, and legs, thickly covered with petechiæ, and the hands, arms, and feet, with the eminences before described; very restless and wanders, but quite sensible when spoken to.

24th.—Has passed a miserable night; much delirium; pulse 120 and fluttering; is incapable of swallowing; breathing laborious; considerable accumulation of mucus in the trachea, which he is unable to cough up. Petechiæ much extended; his nose one complete mass of a purplish black colour; some vibices scattered over his face, but no where on the body; his eyes sunk, having a purulent discharge, and the eyelids of a dark purple hue. The eminences which covered his hands, arms, and feet, no longer hard, but filled with a transparent fluid; the skin had given way on the back of one of the hands, and discharged a perfectly colourless fluid. He died at eleven o'clock A.M.

This case differs materially from any I have been able to find upon record; it appears to have partaken of the nature of purpura hæmorrhagica, and purpura urticans, and yet differs in many respects from both, particularly in the effusion of lymph which took place in the eminences covering the hands, arms, and feet, and also in the blanched appearance of the tongue and gums.

P.S.—I omitted to mention that, previous to the bleeding, the face was bloated, and the breathing oppressed; but that after the faintness which occurred from the loss of blood went off, he appeared relieved, and the pulse continued firm.

A CASE OF

HEMIPLEGIA AND PHLEGMASIA DOLENS, AFTER DELIVERY.

Extracted from the Case-book of

JOHN GREENING, ESQ.
Surgeon to the Worcester Dispensary, &c.

MRS. M., æt. 29, of a leucophlegmatic temperament, and disposed to phthisis, was taken in labour September 30, 1832. When I entered the house the child was born. The placenta was situated at the upper part of the vagina; I brought it away; a good deal of hæmorrhage had taken place, so much as to cause her to faint several times. The uterus contracted from the application of friction and cold water, which prevented any further loss of blood.

Oct. 1st.—Complains of acute pain over the left eye, with violent headache; she was subject to this before her delivery.

Ordered some castor oil.

3d.—The oil has not operated, although she has taken several doses; excruciating pains in her head, and attacked suddenly with hemiplegia.

V. S. ad ℥xvj.; Pulv. carth. ℈j.; to be kept quiet; low diet.

4th.—Rather better; the left arm is completely paralysed.

Liniment for the arm, and apply Hirud. viij. temporib.

6th.—Head better; can use her arm; bowels open; pulse 80; plenty of milk. The child doing well.

Rep. Pulv. carth.

12th.—Considerably better.

19th.—Feverish; pulse 96; great pain over the hypogastric region, with tenderness; tenderness in the groin; leg painful and much swollen, glossy, of a pale white colour; the veins of the calf corrugated, evidently assuming an attack of phlegmasia dolens.

20th.—Pulse small and quick; urine high coloured; tongue clean; milk gone; lochia continue.

℞ Pil. Hydrarg. gr. xij.; Pulv. Antim. gr. iv.; Syrup. q. s. ft. Pil. iv. sumt. ij. o. n.

℞ Spirit. Ætheris Nit. ℥iss.; Liq. Ammon. Acet. ℥iss.; Mist. Camphoræ ℥ivss. ft. Mist. Sumat coch. larg. iij. quarta quaque hora.

21st.—Pulse 110; face flushed; leg much swollen, nearly to half the size of the body; pain in the groin.

To apply a bran poultice, mixed up with a Decoc. Papav. Repet. med. ut heri.

22d.—Much the same; had no rest.

Pil. Opii gr. ij. h. s.

24th.—Abdomen swollen; swelling of the leg and thigh somewhat less.

25th.—Lassitude; complains of great weakness; pain in the calf of the leg distressing; pulse 85.

App. Hirudines octo; continue the fomentations.

27th.—Considerably better.

Nov. 2d.—Apply a flannel bandage to the leg and thigh; cont. med. Let her diet be more nourishing; continue the fomentations; pulse 80; app. hirudines xij. to the other leg.

7th.—The vena saphena major can be felt distinctly from the knee to half-way down the leg, resembling a goose quill; pulse 80; bowels open.

9th.—Hardness of the vein less, but still distinct to the touch; had a sudden attack of hysteria.

℞ Æther. Sulph. ℥iss; Sp. Lavand. Comp. ℥ij.; Tinct. Cardam. c. ℥ij.; Mist. Piment. ℥vss. ft. Mist. Sumt. coch. larg. iij. 2da quaque hora. Rep. Pulv. Carth.

11th.—Pain in the leg and thigh considerably diminished; the left ankle and foot of the other leg are swollen; hardness of the vein continues.

15th.—Convalescent.

23d.—She is able to walk about her house; the swelling of the leg and thigh nearly gone; complains of weakness.

30th.—Much improved in her general health, and the swelling of the leg quite gone; great weakness still remains.

REMARKS.—In the private practice of physicians and surgeons, and even those

connected with our public establishments, how few are the cases of phlegmasia dolens which fall to the lot of any individual! Dr. White mentions, that out of 1897 women delivered at the Westminster General Dispensary, only five were attacked with it; and of 8000 women delivered at the Manchester Lying-in Hospital, and their own houses, no more than four were seized with it.

The difference in opinion of medical men, in regard to the treatment of this disease, is various; much must be left to the discretion of the practitioner, who ought to prescribe according to circumstances. The inferences deduced from dissection, demonstrating the presence of inflammation in the principal veins of the thigh and pelvis, are altogether gratuitous, and to be received only as a matter purely of opinion.

I have not been able to discover a single argument to shew that it commences in the particular vessels thus affected; on the contrary, many circumstances manifestly lead to an opposite conclusion.

Bridge-Street, Worcester,
Feb. 23, 1833.

ON A PARTICULAR FUNCTION OF THE NERVOUS SYSTEM.

By Marshall Hall, M.D. F.R.S. &c.

A paper bearing the above title was read at the Zoological Society on November the 27th, 1832*, in which Dr. Hall detailed a series of experiments tending to prove the existence of a source of muscular action distinct from all those hitherto noticed by physiologists—viz. volition, the irritation of the motor nerves in some part of their origin or course, or that of the muscles themselves. The peculiarity of this motion he stated to consist in its being excited "by irritation of the extreme portion of the sentient nerves, whence the impression is conveyed through the corresponding portion of brain and spinal marrow as a centre, to the extremities of the motor nerves."

The animals experimented on were salamanders, frogs, and turtles. In the first of these the tail, entirely separated from the body, moved as in the living animal, on being excited by the point of a needle passed lightly over its surface. The motion ceased on destroying the spinal marrow within the caudal *vertebræ*. The head of a frog having been removed, and the spine divided between the third and fourth *vertebræ*, an eye of the separated head was touched; it was retracted and the eye-lid closed, a similar movement being observed in the other eye. On removing the brain these phenomena ceased. On pinching the skin or the toe of one of the anterior extremities, the whole of this portion of the animal moved. On destroying the spinal marrow this phenomenon also ceased. Precisely similar effects were observed on pinching the skin or toe of one of the posterior extremities; and on removing the last portion of the spinal marrow this phenomenon ceased. The head of the turtle continues to move long after its separation from the body; on pinching the eye-lid it is forcibly closed; the mouth is opened, and the membrane expanded under the lower jaw descends as in respiration. On pinching any part of the skin of the body, extremities, or tail, the animal moves. The posterior extremities and tail being separated together, the former were immoveable; the latter moved on the application of the flame of a lighted taper to the skin; those extremities had no connexion with the spinal marrow. All movement ceased in the tail also on withdrawing the spinal marrow from its canal.

"Three things," Dr. Hall observes, "are plain from these observations:—1, That the nerves of sensibility are impressible in portions of an animal separated from the rest; in the head, in the upper part of the trunk, in the lower part of the trunk. 2, That motions similar to voluntary motions follow these impressions made upon the sentient nerves. And 3, That the presence of the spinal marrow is essential as the central and cementing link between the sentient and motor nerves."

Dr. Hall then proceeded to adduce another series of experiments still more conclusive. If a frog be made to swallow a watery solution of opium, it becomes affected with symptoms very similar to those of tetanus and hydrophobia; the body and limbs become rigidly extended; but besides this state of spasm, the cutaneous nerves become ex-

* Proceedings of Comm. of Science, Part II. 1832, p. 190.

tremely susceptive, and the motor nerves extremely excitative; a shake, a touch, a breath of air even, induces spasmodic movements of the body and limbs. A frog made tetanic by opium was decapitated and divided just below the third *vertebra*. The eyes continued drawn in, and no motion could be detected on irritating the eye, eye-lid, or skin; but both the anterior and posterior parts remained tetanic as before. The limbs were moved in the same spasmodic manner by the same slight impressions. The exalted condition of the function of the sentient and motor nerves continued in each part. All was changed on removing the brain and the respective portions of spinal marrow. The eyes were immoveable, but no longer retracted; the muscles of the limbs were flaccid, and there was no evidence of irritability in the sentient nerves.

"These experiments," Dr. Hall continued, "appear to me to establish a property or function of the nervous system—of the sentient and motor nerves—distinct from sensation and voluntary or instinctive motion. However doubtful this conclusion might appear in reference to the first series of experiments upon the animal in its natural state, it can scarcely admit of doubt when we compare with them the phenomena observed in the frog made tetanic by opium. In this case the contraction of the muscles is plainly *not* the result of volition; and it obeys the same laws, in regard to its continuance and extinction, as the similar function or property in its natural and unexalted state. Neither does it arise from the irritation of the motor nerves, or muscular fibre; for it ceases on removing the spinal marrow, while the property of irritability continues unimpaired after the destruction of the nervous centre. I conclude, then, that there is a property of the sentient and motory system of nerves which is independent of sensation and volition—a property of the motor nerves independent of immediate irritation—a property which attaches itself to any part of an animal, the corresponding portion of the brain and spinal marrow of which is entire. This property is capable of exaltation, in the frog, from the influence of opium, and doubtless of strychnine; and I may add, that it is diminished or extinguished by the hydrocyanic acid. It is naturally greatest in animals of lowest *sensibility*, as the cold-blooded."

With regard to the office performed by this property of the nervous system in the animal economy, Dr. Hall stated that it appeared especially to preside over all those functions which, from appearing neither exclusively voluntary nor independent of the will, have been designated mixed. That the function of respiration is of this kind he considered plain, from the phenomena presented by the separated head of the turtle, in which the submaxillary integuments became alternately inflated and contracted as in ordinary respiration. The actions of coughing, sneezing, vomiting, &c. are of the same kind; so, apparently, is the singular effect produced by tickling. Of all the parts of the human frame, the larynx and the anus appear to be most under the influence of this peculiar power. No part is so impatient of irritation as the former; none so much in need of automatic action as the latter, with the other sphincters. These very parts are subject moreover to peculiar morbid affections of this function; in regard to the larynx, it is observed in some affections of dangerous tendency referred to spasm; in the sphincters it is seen in those singular and painful affections termed stranguary and tenesmus. There are also peculiar affections of the system of voluntary muscles referrible to the same property. In hydrophobia and tetanus, in each of which the extremities of the sentient nerves have been wounded, there is a peculiar exaltation of this function; the morbid action appears to be propagated to the spinal marrow, and then along the motor nerves, producing those dreadful sensations and spasms so fearfully characteristic of these affections. The least external shock or impression is terrible; the immediate muscular contractions are intolerable.

SCOTTISH GENERAL PRACTITIONERS AND THE SOCIETY OF APOTHECARIES.

To the Editor of the Medical Gazette.

SIR,

OBSERVING your attention being brought to the subject of medical reform, I beg leave through your widely-circulated journal to communicate with the profession, and the Licentiates of the Edin-

burgh College in particular, on a subject of the greatest importance to the latter body, and which will probably be shortly under discussion in the House of Commons, viz. the unjust and oppressive powers held by the London Apothecaries' Society over the Licentiates of the Scottish Colleges.

Whatever may be the merits of the Apothecaries' Society in the regulating their own body throughout England (and as to this, there is more than one opinion), no one the least conversant with the matter can be blind to the tyrannical operation of their act as far as the Edinburgh Licentiates are concerned. The Apothecaries' Society, by laying down the indispensible necessity of the candidates for their certificate having served a *five years'* apprenticeship, entirely cut out the medical men educated in Scotland, and many in the north of England, whose apprenticeships scarcely ever exceed THREE YEARS, and who thus cannot take out their certificate, and are consequently liable to prosecution, penalties, &c. for practising without it; and that for no fault of their own, but from following the regulations of the Edinburgh College.

Now the clauses of this act, affecting so numerous and respectable a body of practitioners, remaining unrepealed, shews a high degree of apathy in the aggrieved parties. They have only to make the hardship of their case fairly and honestly known to the legislature, and there can be little doubt of redress. The Apothecaries' Act, as it affects them, is not merely a gross perversion of wisdom and discriminative fairness—from its confounding a class of men of a higher description as to attainments than even the Apothecaries' Society themselves, with the reckless and ignorant quack—but remains a specimen of unparalleled injustice, from the enormity of the penalties imposed.

The duty of the Edinburgh Licentiates and Graduates in general practice, at present, is immediately to petition Parliament. The Apothecaries' Society have even gained courage from their listlessness; they are at present carrying on a regular system of intimidation against the Scottish Licentiates, and a declaration is even now filed in the Court of King's Bench against Mr. Allison, a Glasgow Licentiate, practising at Kilham, in Yorkshire. This case has created a great sensation in the north. An association of Scottish Licentiates is now forming for mutual protection against the tyrannical proceedings of the Society. Petitions from Scarborough, and some other places in Yorkshire, will be presented to Parliament, praying for an exemption from the Apothecaries' Act, as the education of the petitioners embraces the course of study of the London Apothecaries' Society, and the College of Surgeons together.

I am, sir,
Yours most respectfully,
JUSTUS.

CASE IN WHICH
NEARLY A DRACHM OF ARSENIC

Was taken, without Fatal Consequences.

DR. PERRINE, in the American Journal of the Medical Sciences for Nov. 1832, makes the following statement:—While convalescing from dysentery, on the dawn of the 20th of September, 1821, I mixed some powdered Peruvian bark in a glass where sixty-four grains of arsenic had been accidentally left by my oldest student, and drank all that it contained except what remained adhering to its internal surface, and then rode six or seven miles to visit a patient. On the route I experienced sickness and uneasiness in the stomach, which increased on my arrival, after unavailing efforts to sleep, so greatly as to induce me to promote vomiting by irritating my throat with my finger, but am not conscious of having discharged either bark or arsenic. I then had some partial slumber, which was interrupted by frightful dreams, accompanied with increasing uneasiness of the stomach, severe pain in the head, and violent agitation of the heart and arteries, and general tremor of the muscles. Four hours had thus passed, when my frightened student arrived (now Dr. E. Pichett, of Huntsville, Alabama), with the intelligence that, from the traces in the glass, I must have taken between fifty and sixty grains of arsenic. Terrible as was this news, it excited a degree of mental power that apparently regulated and strengthened the hitherto unequal action of the vascular system. I then felt, or thought I discovered, preternatu-

ral heat in the stomach, and as my pulse had certainly become preternaturally strong, I had forty ounces of blood immediately taken from my arm, and within eight hours afterwards, twenty-four ounces more. My stomach was very repeatedly filled with warm milk and mucilaginous drinks, and as often immediately evacuated with the assistance of sulphate of copper. The bulky cathartic medicines, salts, senna, &c. in large quantities, were then introduced; but the stomach had become so irritable as to reject them immediately. After going the rounds of more active substitutes, jalap, rhubarb, &c. I commenced with pills of calomel, ten grains each, every two hours, which amounted to two hundred and ten grains in forty hours, whose operation was assisted by numerous clysters. Blisters, rubefacients, and the warm bath, were auxiliary remedies. My pulse continued increasing in frequency during the next days, Friday and Saturday, until near midnight, when it apparently ceased. The coldness of my extremities by this time had almost reached the trunk. During several hours I was gasping for breath, and suffering all that mortal inquietude which generally denotes the near approach of death. I felt a sense of suffocation and weight on my breast, and could barely whisper my desire to be placed in a bath of very hot water. I fell asleep in the bath, was removed to my bed with heating applications to my extremities, and looking as I then thought for the last time at the light of the candle, I again sunk into profound repose. I waked on the dawn of the Sabbath, at first doubtful of a change of existence, and next apprehensive of the occurrence of gangrene. I slowly passed my fingers to my wrist, and discovered perspiration, warmth, and pulsation! I raised my hand to my mouth, where it encountered a free secretion of saliva! A discharge from my bowels which immediately followed was properly tested, and gave no indications of arsenic!

The above case may probably tend to settle one of the disputes among the experimenters on poisons, as it shews that arsenic does not operate exclusively on either the nervous or the vascular system. It need scarcely be added, that my will was dictated and signed while the arsenic was in my body.

CASE IN WHICH

A LARGE DOSE OF CAMPHOR WAS TAKEN.

By G. Eickhorn, M.D.

I have read this morning in your journal a notice of a case in which a large dose of camphor had been taken; and as I have had an opportunity of experiencing in my own person the effects of such a dose of that article, and as the results in my case differed in many respects from the one you have noticed, a narrative of the symptoms I experienced may not be uninteresting.

In 1817, during the wet month of November (in Germany), I was attacked with cold in the head and a severe cough. One evening I took a lump of camphor, about the size of my thumb, and rubbed it down with sugar, with the intention of taking a little of it occasionally, and left it in the mortar covered with a sheet of paper; it was about six o'clock, I sat alone, and being unable to read, because my eyes were swimming in tears, time passed very tediously, and I therefore took without reflection, from time to time, a teaspoonful from under the cover without lifting it, till about nine o'clock, when I perceived the mortar almost empty; I had taken at least two-thirds of the whole. The idea then rushed to my mind, that I had perhaps poisoned myself; but as I did not feel any ill effects, I resolved to wait till such symptoms should ensue as might call for interference. I accordingly went to bed, taking with me laudanum and diluted sulphuric acid. I had not been half an hour in bed before I began to feel warmer and warmer, till I experienced a burning heat, and at the same time my heart throbbed more and more frequently, till it was impossible to count the pulse, but unattended with any uneasiness in the head. I never felt better; never were my ideas more lively or clearer; it appeared as if my intellectual powers were increased; and certainly champaigne never brought on a more pleasing intoxication. In this situation I passed about an hour and a half, or two hours, when my skin began to grow moist; soon after my pulse became slower, and I fell asleep. The next morning I awoke miserably weak, the sweat having penetrated to the lower

side of the feather bed, and my shirt and clothes were drenched. My cold and cough were just as the evening before. I took a lump of camphor about the same size, and found it to weigh nearly 3iij., and supposing the powder left in the mortar to have been the third part, I had taken 3ij. or 120 grains.

The difference between the two cases as to the symptoms, is indeed great; in the case at Breslau the pulse was hard; in mine this did not occur, and the frequency was so great, that I cannot conceive how the pulse could have become hard. Then, in the case alluded to, the pulse was full; in mine it was small in accordance with its frequency; there was heaviness of the head; my head felt rather light; anxiety and agitation were experienced in the other instance; I have never felt more exhilarated and comfortable. The individual at Breslau suffered violent heat in the stomach; I did not experience any uneasy sensation in that organ; and as to the senses, I remember only that I could perceive the pulsation of the arteries in the ear, but without any disagreeable sensation. I do not recollect any derangement in the function of the bladder, and therefore suppose there was none. The difference in the symptoms may be accounted for by my having taken the camphor unmixed with any article capable of modifying its effects, whilst by the individual at Breslau the substance was taken dissolved in four ounces of brandy, to which last article, I think, many of the symptoms are to be ascribed*.

New Orleans, March 1832.

MEDICAL GAZETTE.

Saturday, March 9, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

UNQUALIFIED SURGEONS.

THE letter of "Medico-Chirurgicus," which we inserted a fortnight since, we suppose is intended as a hint to the Council of the College of Surgeons that time wears on, and with it the patience of the members begins to wear out. Well, the fault is not ours: we volunteered our services as "flappers" so long ago as August, and we were in great hopes that we had roused the parties to a due attention to passing events, and the signs of the times; but still, we presume, do those "intense speculations" which we then alluded to as prevailing at Laputa, prevail also in Lincoln's-Inn-Fields; and the exertions we made now several months ago, if attended with any effect, seems only to have been that of exciting a momentary "sensation," which has again given place to the abstraction which is endemic in that locality.

The subject adduced by our correspondent in the present instance is somewhat different: he calls upon the Council to apply for an act of parliament "to prevent persons from practising surgery without being duly qualified;" and we entirely concur with him in opinion that it ought to be imperative on those who practise surgery to have previously given satisfactory proof that they have acquired the art they profess to exercise. But let us do the College of Surgeons justice: our correspondent evidently is not aware —and probably others may be in the same predicament—that the Council on more occasions than one attempted to procure an Act to this effect. In 1813, a bill, rendering it imperative on all who practised surgery to have passed their examination at one of the three British Colleges, was sanctioned by the House of Commons, and unexpectedly thrown out by the Peers at the instance of Lord Thurlow. The attempt was renewed in 1816, when it was rejected by the Commons through the interference of Sir Robert, then Mr. Peel. The grounds of objection are not easily understood, as the provisions only required that no

* American Journal of the Medical Sciences.

one should practise as a surgeon, or as an accoucheur, until he had passed an examination—not before the College of Surgeons in London, but before any one of the Colleges in the United Kingdom. In this instance it is clear that no attempt to be exclusive was made by our friends in Lincoln's-Inn-Fields; and the only object we can discern, as likely to be obtained, was one in which the government might have been expected to concur—namely, the security of the community against the ignorance and assumption of empirics and uneducated pretenders.

Nothing more was heard upon the subject till about three years ago, when the then Chancellor of the Exchequer intimated his intention of laying a tax of 10*l.* upon the diploma of the College of Surgeons—a reference to which proposal will be found in our pages of that period. It was, however, very properly represented, that as there was no law by which any one was obliged to take the diploma in question, such a heavy duty would act as a prohibition, and prove nugatory as a source of revenue. Great surprise, we have heard, was expressed by the minister at this statement of the facts, he having believed that it was imperative to have a diploma before practising, and he advised that his colleague for the Home Department should again be applied to on the subject.

A deputation from the College of Surgeons accordingly waited upon Sir Robert Peel, and strongly urged upon him the propriety of the compulsory measure in question. The view which he took of the matter, however, was unfavourable to the wishes of the College, and we cannot help thinking was altogether rather extraordinary. He stated, first, that the public ought to be allowed to select whom they pleased as their medical advisers; and, secondly, that the Irish College would object to the measure. The latter idea, we suspect, affords the proper clue to the mystery of the refusal: he seems to have received some confused and erroneous ideas about the privileges of our brethren in the sister kingdom, of which his mind could not be divested, although founded entirely on his own misapprehension of the facts. It is enough to say that the request was not that persons practising surgery should have the diploma of the London College, but of some one of the three British Colleges. The question of the right of selection is a very different one; but when it is propounded by a member of the government, we may fairly ask why the legislature should have recognized the propriety of affording protection to certain classes of his Majesty's subjects, and not extend it to all. No one can enter the medical department of the army or navy unless provided with a surgical diploma —nay, even the inmates of our gaols, and the convicts in our hulks, are similarly protected against the practices of uneducated persons. If the principle as applied to these be good, it is not easy to perceive any reason for that excess of liberality which declines to prohibit uneducated persons from practising on other members of the community—which hands over many of the weak and ignorant, both among the rich and poor, to the tender mercies of St. John Long, or to those of humbler and less audacious empirics. With regard to the parochial poor, among whom so many surgical cases necessarily prevail, it is notorious that they too often are sold,—not to the highest but to the lowest bidder, without his either having a diploma or the knowledge that should entitle him to it.

The College of Surgeons, however, among their sins have not this to answer for—would that they would bestir themselves, and take away juster causes of reproach. Their tenure is one of character, and their influence is one of opi-

nion;—they cannot, therefore, be too vigilant. It is thought to be, and undoubtedly is, a mark of an education and of considerable acquirements to have passed the College of Surgeons: it adds to the respectability of the individual in the eyes of the public and the profession, and it is a remarkable and gratifying circumstance to see so many voluntarily competing for a distinction which the party bestowing it neither invites them to seek nor can compel them to possess. Probably the College may be of opinion that they stand on higher grounds than if it were made compulsory to submit to their examination, and it is one of those questions which, after what we have mentioned above, we can scarcely expect that they should be the first to moot again. The measure, however, is of a public nature, and one which ought not to be lost sight of among those improvements which we trust at no distant period to see effected in various departments of medical polity.

We have thus been led by the letter of our correspondent into some general observations connected with the subject to which it relates, and we shall only add farther that no act for amending medical practice will to us be satisfactory, which does not prohibit, under heavy penalties, any man from undertaking the cure of disease, or the care of parturition, without having previously demonstrated that he is qualified to do so, not only by examination before some competent tribunal, but by producing testimonials of such preliminary education as the representative bodies of the profession may from time to time deem necessary.

HOMŒOPATHIC MISSION.

THROUGH the kindness of one of our editorial brethren of the daily press, we have been favoured with a sight of a curious circular—which though addressed to all the world in the profession—"to all practitioners of the medical, *medicinal*, and mechanical branches of the healing art, in every quarter of the world"—has yet not been sent direct to us, it being intended, it appears, that we should receive this "appeal to the faculty" through the medium of our ordinary public instructors.

The name of the appellant is John Borthwick Gilchrist, and he obliges us with a few autobiographical hints by way of establishing his qualification as a preacher of the homœopathic medicine in this country. In early youth Mr. Gilchrist was initiated in our "useful vocation," but more, he says, from necessity than choice; and having had occasion to observe the uncertainty and danger of physic—this, together with an antipathy to witness "painful operations and scenes of domestic affliction," conspired to induce him to relinquish a business wherein, not being a favourite pursuit, he tells us he could hardly expect either fame or fortune. He now took up a literary and laborious occupation in the service of the East India Company, and in this "consumed the prime of youth and manhood of his existence." Physic he totally discarded, or retained but a few elemental reminiscences of it, which, he says, have proved beneficial to him "after suffering as a wretched patient during the last six tedious dreary years of a very long life."

We learn further from Dr. Gilchrist, that he has been a martyr to hypochondriasis for the last six years; that during that time he has been in the hands of "very celebrated and generous allopathists;" but that, after their method of proceeding had proved utterly fruitless, he had recourse to the homœopath, Dr. Pechier, of Geneva, whose remedies he even now feels acting "liker a spell than ordinary drugs, though the dose taken once in eight days is not so much as a very moderate pinch of snuff. From a

state of constant low spirits," he continues, in the overflowing of his gratitude, " I have become all at once as light and as *gay* in body and mind *as a skylark*, and feel myself hourly *soaring* on the pleasures of hope, to reach my wonted state of health and strength by the end of this month, or at farthest the next (March), making an allowance of three months for the complete restoration of all my corporeal and intellectual energies."

He transacted the cure, we are informed, per post. He transmitted a circumstantial narrative of his case to Dr. Pechier, and received in return a medicine, " the nature of which is antipsoric, the colour white, the taste sweetish, its bulk a pinch of snuff, carefully to be placed on the tongue only once a week, after barely rinsing the mouth with tepid water, which helps to dissolve the powder, too small to be perceptibly swallowed, and impalpable enough to be absorbed by the *lingual papilla or adjacent parts.*" The virtues of this wonderful powder, together with a *quantum sufficit* of " tender beef, mutton, certain fowls, *game* and *flesh*, rice, and all the farinaceous grains usually employed in making simple puddings, gruel," &c. have put the author of the circular into such a delightful state, that we must let him describe it himself in his own eloquent language. " I have been virtually, for several years, buried alive for the most essential purposes of existence, and actually feel like a man risen from the dead; but instead of being still charged with gloomy misanthropy, my whole frame glows with the most expansive benevolence, and I could with delight, *if able to do so*, fly on the wings of the morning, or *like the fearless eagle*, from east to west and north to south, that I might enjoy the supreme felicity of making all the sick well, and all the sad happy, so far as homœopathy can perform such a beneficent task. As one proof of boundless philanthropy, I hereby cheerfully forget and forgive every offence which any person has ever committed against me; and I moreover conjure whomsoever I may have offended, to evince the same charitable disposition towards me!"

If Dr. Gilchrist soars at this rate, while he confesses that he is not yet fully restored to his corporeal and intellectual energies, by the end of the present month we fancy he will have no hesitation about his ability, but straightway mount up, " like the fearless eagle," and fly to whatever region of earth or heaven he chooses. Daniel O'Rourke, who got upon the eagle's back and landed in the moon, will have been a novice to him. Then, indeed, for the diffusion of homœopathy! and diffused no doubt it will be, for Dr. Gilchrist hails it " as the gospel of medical salvation, whose genial balm of Gilead, &c."—and he entertains no misgivings about his competency to be its apostle.

We wish, however, that he had waited, till quite well, before he put forth this farrago of a circular. It contains little more than what we have quoted, except that it affects to state the elementary notions of Hahnemann's doctrines and practice, which the writer assumes that the medical people here are totally unacquainted with. Throughout, as the reader may suppose, there runs a vein of *bonhommie*, and an affectation of medical smattering, which we cannot altogether laugh at in our missionary: we could almost be serious with him. Large allowance we can certainly make for the gratitude of a valetudinarian rescued from the " blue devils," whatever may have been the charm by which the exorcism was effected: but he ought not to be permitted to go abroad and preach on the highways, before he is quite convalescent. A second letter, we perceive, is

threatened: is there no homœopath in the land with discretion enough to interfere?

ST. GEORGE'S HOSPITAL.

Dr. Macleod was appointed Physician to this hospital on Friday last (the 1st instant.) There was no contest, the other candidates having retired previously to the day of election.

PAROCHIAL INFIRMARIES.

(From a Correspondent.)

It is very generally supposed that the Physicians of the St. Marylebone Infirmary undertook their office gratuitously; and it was under this impression that other infirmaries (St. Pancras and St. George's) withdrew the salaries from their medical officers.

We know, on indisputable authority, that the Physicians of St. Marylebone did not accept their appointment on such terms, but on condition of being allowed to derive their remuneration from pupils, as at the open hospitals. Nor was it they who made the offer to do the duties without salary. The St. Marylebone Infirmary, therefore, cannot, so far as the medical officers are concerned, be taken as a precedent by other institutions for withdrawing from the profession the pittance to which they are in justice entitled, for laborious services rendered to the public.

We are glad to see that the authorities at the St. George's Infirmary have restored that institution to its original footing.

COLLEGE OF PHYSICIANS.

February 25, 1833.

Dr. Bree in the Chair.

The paper read this evening was entitled "On Fits and Sudden Death, in connexion with Disease of the Kidneys. By James Arthur Wilson, M.D."

The author began by laying down the general position that in the pathology of sudden death, as well as in physiology, and in general medicine, the clue of the physician is in the blood—the material by whose integrity we live—by the waste or spoiling of which we die. It was with a view of illustrating this general idea that the subjoined cases were related, in which a death of greater or less rapidity seemed to have been transmitted from the kidneys through the blood to the other organs. The importance of the kidneys, in regard to the *constancy* of their operation, was pointed out, and the propriety insisted on of judging of the value of their influence, not by what they throw off, but by the blood which they return to the circulating mass, for there is no organ by which the blood is so much modified in quantity and in quality as by the glandular structure of the kidney. The well-known fact of coma supervening upon retention of urine was adduced as shewing the extent to which the brain was influenced by the kidneys—an influence held by the learned author to be produced upon it through the medium of the blood rather than by "nervous sympathy"—the common expression, and supposed explanation. While all admit the general connexion between the kidneys and brain, yet few, said Dr. Wilson, are aware "how rapidly, entirely, and fatally the gland may influence the nerves in their assemblage—which is the brain." For several years he has been in the habit of directing attention to the views here laid down as opportunities presented themselves in the wards of St. George's Hospital, and some recent dissections have tended to confirm the justice of his opinions, as well as to shew their value in reference to questions connected with sudden death—often an important subject of investigation in forensic medicine.

The following account is dated August 13, 1831. Mary Ransom, a female patient, admitted under Dr. Wilson's care at St. George's two days before her death. Case had been reported as "pains, with swelling of the limbs." The complexion was very pallid, and the general aspect very sickly. The morning after admission she was seized with what the nurse called "a fit." Later in the day she was found by Dr. Wilson in a state of insensibility, with stertorous breathing. Next day she died. Her friends reported that she had had a paralytic attack three weeks previously, and had been "very low" for three months. The head was first examined, in consequence of her having died apoplectic. There was no effusion, no

lesion, nor any thing that could elicit a remark except that the brain was pale and bloodless. The author observed that Dr. Bright, in his splendid work on pathology, had adduced several instances of arachnitis, with effusion coincident with disease of the kidney; but in the cases to which he himself was then directing attention, there existed no alteration in the structure of the brain. The large veins were "surprisingly" empty, and there was no fluid in the ventricles. Dr. Wilson turned with eagerness to the kidneys. In both the cortical portion had disappeared, while a smooth firm light-brown homogeneous mass had been substituted, leaving no remains of the original textures, but resembling common size pretty closely. The tubular and mammillary structures had also undergone great change, and in fact had nearly disappeared. There was a large irregular "pocketed" cyst in the left kidney, communicating by numerous pouches with the pelvis of the kidney, and containing some limpid fluid. The bladder was empty. The left ureter had become distended, from which it is inferred that its canal lower down had been obliterated, the bladder being also much thickened at the entrance of both ureters. The lungs and heart were sound. About ℥vj. of light red fluid were found in the pleura. The cervix of the uterus was nearly destroyed by ulceration. In this case, though the actual stock of blood must have been wasted by the uterine discharge, yet the change on which the "fits" depended the author had no hesitation in attributing to the state of the circulation resulting from the disorganization of the kidneys.

A young gentleman was affected with great and constant languor, hesitation of manner, general discomfort, and occasional sense of weight in the chest. His tongue was always furred, and his complexion of a deep dull yellow. He died on the 6th ultimo, having been able to walk out a week before his death. On his return home on this last occasion, he had complained of shortness of breath, and next morning he was found in bed insensible, and with stertorous breathing. So urgent were the indications of pressure on the brain deemed by those who first saw him, that fifty ounces of blood were taken from the arm. He recovered his senses, and lived for a week without fits or palsy, but with symptoms of stupor. A small quantity of blood was again taken from the arm; all, except a minute portion of that taken last, was thickly buffed. No lesion was found in the brain, and no effusion. The veins and sinuses were empty, but of surprising capacity, and this remark was proved by Messrs. Lane and Harrison, who conducted the examination, to apply to all the veins of the body *except the renal*. The kidneys were shrunk within one-fourth of their average size, and scarcely any part of what remained exhibited the appearance of healthy cortical structure. There were several ounces of pale fluid in the bladder, which coagulated on the application of heat and nitric acid. Nearly a pint of serous fluid in left pleura; lungs much loaded with frothy serum; heart large, but healthy; large coagula in right cavities from jugular veins, which were of immense size. In this case, as well as in some others which were adduced, wherein the kidneys were diseased, the blood was "exceedingly" buffy, although no appearances presented themselves which admitted of being referred to inflammation.

Five additional examples were mentioned as having occurred within the author's observation, in which death, more or less sudden, and for the most part preceded by "fits," had taken place, no effusion nor lesion being found within the head, but disorganization presenting itself in the kidneys of a nature to have interfered with secerning powers of the glands; and the position strengthened by reference to a case in the last number of the Medical Gazette, (Feb. 23d) in which Dr. Elliotson remarks that in the only case of apoplexy connected with suppression of urine which he had ever opened, there was neither fulness of vessels nor effusion about the brain.

The inferences drawn from the foregoing facts relate to the importance of the kidney "as an organ of the circulation," by its influence on the quality and quantity of the blood. On the condition of the vital fluid in these respects constantly and necessarily depends the business of the brain, heart, and lungs. The exact changes of the blood may require farther investigation, but the presence of the urea, and the deficiency of albumen, are those which have hitherto chiefly attracted the notice of Dr. Prout and Dr. Bright, the two highest autho-

rities on questions of this nature. Dr. Wilson's object was rather to insist on the intimate, constant, and vital connexion of the brain, lungs, and heart, with the kidneys, through the medium of the blood, as illustrated by the morbid anatomy of that gland; and to draw from this the inferences, that in the treatment of all cases of apoplexy, epilepsy, hydro-thorax, anasarca, the state of the kidney ought to be fully taken into the account; and that in all cases of sudden death these organs ought to be examined whether disease be found elsewhere or not. Dr. Wilson farther alluded to the obvious connexion between some varieties of hysteria and the urinary secretion, and inquired whether—seeing the nervous system is thus so much influenced by it—the "function of sleep" may not also have some relation to the effect produced by the kidney on the blood. A few years ago (he observed) scarcely any one would have thought of seeking for the cause of epilepsy, dropsy of the chest, or disease of the heart, in the structure of the kidney; but that hereafter the attention of pathologists will include this investigation, he regards as one of the many proofs that physic is fast becoming a science, and that its practice henceforth is likely to rest on a less questionable basis than mere assertion, however positive.

CLINICAL OBSERVATIONS

ON FRACTURE OF THE LOWER EXTREMITY OF THE HUMERUS, SIMULATING LUXATION OF THE ELBOW BACKWARDS.

By Baron Dupuytren.

From the "Leçons Orales," published, periodically, under the Baron's inspection.

In our diagnosis of fractures and luxations we cannot be too precise, for we are every moment meeting, in the hospitals, with abundance of cases which have foiled the sagacity of able masters. Thus affections of the coxofemoral articulation, scapulo-humeral luxations, fractures of the lower extremity of the humerus, of the lower extremity of the radius, and, generally, every solution of continuity in the neighbourhood of joints, are sources of numerous errors. Several of these I have from time to time taken into consideration: to-day I shall call your attention to fractures of the lower extremity of the humerus, simulating luxations of the fore-arm backwards. Nothing is more common than cases of this kind: but a thorough knowledge of their nature is of great importance, for upon a mistake in the treatment may depend an infirmity incurable for life.

Let us suppose the fracture a transverse one, and situated just above the condyles. The olecranon is drawn backwards and upwards by the triceps brachialis muscle, the upper fragment is carried forwards, and simulates the lower articular surface of the humerus. The prominence of the olecranon will be so remarkable as to present the appearance of being from twelve to eighteen lines more projecting than on the sound side: and then the antero-posterior diameter of the arm, near the elbow, will be found sensibly augmented. Such apparently are all the signs which are observable; and if the observer is satisfied, efforts of extension and counter-extension are made, and the reduction is in general readily effected. A bandage is applied, and the facility with which the bones are restored to their place is a source of congratulation. But presently they are displaced again; and at the end of five or six days, in the midst of tumefaction, there is something found that is not natural. It is attributed to the patient, who has not kept himself quiet. The reduction is tried again, but the deformity cannot be got rid of. Considerable swelling occurs. The surgeon is not uneasy, although the state of the parts is not improved. At the end of six weeks or two months, however, he recognizes the error he has committed, but it is now too late to repair it; the patient is deformed, and the movements of the parts are greatly abridged or singularly impeded. In general, if twelve or fourteen days elapse without the true nature of the accident being detected, nothing can be done. The swelling of the surrounding parts presents an almost insurmountable obstacle to a complete reduction, and the deformity is fixed.

Case I.—*Fracture of the Extremity of the Humerus mistaken for a Luxation—Deformity, and defect of Motion in the Elbow-Joint.*

In the month of December, 1832, a child was brought to M. Dupuytren, which had had a fall from an ass about a month previously. Two medical men, who were called in successively, pronounced that there was a luxation present, and treated the case accordingly. When M. Dupuytren examined the child he found a projecting tumor, very uneven on its surface, and which evidently was the inferior extremity of the humerus: the olecranon projected externally. It is very probable that, by reason of the tender age of the

child, nothing had occurred but separation of the epiphysis: the two fragments had united with a deformed callus. What was to be done? To fracture the callus did not appear to be safe, and as M. Dupuytren considered that the chief inconvenience would arise from the inability to extend the forearm, he contrived a method by which the extension should be effected by degrees. This plan has been partially successful; but a certain degree of deformity and inability of movement of the parts will always remain.

The chief means of distinguishing fracture from luxation is by the crepitus. If, then, the practitioner be called in very soon after the accident, taking in one hand the arm, in the other the fore-arm, he ought to impress on the parts of the former motions from below upwards, and *vice versa*, as well as from before backwards. On doing so, he will almost always perceive the noise characteristic of fracture; whilst the moderate motion of extension and counter-extension will ordinarily bring the parts very soon into their proper situation. If it be a luxation of the elbow, it ought to be known that this is one of the easiest of luxations to reduce.

The crepitus, however, which is so valuable a sign of fracture, can only be perceived very obscurely, if at all, once the swelling has commenced. In such case, it is true that the reduction of the displacement is always less difficult than in luxation, and the motion more free. But who will venture to pronounce on such symptoms? There is, fortunately, a capital resource or pathognomonic sign, which will serve instead of crepitation in such cases. Take a fragment in each hand, the thumb forward and directed towards the fracture, and then try reduction. This simple effort is generally quite sufficient within the first twenty-four or thirty-six hours after the accident. Then, having given it a little time, move the fore-arm backwards; if it be a luxation the reduction holds good—if a fracture, the displacement re-appears immediately.

Dr. Malgaigne, who has published his remarks upon this kind of fracture in the *Gazette Medicale*, thinks that we ought to employ other means of diagnosis, distinct from those just stated. In the luxation, says he, the articulation is destroyed, and movements of extension and counter-extension are impossible; in the fracture it is perfect, and probably those movements are, to a certain extent, preserved. This distinction, however, would only be useful to us immediately after the fracture; but at any time there is an anatomical sign which appears to be infallible whenever it is recognized. It is this: how great soever may be the projection of the olecranon, it will not be found farther from the tuberosities of the humerus than natural, if there be fracture; whilst it will be found much more so if there be luxation. In the latter case also, the anterior projection is more round and smaller; while, in the former, it is as large as the articulation itself. There may be cases in which the swelling might conceal the projections of the bones; but here no longer is it indispensable to determine the nature of the displacement: most probably it is beyond the possibility of determination.

Case II.—*Fracture of the Lower Extremity of the Humerus, resembling Luxation—Cure without Deformity.*

A man, aged 27, tall, and of a strong constitution, fell into a pit on the left elbow, and was brought immediately afterwards into the *salle* Saint Côme, to be treated for luxation, as the surgeon who saw him pronounced it to be. The humero-cubital articulation was out of shape; an enormous swelling occupied the lower extremity of the arm, which was tense and very painful. The fore-arm in a state of semiflexion; the fingers applied to the tumor could feel, in spite of the tension, a hard projection, slightly irregular and wrinkled, occupying the bend of the elbow and raising the anterior brachial and biceps muscles. Behind, the olecranon projected beneath the skin, and was slightly elevated above the level of the condyles; movements of flexion and extension were impossible, and when attempted gave great pain. So far, the symptoms did not contradict the existence of a luxation: but motions communicated to the inferior extremity of the arm, and also to the upper extremity of the fore-arm, indicated an unusual mobility and a distinct crepitus. This decided the nature of the lesion. M. Dupuytren at once pronounced it to be a fracture of the inferior extremity of the humerus, some fingers' breadth above the condyles.

Perfect reduction could not be effected on the day of the accident, owing to the sharp pains caused by the attempt, and also on account of the great swelling. All that could be then done was to place the limb in a state of semiflexion on a horizontal plain, propped with pillows, after covering it with compresses steeped in Goulard water. A smart bleeding was practised on the other arm. Low diet.

Next day, M. Dupuytren completed the reduction. Having secured the shoulder in the first instance, and directed an assistant to draw the fore-arm semiflexed (the limb being converted into a lever of the third order, the fulcrum being, as it were, at the wrist which was held by the assistant, the power at the bend of the arm

where it was applied by the other hand of the assistant, and the resistance at the lower fragment), the professor seized, with both his hands, the lower extremity of the arm where it was fractured, pushing the oleeranon strongly forward and the inferior fragment backwards. The bandage of Scultetus was now applied; some graduated compresses were put circularly on the lower extremity of the arm, so as to correspond with the two osseous projections, and to replace the fingers, which held them in their places. They were further secured by two rather lengthy compresses, and afterwards by the other pieces of the bandage, previously dipped in cold water, which was rendered still more sedative by the addition of some acetate of lead. Finally, the two lateral cushions were lapped on each other, in order that, in closing the *appareil*, they might secure specially the graduated compresses, and cause them to be properly directed. On the second day, things looked satisfactory: the bandaging, which became a little loose by the subsidence of the swelling, was rearranged. On the sixth day the patient felt some pain, which, upon examination, proved to be owing to a slight projection of the fragments: but a few efforts of extension produced a complete reduction. The bandage reapplied.

Although there was no pain felt afterwards, yet, lest there should be any displacement, however slight, M. Dupuytren from time to time, examined the state of the parts, and always found them in the most desirable condition: the bandage was regularly reapplied.

On the thirty-third day the coverings were finally removed: the consolidation of the parts was complete, and left not the slightest deformity.

The forty-fifth day the patient left the hospital, being able to perform the movements of flexion and extension.

The history of this fracture is of great interest, as well on account of the insidious nature of the symptoms, which led to its being taken by some for a luxation of the elbow, as on account of the mechanism of the displacement so well explained by M. Dupuytren. One of the pupils had an opportunity of seeing the patient some weeks after his discharge, and of ascertaining that no trace of the fracture remained except some stiffness in movements of the joint.

CASE III.—*Oblique Fracture of the left Humerus, near the Elbow, with External Wound—Reduction—Cure within fifty-four days.*

P——, aged 23, of good constitution, came to the Hôtel Dieu October 18th, 1831, on account of an injury consisting of considerable displacement of the oleeranon, with wound of the soft parts, occasioned by a fall on the pavement. Great pain was experienced at the moment, with impossibility of executing any movement. From the displacement which existed, one would have supposed that there was luxation of the elbow; in fact, the lower fragment was raised up behind to some extent, and thus similated the presence of the upper extremity of the bone of the forearm, whilst the upper fragment of the humerus came very low down before the inferior, so as to form a projection which resembled the lower extremity of the bone of the arm in luxation of the elbow backwards. The limb, besides, was shortened, and all movement impossible. But the mobility of the fragments, their crepitation, and above all the integrity of the elbow-joint, soon rendered the nature of the injury apparent. The fracture was oblique, and had its seat about an inch from the joint. The external wound which existed had been produced by the blow on the ground, and did not communicate with the fracture. The case, however, was regarded as severe, because the inflammation might readily extend to the joint, and give rise to troublesome consequences. The reduction of the fracture was performed by means of extension, counter-extension, and coaptation, under which the limb soon regained its proper figure. The wound of the elbow was dressed, and protected from the pressure of the splints, which were then applied so as to keep the parts in apposition. The limb was then laid on a cushion in the half-bent position. The patient was copiously bled, and placed on low diet. On the fourth day the dressings were removed, and at first required to be renewed every day in consequence of the suppuration, but this soon subsided, and cicatrization rapidly followed. At the end of forty days the consolidation was complete, and no deformity apparent; and on the fifty-fourth day she was discharged, having already regained in part the movements of the joint.

The celebrated Cooper has remarked that this fracture is much more frequent in infants than in more advanced age: nevertheless, the two cases above related, and to which I might add others, shew that it is sometimes met with at a later period. Supposing this to be the case, what course ought the surgeon to adopt? If he be called to a patient who shews symptoms of fracture of the lower end of the humerus, or of luxation of the elbow-joint, he takes hold of the fore-arm with one hand, and of the arm with the other, and in the case of fracture generally

replaces the parts in their natural position with the greatest ease, unless there be tumefaction, but when the least movement is made the displacement immediately occurs again, and he need not hesitate in regarding this as a case of fracture. To suppose there is fracture when there is dislocation, is a much less injurious mistake than the contrary supposition would be.

The diagnosis established, what apparatus are we to apply? This has been partly seen from the preceding cases, but we shall now explain it more in detail. The extension, counter-extension, and coaptation, having been properly performed, we place the limb on a plane of cushion, covered with the common bandage of Scultetus; the position of the limb ought to be intermediate between flexion and extension. Graduated compresses are then applied on the fore and back parts of the humerus, about three fingers breadth wide, and not more than three or four inches long; a little thicker opposite the fragments. These are made to bear in a curve upon the fragments, and maintained in their situation, by pretty long compresses. The separate many-tailed bandage is next applied, and then a cushion bent in the middle, so as to be double at the part which is applied to the lower end of the humerus; and the same process is adopted with regard to the olecranon, by which means the former is pushed backwards, and the latter forwards. A short splint is placed on each cushion, and fixed pretty firmly, to give more power to the apparatus. In twelve or fifteen days the fragments are so far advanced as to be no longer capable of subsequent displacement. The swelling, in fact, now presents an obstacle to consecutive derangement of the parts.

ON EXOSTOSIS OF THE GREAT TOE.

In formerly speaking of those cases where the nails prove troublesome by entering the flesh, I purposely avoided any allusion to those exostoses which occur on the last phalanx of the great toe, because I wished to be able to shew you some example of it. An opportunity of doing this has now occurred; and it has also enabled me to perceive that my ideas on this subject are not generally prevalent. A distinguished practitioner of this metropolis, who formerly served as a surgeon in the army, consulted me about his child, whom he believed to be troubled by a nail entering the soft parts. I examined the little patient with care, and I soon discovered that the supposed disease was nothing more than an exostosis on the upper surface of the phalanx, and that the matrix of the nail was not affected. Perhaps you remember the young woman who came to the visit about three months ago, with a tumor on the upper surface of the great toe. At the first glance, one might have supposed that there was an affection of the nail; but an incision on each side brought the evil into view. I afterwards removed it, and in a short time the woman was entirely freed of her exostosis, and of the apparent disease of the nail. The three cases which follow will give you more precise ideas on this subject.

CASE I.—*Exostosis at the Extremity of the Great Toe.*

Louisa Emery, aged 22, of good constitution, and never having had any venereal affection, consulted M. Dupuytren December 28, 1821. For about two years this young woman has had, at the extremity of the last phalanx of the great toe, and near its external edge, a very hard tubercle, bony, and insensible unless very firm pressure be made. The base is wide, and has thrown the nail outwards, having besides produced some wasting of it at this part. She assigns no cause of the complaint. It began more than two years ago with some pain about the toe, the pain having no exacerbation at night, but being increased by walking. It slowly attained its present size. Acceding to the advice of M. Dupuytren, she had it extirpated.

CASE II.—*Exostosis of the last Phalanx of the Great Toe.*

Catherine Lowny, aged 20, a mantua-maker, has had for the last eighteen months a hard bony tumor, on the outer and lower part of the left great toe. Its growth is extremely slow, as it is even now not larger than a small nut; no cause is assigned for its origin. The tumor appeared to originate before the first phalanx of the toe, and slightly raised the nail. It was not painful, but it interfered with walking.

Jan. 8th, 1822.—The girl having consented to the removal of the tumor, it was accomplished in the following manner:—The patient being placed on a bed, the foot held by an assistant, M. Dupuytren made two semi-oval incisions, the first of which included the greater part of the tubercle; other portions were subsequently removed with the knife in a similar manner*. The tumor was of bone, and composed of two textures—the outer hard and compact, the inner spongy. The wound

* The expression used in the original in describing the manner of operating, is "*M. Dupuytren cerna la tumeur.*" "Cerner" means, to take a kernel from its shell.—*Translator.*

was simply dressed, and the patient was able to return home.

12th.—The patient returned to have the foot dressed; the wound has suppurated, and is healing.

CASE III.—*Exostosis under the Nail of Great Toe—Symptoms aggravated by Caustic—Extirpation—Cure.*

A young woman, about 25 years of age, had been affected for two years with a tumor under the nail of the great toe. At first it was very small; this tumor became larger and larger, raised and displaced the nail, and rendered the act of walking extremely painful. The patient then consulted a farrier, who thought that it was a wart, and cauterized it. Far from diminishing under this application, it only increased in size, and the nail was bent more and more backwards; it was besides rough, and of a deep yellow colour. The sufferings of the patient led her to seek relief at the Hôtel Dieu.

June 3d.—M. Dupuytren proceeded to extirpate the exostosis by means of a bistoury. He made a semi-lunar incision at each side of the toe, by which the tumor under the nail was exposed; and he then cut it completely off with the same instrument; but as it proved harder than had been expected, this was not accomplished without some difficulty. However, it was entirely removed, and no other circumstance presented itself in the case worthy of remark.

Now this disease, so far as I know, has not been described by writers. It consists in a pyramidal exostosis, arising from the upper surface of the last phalanx of the great toe, raising the nail, and rendering the act of walking painful, or impossible. Though not dangerous, it is nevertheless very inconvenient, and gives rise to mistakes which lead to painful and unavailing operations. At the beginning the exostosis is not attended with pain, but by degrees this comes on, as the nail is more and more displaced. Sometimes the pain is excruciating when the individual in walking strikes against any thing hard, as for instance the pavement. The causes of the affection are unknown; generally it occurs in persons who have received no blow on the part, and who have not worn too light shoes; but in other instances it shews itself in those who have met with some violence to the part. It does not seem to be either venereal or scrofulous; nor is it probable that an affection which always exhibits the same symptoms, and the effects of which are identical, should originate in such dissimilar causes. The patients themselves generally take it for a wart, and under this impression they apply caustic, which always does harm. In other instances it is supposed to be a disease of the nail itself, and this part has been occasionally extirpated. The tumor, however, increases, the nail is more and more displaced, and is thrown backwards till the point approaches the root. If the tumor be dissected at this time, it will be found to consist of skin, a fibrous tissue, and a bony pyramidal projection rising from the upper surface of the last phalanx. Generally the exostosis is not very hard, and may be easily cut through by means of a strong bistoury. Sometimes, however, the induration is such as to require stronger instruments, such as the chisel and mallet.

If the disease be allowed to run its course, ulcerations of a troublesome kind are apt to take place; and M. Dupuytren has seen the last phalanx amputated for a tumor of this kind with ulceration. The only cure is complete extirpation of the exostosis; and for this purpose the removal of the nail is sometimes necessary, but in most cases it is not indicated. A semi-circular incision is made on either side of the nail; by these the tumor is exposed, and may be removed by the bistoury or chisel. Care must be taken not merely to remove the summit, else will the disease recur. I have had occasion, added M. Dupuytren, to extirpate at least thirty of these tumors, and I have always by this means effected a complete cure.

ROYAL INSTITUTION.

Friday, February 22.

Practical Remedy for the Dry Rot.

EVERY body has heard of the havoc which has been effected in some of our most valuable shipping, and of the destructive process which has rendered the work of the architect vain in some of our noblest edifices. To discover a remedy, or a preventive rather, of this insidious power—the dry rot—has long been a problem. It is now, however—we think we may venture to be sanguine about it—found. Corrosive sublimate is that remedy. The preservative powers of this substance have long been known to anatomists, curators of museums, and others interested in an acquaintance with antiseptics. It occurred to Sir H. Davy, some years ago, when applied to for a receipt to check the approaches of the book-worm in the magnificent library at Althorp, to suggest corrosive sublimate; but he was induced to abandon the idea, from a supposition that a poisonous atmosphere would attend on the volumes which should be charged

with this active mercurial. Dr. Faraday confesses that it was he himself who influenced Sir Humphry in coming to such a conclusion; but the result of his researches since that time, and particularly within the last two or three years, warrants him in stating now the contrary. Organic matters treated with corrosive sublimate, form with it a chemical compound, and contract none of its noxious qualities. It is on this principle that Dr. Faraday is enabled to shew, and indeed may be said to have succeeded in proving, that timber which has been steeped for a time in a saturated solution of the sublimate becomes indestructible, and affords that which has been so long a desideratum in the building of our wooden walls. The lecturer detailed the various experiments which have been made on this subject at Woolwich, under the sanction of the Lords of the Admiralty; and in every instance wherein the results have been examined (for some of them are yet undergoing the test of time), it appears that they have been eminently marked with success. Pieces of the same wood, some saturated, and some left untouched, have been exposed to the same influence, when the latter have turned out to be utterly devoured with the rot, the former remaining perfectly sound. The saturated and the unprepared pieces have even been mortised into each other, when the dry-rot has eaten the latter to the boundary line, and stopt there. The same thing occurred with pieces of cotton canvass; those washed in the solution remaining uninfluenced by the rot, while those not so protected, perished. A Mr. Kyan, we understand, is the inventor of the remedy.

Several very fine specimens of the fungous growths which constitute dry-rot, were on the table.

Friday, March 1st.

Singular Case of Juvenile Corpulency.

After Dr. Faraday (who, at a short notice, supplied the place of Mr. Wheatstone this evening,) had concluded a very interesting lecture on the experiments which have been recently made with a view to measure the velocity of the electric fluid in discharges by the machine, and thus to determine more satisfactorily its direction and nature, Mr. Pettigrew introduced to the meeting the boy concerning whom he has recently written a paper for the Royal Society. Among other points noticed by Mr. Pettigrew in the short verbal statement which he now gave, he mentioned that this boy was the son of a miller (then present), and there was nothing remarkable to be told about his infancy; that a few years ago, having met with an accident—the fracture of a limb—during his confinement and convalescence obesity set in, and he has ever since continued to grow till he has attained his present extraordinary size. He is no more than twelve years old, yet he weighs 14 stone 2 lbs.; he is 5 feet 1 inch in height, is well proportioned considering his bulk, and his flesh is particularly firm. He looks healthy, good humoured, and is, we understand, in no way different in his habits from other boys of his age.

ANECDOTE OF PARÉ.

Ambrose Pare, having had his leg badly fractured by a kick from a horse, entreated the surgeon who came to dress it, not to spare him. "Let me be," said he, "even as the greatest stranger in your eyes; and while you reduce my fracture, forget, I beseech you, the friendship that you bear me." He then advised the opening of the wound with an instrument, that the bones might be the more readily restored to their place by the application of the fingers.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *March* 5, 1833.

Abscess	3	Inflammation	66
Age and Debility	67	Bowels & Stomach	4
Apoplexy	12	Brain	4
Asthma	37	Lungs and Pleura	6
Childbirth	11	Insanity	11
Consumption	97	Jaundice	1
Constipation of the Bowels	1	Liver, Diseased	13
Convulsions	58	Measles	20
Croup	5	Mortification	1
Dentition or Teething	12	Paralysis	4
Dropsy	27	Rheumatism	2
Dropsy on the Brain	17	Small-Pox	27
Dropsy on the Chest	2	Sore Throat and Quinsey	1
Epilepsy	1	Spasms	2
Erysipelas	2	Stone and Gravel	3
Fever	15	Stricture	1
Fever, Scarlet	5	Thrush	2
Fever, Typhus	1	Tumor	2
Gout	2	Venereal	1
Heart, diseased	2	Unknown Causes	5
Hooping-Cough	42	Stillborn	14

Increase of Burials, as compared with the preceding week . . . 221

METEOROLOGICAL JOURNAL.

February 1833.	Thermometer.		Barometer.	
Thursday . 28	from 27 to 45		29·29 to 28·85	
March.				
Friday. . . 1	29	45	29·04	29·26
Saturday . 2	29	49	29·61	29·74
Sunday . . 3	31	53	29·68	29·64
Monday . . 4	39	53	29·64	29·74
Tuesday . 5	27	51	29·86	29·98
Wednesday 6	37	43	30·04	30·00

Wind variable, S.W. prevailing.

Except the 5th, generally cloudy, with rain at times.

Rain fallen, ·2 of an inch.

Charles Henry Adams.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 16, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

AFFECTIONS OF THE INTELLECT.

Mental functions dependent on the size of the Head.—Having spoken of the diseases found in various parts of the nervous system, I now proceed to speak of those original aberrations of formation which are occasionally discovered. You are, of course, aware that the nervous system is more complicated in the series of animals, as we rise from those which display the least mental functions, till we arrive at man, who displays the very highest intellectual faculties. So, accordingly, the lower the animal is, the smaller is the brain; and in the very lowest we have nothing that corresponds to brain; but where there is mind there must be something to direct the functions; to feel sensation, there must be an organ.

Accordingly, you will find it universally allowed, that the nervous system has an addition in proportion as we ascend in the scale of being. I will read you an extract from the Edinburgh Review, which was disposed to laugh at this as nonsense. It said that all heads were the same shape, and the same size; but you will find the following paragraph in the 94th No.:—"As we ascend in the scale the animal acquires increased sense, power, or instinct; its nerves multiply, its brain becomes improved in structure, and, with reference to the spinal marrow and nerves, augmented in volume, more and more, until we reach the human brain; each addition being marked by some addition or amplification of the powers of the animal, until in man we behold it possessing some parts of which animals are destitute, and wanting none which theirs possess; so that we are enabled to associate every faculty which gives superiority with some addition to the nervous mass, even from the smallest indications of sensation and will, up to the highest degree of sensibility, judgment, and expression."

You may therefore suppose, that if certain parts of the brain be deficient, the mind will in a correspondent manner be defective; and this accordingly is the case. I will first enumerate, as morbid anatomists do, the deficiencies which are found in the brain, not referring at all to phrenology, but taking up the subject as it is treated by morbid anatomists.

Deficiency of the Convolutions.—In the first place, it is found in the higher beings who have a deficiency of the cerebral mass in any respect, that the convolutions are too small, or that there are too few of them on one or both sides. You are of course aware that the convolutions give a great extent of surface to the brain, just as the valvulæ conniventes of the intestines give an increase of surface to the interior of that canal; so that if there be fewer convolutions than usual, there must be so much less external part of the brain. Thus you find occasionally in human beings that there are too few convolutions on one or both sides, or you find them too small. Occasionally, one or two convolutions, usually found, have been entirely absent.

Deficiency of the Hemispheres.—Secondly, all the upper parts of the hemispheres, down to the vault of the ventricles, have been found to be absent, so that the ventricles lie entirely open, or are only covered by a serous sac; that is to say, by the

arachnoid coat, in all probability, which lines them. Sometimes one lobe of the brain has been absolutely wanting, and sometimes one has been only too small.

Deficiency of the Thalami Nervorum Opticorum and Corpora Striata. — Thirdly, the thalami nervorum opticorum and the corpora striata, on one side or both, have been too small, or have been found absolutely wanting, or their place has been occupied by a cyst, but sometimes it has not. A deficiency is sometimes seen in the grey substance of the brain, and sometimes in the white substance. If the hemispheres be wanting, there is nothing beyond the crura cerebri, except a few scattered fibres, such as are seen in the fœtus before the hemispheres are formed; and indeed then there are no central white parts.

Deficiency of the white parts.—Fourthly, the central white parts are found sometimes in a state of deficient development. Occasionally the corpus callosum is a mere membrane; and it has been found absolutely wanting in an idiot thirty years of age. In some brutes, for instance, birds and reptiles, the same is naturally observed; there is no corpus callosum, nor any fornix, and therefore such a brain resembles the brain of some brutes.

When there is this smallness of these parts, other parts are not naturally so developed in man as they are in brutes; they appear larger in such a human being, but it is merely by comparison, and it is found that the parts are larger in brutes; they appear larger, if the other parts be wanting, but it is merely in deception. You never find the tubercula quadrigemina a hollow tube, as in birds; you never find the fourth ventricle so large as in some brutes. The middle lobes of the cerebrum, though naturally smaller in brutes than in man, are in this case just as large as those in man.

Deficiency of the Cerebellum.—The cerebellum is sometimes deficient: it may be small, or the medullary centre may be small, or the lobes may be small—they have been seen to be a mere sac. This is observed in some brutes, and sometimes in the human embryo.

The reason of this extraordinary formation is, that development has ceased, in most instances, at a certain period. You know that the brain, in the human body, is different at first from what it is at last, and occasionally the development of it stops; and as the adult person grows up, you see that it is totally different from what it is in other beings.

When this is the case, the cerebellum is so defective as to be a mere sac, the tuberculum annulare is wanting, though the middle lobe of the brain is present, because the tuberculum annulare is found to be in proportion to the size of the cerebellum. You find, where there is no cerebellum, still the corpora quadragemina may exist, because they have no relation to the cerebellum, but to the spinal marrow. As to the pineal gland, you find that in all formations of the brain.

Absence of the Spinal Marrow, &c.—Now the cerebrum and cerebellum may be absent, although there is the spinal marrow and the medulla oblongata; but if there be no spinal marrow, it is found that there is neither cerebrum, nor cerebellum, nor medulla oblongata. As to the spinal marrow itself, it may be entirely absent, and sometimes it is found divided; and it is said that when it is divided into two, the brain is always absent. Sometimes it is only channelled down the centre; and when this is the case there are frequently other malformations—such as a want of brain, or a want of bone in the spine. When there is a channel, it is found to arise from the want of the cortical substance of the spinal marrow, and the channel seems continued all the way up to the fourth ventricle. The division, or the channel, may be large or small, and it may not run the whole extent. The channel itself is found at all ages. Two instances of maniacs are recorded, in one of which two central canals were observed in the spinal marrow, and in another only one. Many brutes have this central canal. Sometimes the spinal marrow is not wanting, but is very small; and sometimes the smallness is local, occurs only at one spot, just as smallness occurs sometimes only in one part of the brain.

Does not influence the Nerves.—Now it does not follow that the nerves should correspond to this deficiency; there may be a deficiency of the nerves, when the brain is wanting, and a deficiency, too, when the spinal marrow is wanting, but occasionally the nerves are found perfect, although the brain and spinal marrow are found wanting. There they are, ready for action, but they want the brain and spinal marrow to put them in motion. When there is this deficiency in the nervous system, the corresponding parts of the body are sometimes small, and likewise atrophied, yet occasionally the body is perfectly sound—in all other respects well developed, where this deficiency of the nervous system exists, excepting that the heart is never found where there is no head. Serres says that he has found a heart where there was no head, but nobody else ever did.

Absence of the Head always accompanied by Absence of the Lungs.—Where there is no head, I believe the lungs are never found; but notwithstanding there is no head, there is always some rudiment of the alimentary canal, and for this simple reason—it is formed first.

Causes.—Now the causes of all these wants—smallnesses, and deficiencies in the nervous system are—First, original defective power;—the parts are not developed, through some deficiency in the formative power, independent of all external circumstances. There is a want of power in particular rudiments of the embryo to develop the various parts. Secondly, they are wanting, I believe, through some previous irritation. They have existed, but some irritation has also existed, which has wasted them, or arrested their progress. Thirdly, pressure, we know, will cause atrophy in future life, and so it will occasionally prevent the development of parts in the fœtus.

Deficiency of Brain attended by a corresponding deficiency of Mind.—Now if the brain be the organ of mind, which I suppose no one will doubt at the present day, it stands to reason that this deficient development must be attended by a correspondent deficiency in the mind, in some way or other. If the brain be altogether wanting there can be no mind at all; and, accordingly, you will find fœtuses continually formed without any head, and, of course, they cannot live, so as to have a chance of manifesting mind. But you will see some born, and living some days, who have merely a little brain about the tuberculum annulare, and they will cry, and suck, but they will do no more, and presently they die with so little brain as that, if we may call it brain at all. You will see others, who have just sufficient brain to eat and drink, breathe and grunt, live to be two or three years of age. You will see others, with a little more brain, who will never be able to talk; but they will laugh, cry, be pleased by certain external objects, and be displeased with others. You will find others, again, with more brain, who are able to go about, and may be taught to do certain things mechanically, as it were by art, but they never can exercise judgment. They may be brought to go to bed at a certain time, to get up at a certain time, and to eat at a certain time, but they never go beyond that. Others have sufficient brain to perform the lower offices of life, but not to perform any duties that argue the least intellect. Others, who have still more, can perform the offices of life, but they are known in the world as "innocents"—very weak persons. So we go on till we come to fair average people, and we pass them, and come to very intelligent characters.

However, these intellectual varieties do not depend upon the development of the *whole* of the head: it is found unquestionably that they depend upon the development of the anterior part: for you will have many of these weak people sufficiently large in every part of the head but the front. On the other hand, you will have persons with a very small development of all the parts of the brain excepting the front, and who shall be sufficiently clever persons. These are undoubted facts; and whenever you see a deficiency of the development of the anterior part of the brain, and necessarily of the anterior part of the head, you may take it for granted that the individual can only manifest a very limited display of intellect.

IDIOTCY.

Distinction between Idiotcy and Insanity.—I may first premise, that under the term "unsoundness of intellect," are comprised idiotcy and insanity. By idiotcy, or idiotism, is meant the absence, or rather the deficiency, of intellect, which amounts to such a degree as to disqualify an individual for the common offices of life. Generally speaking, a madman has a wrong opinion, or a wrong feeling; but an idiot may be generally said to have none. The madman is wrong, but the idiot is defective.

Legal Definition.—Now this defect, according to our law, must be so great, that "the individual, in order to be constituted an idiot, must be unable to number to twenty, or to tell his age, or to answer any common question, by which it may plainly appear (I am quoting from a law book) that the person has not reason sufficient to discern what is for his advantage or disadvantage." To quote again from the same work, Burn's Ecclesiastical Law, "That man is not an idiot who has any glimmering of reason, so that he can tell his age, know his parents, or such like common matters."

Not referrible to the external senses, nor to the knowing faculties.—Now this deficiency of intellect does not refer to any deficiency of the *external senses;* idiots can often hear, see, taste, feel, and smell, just as well as other people. A man may be an idiot, and yet be able to use his five external senses perfectly. Neither does it at all refer to what phrenologists call the *knowing faculties*, by which a person judges of music, colours, distance, size, number, or can recollect words. An idiot may do all these things, may understand music to a certain extent, may distinguish colours very well, and also size, distance, and numbers, but he may be a complete fool for all that. Many idiots are defective in these respects; very great idiots know nothing at all; they can merely eat, drink, and slumber. Many persons are idiots who can count above twenty, notwithstanding what the law says; and medical men would declare many persons to be idiots although they could count to a hundred and above. Some idiots take a great delight in music; I do

not know that they will be ever great musicians, but they know what music is, they understand it, and some sing very well. Some will sketch likewise exceedingly well, and some have an excellent memory of words, so that they will remember long passages. Spurzheim saw a young man at Hamburgh, the anterior part of whose brain was favourably developed, but whose forehead above that part was scarcely an inch in height, and in whom the movements of the superior parts of the brain was consequently impeded, and he had only the functions of the inferior anterior parts. Now this individual recollected names, numbers, and histo ical facts, and repeated them all in a mechanical way, proving that he had a much better memory than many acute men; but the functions of comparison, penetration, and sagacity, were utterly wanting. He says that he saw at a poor-house a boy who excelled in verbal memory, but as to judgment he was an idiot. Dr. Roberts, he says, shewed him an idiot who repeated whole passages from the bible, simply from hearing them read. He adds, that he saw an idiotic child who sang several airs, and if others began to sing, she accompanied them with harmony. It is very possible, therefore, for an idiot to have a pretty tolerable share of those particular faculties by which a person understands distance, knows colours, can recollect numbers, calculates, dist nguishes one object from another, and so on. It is not, therefore, the deficiency of these things that constitutes a person an idiot, for many very clever persons are deficient in these particulars; many clever persons cannot tell red from green, and many clever persons cannot tell "God save the king" from "Rule Britannia." Others again can never be made to calculate; and some persons can scarcely keep their own accounts, who otherwise are reflecting and very clear-headed persons. A person may be an idiot, on the other hand, who has these faculties; an idiot may have them, but their absence does not constitute a man an idiot.

Varieties of deficiency of intellect.—You of course perceive that there is every degree, from the lowest to the most perfect idiotism, in which an individual merely eats, drinks, discharges his fæces and urine at all times and in all places, slobbers and grunts, up to a person who is merely called *imbecile*, merely perhaps called *a little soft*. There is every sort, every insensible degree from the one to the other, all of which we see continually in life. Now such a degree as makes a man soft, but will not qualify him by law to have the privileges of an idiot, you will find pourtrayed by Shakspeare in the Twelfth Night, and Merry Wives of Windsor. You cannot have a better description of an idiotic or weak person, than Shakspeare has given. Sir Andrew Ague Cheek, in the Twelfth Night, is a very fine illustration of idiotcy. He says, "Methinks sometimes I have no more wit than a Christian or an ordinary man has; but I am a great eater of beef, and I believe that does harm to my wit. I would I had bestowed that time on the tongues that I have in fencing, dancing, and bear-baiting. Oh, had I but followed the arts!" Then you will recollect in the Merry Wives of Windsor an equally sagacious individual, in the character of Slender. He says, "Though I cannot remember what I did when you made me drunk, yet I am not altogether an ass; I'll ne'er be drunk whilst I live again, but in honest, civil, godly company, for this trick. If I be drunk, I'll be drunk with those that have the fear of God, and not with drunken knaves." These are two illustrations of individuals who were weak enough to be below other people, and yet not so weak as to be called downright idiots.

Now as idiotism, which is merely more or less of deficiency of intellect, varies, so insanity, being a disturbance of the mind, must have infinite varieties. You perceive at once that insanity must have infinite varieties, because many faculties of the mind may not be disturbed at all, and others may be disturbed in various proportions; and therefore the varieties of insanity can never be described perfectly. Idiotism, however, being merely a deficiency of intellect, and idiots merely varying as to more or less deficiency, the one must be more simple than the other; yet you will find that idiots vary in their character just like sane people. There are no two persons alike in their senses, any more than there are two faces alike; and idiots vary in their character in the same way. Many may be idiots to the same degree, but there are various other parts of their character which do not correspond; and therefore idiots will vary in their character to a great degree, just as sane people do. For example, some have one of the faculties of which I have been speaking, and which phrenologists call the *knowing faculties*, such as music—some will have one very strong, and another will have another faculty very strong, and all may have them in various degrees; and so again some idiots will have one propensity, one feeling, very strong, while others will have a different propensity or feeling very strong, and some will have several; so that they vary in their character, to say nothing of idiotism, just as the rest of the world.

Now although the deficiency of any of these knowing faculties, and the deficiency of any feeling, such as good-will towards

mankind, revenge, passion, lust, and so on, does not constitute idiotism, yet if the anterior superior part of the brain be so defective as to constitute the individual an idiot, there is seldom so much defect in that part of the brain without there being a good deal wrong in other parts. You never find an exceeding degree of monstrosity without finding minor degrees. When a fœtus is formed without a heart, there are generally supernumerary fingers and toes; wherever there is a great monstrosity of body, there is almost always minor monstrosity; and so when the head is defective in one part, to such a degree as to constitute idiotcy, there is generally more or less defect in certain other parts. Thus it is very common to see an idiot with these various knowing faculties defective, as well as those which constitute him an idiot; and it is very common for him to have certain propensities deficient, or some in excess. There are generally other parts of the brain wrong, although the erroneous state of other parts does not constitute the disease.

Now some idiots, in conformity with all that I have been saying, are exceedingly gentle and good-natured,—never do any harm, do every thing that they are bid. Some, on the other hand, are very passionate, never can be trusted, and if you excite their feelings into violent passion they will take any thing they can procure, and murder you, if they can. Some are exceedingly mischievous and sly, without being passionate. Some are very much disposed to thieve, and will steal every thing they can. Others, again, are exceedingly low spirited and gloomy, and some are exceedingly lustful—have violent sexual desires. These desires frequently go wrong—partly from some error in the faculty itself, and partly from some deficiency in intellect; so that many of them are beastly—not merely lustful, but beastly in various ways. Some are very prone to imitation; and I knew an instance of an idiot in a workhouse, who had all the imitative disposition of a monkey. When the surgeon went to visit the patients in the workhouse, he universally observed what was done, and as soon as the surgeon was gone he would feel the pulses of the various patients, and get a piece of tape, and begin bandaging up their arms, in order to bleed them. Whatever he saw done, as soon as he had an opportunity he regularly went and did the same. This idiot was in the workhouse at Clapham. You find cases of a similar description mentioned by Pinel, and other writers on insanity. There is no doubt about there being a propensity in the human mind to imitate; all acknowledge this—phrenologists and anti-phrenologists; and this was so strong in this idiot, having no sense to restrain him, that it led him to do ridiculous acts exactly like a monkey.

Conjoined with other Nervous Affections.—This state of mind, idiotism, is very often conjoined—like all diseases of the nervous system—with other diseases of the nervous system. It is frequently connected with epilepsy, with chorea, and with paralysis; so that you continually see idiots epileptic, or constantly shaking, and more or less paralytic.

Congenital Idiotcy generally united with Deficiency of Brain.—Now when the disease is congenital, there is generally a defect of brain at the superior anterior part, and generally the whole head is too small; there is a decided defect there in general, and, more frequently than not, the whole head itself is too small. Gall says, that if the head be only from fourteen to seventeen inches in circumference, and only from ten to twelve from the root of the nose to the foramen magnum, there is always more or less stupidity; that heads of eighteen inches and a half in circumference are small, and give but a mediocrity of talent, and that the full size is from twenty-one to twenty-two inches in circumference. However, idiotism may be produced without a defect of brain; the brain may be plentiful enough, but be of bad stuff. Dr. Spurzheim says that he dissected an idiot, two years of age, in whom the grey and white substance were of a greyish-blue colour, and, instead of being of the ordinary texture, were of a gelatinous quality. Such a brain as that, although there was plenty of it, was not of a sufficiently good quality to execute its functions. In such an instance the brain may be very large, but the additional size will not counterbalance the bad quality.

Improvement of the Quality of the Brain.—It has happened sometimes that an individual has been born an idiot with a sufficiently well developed head, and the brain has appeared suddenly to improve in quality. The brain improves in quality as the body grows; it becomes of a different quality as age advances to a certain point; it attains a perfection of structure, not as to size and development merely, but perfection as to quality; and then it afterwards declines, like all other parts of the body, in quality and size. Now in some individuals the improvement of quality does not take place at the ordinary period, and the result is that they remain children longer than other people, and they recover from their idiotcy at a certain period of life. The same circumstance occurs with regard to puberty; many instances of which are on record. There is a case mentioned by Wilson, of puberty not tak-

ing place till the individual was 28 years of age. There was no beard, no hair on the pubes, and the testicles were small, till the individual was 28, when suddenly he got a pair of whiskers, a tolerable beard, hair below, good testicles, fell in love, and was married. Now it is just the same with the brain altogether: the brain, in some individuals, does not go through its changes of structure at the usual period, so that the individual is sometimes idiotic during the first part of his existence, and as he grows up he becomes like other people. Most frequently, of course, this is not the case—the same defective power of development continues; but to illustrate that a torpid inactive brain has sometimes been excited to perfection by some external circumstance, an instance is mentioned of a boy who possessed inferior talents till a tile fell on his head, when he began to shew great intellect. Dr. Mason Good says that he knew a lad cured of his idiotcy by a fall from the first-floor to the street. To mention instances of a similar kind, I may state that a German writer relates a case of fracture of the skull by falling from a great height, which cured deafness, and after the fracture the man became able to speak. This was upon the same principle as idiots are cured by the fall of a tile, or any thing else. In the Philosophical Transactions, vol. xxv. you will find a case where want of hearing was cured by a fever. The patient was 17 years of age, and had never heard; but fever came on, and produced such excitement that he afterwards heard like other people, and having heard, he began to speak, though he had never spoken before.

Torpidity of the Brain unconnected with the Size.—Now in cases of torpidity of the brain, where there is an inactivity of it producing idiotism, you may expect the head to be of the same size as in other persons; and it may be large, from the brain being blubbery, or from there being a collection of water, as was the case with the head of Cardinal, which I shewed you. He ought to have beaten Lord Bacon, and Sir Isaac Newton too, if the size of the head had any thing to do with it.

Idiots seldom attain above 30 years of age.—When an idiot is so congenitally, he seldom lives to be above 30; the defective power which causes the brain to be in such a state, is generally connected with such a want of energy throughout the whole body, that the patient seldom lives beyond 30, and the greater the idiotcy, *cæteris paribus*, the shorter do they live.

Causes.—Now just as the brain may be originally torpid and inactive, so from excessive action it may fall into the same state; the same effect precisely may be produced, if there be excessive action before the brain has acquired its full growth—full structure. This is very likely to be the case, for many precocious children, who have been shewn to the world as prodigies of talent, have, through the excessive application imposed upon them by their preceptors, become idiotic; and when they have not become idiotic they have frequently died. The powers of the body have been exhausted, and some organ more than another has fallen a victim to disease; so that they have died. Intense application will produce temporary idiotism. Many persons who have bent their minds upon a particular object, and have worked night and day, have frequently fallen into a state of fatuity, which has lasted only for a certain time; the brain has been over fatigued, and after a time it has recovered itself.

You may have fatuity or idiotcy come on in after life, when persons have not been born idiotic from other causes—for instance, from blows, and from any of the diseases which I before mentioned under the morbid anatomy of the brain: any such disease as causes paralysis; tumors pressing on the anterior part of the head; softening of the anterior lobes—those parts which I stated are deficient when the person is a congenital idiot; pressure, softening, or any thing which impedes the functions in any way, will, of course, produce idiotism. Fever being so often accompanied by violent irritation of the brain will frequently leave idiotcy, and insanity has done the same. It is very common, when persons have been long insane, for them to lose their faculties altogether: idiotcy is a very common result of insanity.

Distinction between Idiotcy, Fatuity, and Dementia.—Now the words idiotcy and fatuity are not applied indiscriminately. They are nearly the same thing, but *idiotcy* is generally used by modern writers for that which is congenital, born in a person; and I believe you will generally find *fatuity* applied to that imbecility which comes on in after life: the person not having been an idiot first, but become so, it is said that he has become fatuitous; and if insanity have been the particular disease which has preceded the imbecility, then the imbecility is called *dementia*—unminded. Hence, if a person be born an idiot, his case is one of *idiotism*; if imbecility come on afterwards, from a common cause, it is called *fatuity*; but if it be preceded by insanity, if it be nothing but the degeneration of insanity, then it is called *dementia*.

Now if there be great deficiency of the anterior part of the head, if it be a question of idiotism and imbecility of mind, the case is very easily ascertained; but the head may be large, and yet the person may be an idiot. In the latter case you have to

question him as to common circumstances —to ask him how many halfpence there are in a sixpence—how many sixpences in a shilling: if he were born in April, ask him whether he was born the January before, and things of that description. You should ask him questions on the most ordinary subjects, and generally put money before him, and make him count it—count it as simple pieces of money, and then make him shew the value of the whole, and you will soon find out whether he is an idiot or not. If he stumble at such questions as these, you may give an opinion that he is not qualified to manage his own affairs.

Prognosis.—But besides such an examination as this, it is right to look at the individual's head; and if you see it morbidly small, your opinion as to his idiotcy would not be increased, but your prognosis would be exceedingly affected by it. If you see there is an absolute want of brain, you may take it for granted that the prognosis ought to be unfavourable. There is little hope of its growing to such an extent, becoming of such dimensions, as will enable him to be clever, like other people. This will also guide you very much in your attempts at benefitting the sufferer. If you see a great deficiency of brain, all attempts at benefitting him will be hopeless. The schoolmaster may flog, but he will never make any thing of such a head. You might also derive great advantage from inspecting the head and observing the general character, so as to give directions to his friends how to manage him. You should observe what passion is strong enough to render it necessary to be on their guard against it. This will be of use, as well as observing the imperfection of the head, for the purpose of ascertaining the degree of idiotism that exists in the individual.

Treatment.—As to curing the disease, all that can be done is to put the patient in as healthful circumstances as possible; to feed him well, give him fresh air, and improve his body altogether, on the one hand, and cultivate those parts of the mind particularly which are best developed, on the other. If there be found any talent for music or calculation, you must make the best of it. A story is told that may be true of a boy who was an idiot up to eighteen years of age, when he saw a beautiful girl, and was struck with love for the first time. It shed such a flame throughout his brain that he became as clever as the rest of the boys in the village. I have no idea of love being so employed; but if you can find a faculty tolerably strong, it should be made the most of, whether it be an intellectual or knowing faculty; and if others be not excited by it, yet it may be strengthened, and the individual may be rendered much less deficient than he otherwise would be. He may be unable to gain the command of all his faculties, but by strengthening one he may not be so miserable an object as if he were altogether neglected. This is an important point; because to set down an individual as an idiot when he has some one faculty that might be made something of, would be cruel; and if you see the development of any thing that would enable you to make the experiment, it ought not to be passed by.

In respect to the importance of good air and good food, in lessening idiotism, I may mention that particular form of idiotism called *cretinism*, which is produced (I should conceive that there can be no doubt on the subject) by bad air or bad water. It is found in the vallies of the Alps. You cannot travel in Switzerland among any of the vallies, where the air is stagnant and wet, full of the exhalations from marshy ground, and where the water for the most part is very bad, and the people so ignorant in many parts that they drink water like swallowing so much chalk, although good is to be had, without seeing plenty of cretins. They are miserable objects, mostly always short; in fact, they are dwarfs, and in general have enormous heads. Their features are shrivelled; they look like decayed autumnal leaves, or something like a shrivelled apple, and all of them have *ace of spades* noses. Their limbs are soft and flabby, their mouths are wide, extending from ear to ear, their lips are very thick, and they have a dry looking skin. All of them are more or less idiotic, and many of them have a goitre—an enlargement of the thyroid gland.

These poor creatures are found after death to have the bones of the head very thick, and sometimes there is a quantity of water in the head: they are more or less hydrocephalic, but there is hypertrophy of the bones of the head. The cavity of the skull is not so large as the external appearance of the head would lead you to suppose. Sometimes the diminished capacity is from the excessive quantity of bone, and sometimes from a collection of water; and in other cases the brain, although large enough, is of bad quality. The tongue in some cretins is hypertrophied, is too large for the mouth, and a large number of them are deaf and dumb. There is a great difference in their disposition; some should never be trusted; they are such destructive creatures that they do all the mischief they can, while others are innocent, and as tame as lambs. Some females have a great number of these children; they have desires, like other people, and they fall in love with each other, and marry. Certainly nobody else would marry them.

Now it is said (I do not know whether it is true, though I have endeavoured to ascertain it) that if two persons marry with a broneocele, their progeny generally have a goitre; and if their goitreous progeny marry any other persons with a bronchocele, then the third generation are sure to have something more than bronchocele—they are sure to be idiots: many persons assert this. There is a great relation between goitre and cretinism, no doubt; and what affects the thyroid gland, if it affect the head and brain, will, of course, produce idiotism.

This is all I have to say about idiotey. It is more an object of curiosity and medical jurisprudence than medical treatment, but it is very interesting, both in a physiological and pathological point of view, and sometimes it is very important in practice.

OBSERVATIONS

ON

ANIMAL MAGNETISM.

By M. Andral.

M. Andral, in his lectures on pathology, now in course of delivery, recently made some observations on animal magnetism, an excellent account of which, freed from mere extraneous matters, we subjoin. It is taken from the number of the Gazette des Hôpitaux, of March 2d.

The ecstatic paroxysm, said the Professor, may be voluntary; it may shew itself independently of any external influence: it may also shew itself in an individual, through the influence of another person, exercising certain acts with a view to its production. To explain the phenomena, two hypotheses have been advanced: according to some, they are all the result of a heated imagination, while others have recourse to an invisible imponderable agent, which they call "magnetic fluid," and which is held by most to be nothing else than the fluid which is regarded as the cause of common electrical, and electro-magnetic phenomena.

Wishing to be guided by facts alone, in this difficult discussion, M. Andral selected two of the cases recently published, and possessing all the conditions which render their authenticity unquestionable. The first related to an instance of spontaneous somnambulism, which occurred in Italy towards the close of 1832, and appeared in the Bulletin of Medical Sciences of Bologna. The narrative runs as follows:—

First Case.—A cook, of Bologna, of nervous temperament, 24 years of age, born of healthy parents, and having never suffered from any serious disease, presented himself at the Hospital Della Vita September 5, 1832, after the eighth paroxysm of convulsions, which had come on in the following manner. For some time various rather severe disappointments had rendered him more irritable than usual, when, on the 21st of July of the year above-named, he had occasion to render his assistance for several hours to an hysterical person, who had seized him by the arm with so much force that he had not been able to disengage himself during the whole of the above period. The impression made by this accident was such that he experienced from the moment of its occurrence general uneasiness and aching of the lower extremities. On the 15th of August, that is, twenty days after the accident, he fell into the following state: convulsions, of a violent description, appearing always at the same hour, and having the same duration, being, by his own account, similar to those which he still continues to have in the hospital. The attack is usually ushered in, either by somnolence, or by troubled sleep the preceding night, and also by a sensation as of a drop of cold water falling upon his heart every quarter of an hour. This sensation generally manifests itself at the approach of day: it is the *avant courier* of the fit, and ceases some little time before this begins. He has for some hours before a sense of weight at the back of the neck, whence there stretches circularly to the forehead a painful sensation, as of a bandage compressing the temples, and which continues even after the paroxysm. Then, at a quarter past 11 A.M. he experiences coldness of the feet, which extends by degrees to the knees; in a quarter of an hour more the sight begins to be troubled; ringing is heard in the ears; a bad taste is experienced in the mouth; and there is a numbness of all the senses. Trembling of the lower extremities comes on, which by degrees extends to the trunk and upper limbs: a kind of oscillation of all the muscles; and we should say, from the appearance they present externally, that this pervaded all their fibres. The muscles of the face are excepted. The respiration is panting, and the circulation very much hurried, with strong action of the heart. This aggregation of symptoms, which we shall call the *prodrome*, increases by degrees, until, at the end of half an hour, the circulation becomes stronger and more irregular; the respiration more embarrassed; the extremities cold, as those of a dead body; and the trembling so violent that the patient would fall out of bed if he were not held. At this moment, that is to say exactly at noon, he feels as if

struck by a jet of cold water, projected with force against his forehead; he makes a very deep inspiration, and becomes instantly insensible to external objects; he then merely utters horrible cries, followed by irregular contractions of the face, which had previously been in repose; the countenance also becomes covered with viscid perspiration.

Such was the condition of this patient when seen by Dr. Ceni in the hospital Della Vita; the first paroxysm which he had after his admission being the ninth from the commencement of the attack. All appeal to the ear had become utterly useless, but the patient replied, and the convulsions ceased when the vibrations of sound were directed upon the epigastrium and the neighbourhood of the apex of the heart, a phenomena which attracted the earnest attention of M. Ceni, and induced him, as well as another physician and many spectators, to repeat the experiment in various ways, and at different times.

Second Case.—The second case quoted by M. Andral was taken from the inaugural dissertation of Dr. Filassier, an *élève interne* of the hospital. This thesis, having for its title, "Considerations on Animal Magnetism," was sustained in 1832. The author did not know any thing of magnetism except from the article by M. Rostan, inserted in the *Dictionnaire de Medicine*. He was not incredulous, but sceptical ["*pas incredule, mais sceptique.*"] He one day took as the subject of experiment an *interne* of the hospitals, who was opposed to the doctrine of magnetism, and he produced on him the phenomena described below:—

I magnetised him (says M. Filassier) during twenty minutes: at first he experienced some stretching and yawning; his eyelids closed; the muscles of the body became relaxed; his respiration snoring; his head dropped to the left side; his face grew turgid; then, after a short time, he burst into a sardonic laugh, and groans of such a kind as led me and one of the bystanders to think that he was making game of us; but we were grievously undeceived, for his skin became covered with a cold and viscid perspiration; his pulse became rather more frequent, small, and irregular; his face was lengthened, greatly changed, and became blue; his head and body were drawn back by tetanic spasms; his breathing rattling, like that of a dying person, accompanied by convulsive hiccough and moaning. My perplexity at this moment may be imagined—I cannot express what I suffered; I had magnetised for the first time, and knew not what remedy to apply. I suspended my operations, but still the symptoms increased to an extent that made me tremble. Among a thousand other thoughts which passed through my mind, that of continuing with more vigour than before the action I had begun to exercise, was the strongest. I did accordingly recommence with redoubled energy, and the phenomena above described passed into a profound collapse. I placed my victim on a bed, and waited with anxiety for the result, having my hands in his. The fainting lasted a quarter of an hour, after which he gradually came to himself, when his first words were, "you have made me horribly ill; I never suffered so much in my life; however, the effects have been extraordinary, and you must begin again." I was stupified, and refused, but he insisted with such earnestness that I was forced to consent. Yielding, however, to the fatigue which resulted from the violent efforts I had made, and still more influenced by reason, which pointed out the necessity of employing a proceeding different from the former, I exerted my volition with less intensity; I moved my hands with more gentleness and calmness; there was developed in me a timid benevolence and solicitude for my friend, whom I had made to suffer, and whom I wished to spare farther uneasiness. His eyelids closed as before; a complete abandonment spread over all his muscular frame; his countenance became tumid, and assumed an expression of happiness difficult to describe; his skin was covered with a soft and gentle perspiration; his respiration became slow, deep, and calm. The words, "what happiness!—one cannot be happier in Paradise," burst from him. These expressions made me laugh, and this produced over his entire frame a general impression of suffering. "You hurt me," said he: I ceased, and the phenomena were suspended, occasioning uneasiness on his part, but were reproduced by my renewing the same actions as before, which at length induced a gentle sleep, from which he spontaneously awoke at the end of twenty minutes. There remained some general lassitude and uneasiness, which were dissipated by a little repose at first, and followed by a turn or two in the open air.

I cannot attribute these phenomena to the influence of imagination; indeed, they manifested themselves in a young man of a grave and logical mind, a physician, and above all, an unbeliever. They were produced by a medical man and a sceptic.

Here, then, said M. Andral, are two capital cases, and which may admit of important application. The cause, under the influence of which the phenomena were produced, is evidently complex. In the first place, the imagination appears to

have a large share in the effect; and we ought also to take into account the frictions in the course of the nerves. Who has not witnessed the effect of tickling, on irritable individuals? Again, in the former instance, we perceive that instinct of imitation which plays so important a part in the production of certain nervous affections. Nevertheless, this triple influence does not suffice to account for all the phenomena presented by the subjects of the preceding cases. Must we then admit besides a magnetic influence in a particular agent? M. Andral candidly confessed that he had no fixed opinion on this point.

As to the rest, the existence of the phenomena of ecstasy is incontestible: to this is to be attributed the history of the mysteries, the oracles, the sybils, the pythonoses of Egypt and of Greece. In the middle ages they appeared again, but under the name of sorceries and demoniacal possession. The nuns of Loudun present us with analogous phenomena as well as the protestants of Cevennes, who fled before the persecution of Louis XIV. More recently these phenomena were seen under the guidance of Mesmer and the lordly patronage of Busang. Epidemic at different periods, they now appear sporadically. Many persons have occupied themselves with the subject, and in Germany there are several clinical institutions for magnetism. Have all the learned men who have directed their attention to the investigation been imposed upon by their illusions? It is, said M. Andral, what we cannot believe. The learned lecturer thinks, after mature reflection and much reading, that with many shameful practices and infamous juggleries, there are to be found and to be studied certain perturbations of the nervous system which may become the source of a great number of remarkable phenomena. We ought not to be in too great a hurry to say, "such a thing is impossible," for who can pretend to know the limits of possibility? Who can flatter himself that he has penetrated to their depth all the laws of nature? However, we ought also to distrust our love of the marvellous, which often influences us; and it is only with the greatest reserve that we ought to admit into scientific investigations new facts, which are foreign to all our knowledge of physiology and pathology.

M. Andral, without entering into a detail of the different magnetic proceedings, expressed his opinion that a certain number of phenomena may be produced by magnetism applied *immediately*; but all the cases of magnetising from a distance appear to him to be extremely doubtful.

Among the phenomena produced in the former manner, the abolition of sensibility appeared to him incontestible. There exists a great number of analogous facts, recorded in the annals of science. The individual ceases to exercise any relation with the external world: he isolates himself completely from men and surrounding objects, and retains no recollection of what has passed during the sleep of magnetism. The history of epilepsy presents us with analogous phenomena: epileptics have been known to resume after a fit the conversation they had begun at the moment of the attack. All such facts may be received without hesitation. The same may be said of the exaltation of the mental faculties, particularly of memory: somnambulists have even recovered the knowledge of languages acquired in their infancy; but M. Andral never knew any one really speak any language which he had never learned. As to seeing a fluid which escapes from the person of the magnetiser, M. Andral particularly dwelt upon the fact that this was never affected to be done except by those who maintained its existence when they were not under the influence of somnambulism.

M. Andral calls in question the faculty which has been claimed by somnambulists of perceiving the sound or diseased state of their own organs, or of those of another, and of applying to their diseases appropriate remedies: in this, said he, I see nothing but juggling, ignorance, and bad faith. Accordingly, all the somnambulists of the last century, a period at which these theories were prevalent, in all diseases saw nothing but bile and various humours in commotion, and their uniform precept enjoined their evacuation; so that emetics and purgatives formed the prescription in every case. At present, again, it is redness of the stomach and bowels which haunts their sight; and in accordance with this view, they prescribe leeches and gum-water. With regard to the faculty of seeing the interior of their organs, M. Andral has interrogated somnambulists on this point, and they have only replied by various absurd wanderings. Again, can these somnambulists indeed see without the assistance of their eyes—by the forehead—the occiput—the epigastrium? In answer to this question, M. Andral made an analysis of seven cases of this nature, which have been recorded; those guaranteed by Petetin, de Lyon, Deleuve, Delpet, Rostan, Felassier, &c. Of all these, the case related by M. Rostan, of vision, independent of the eye, alone appears to him at all made out. Nevertheless, as this case is unique, it is necessary to wait till the fact be repeated before it can be admitted as having a right to enter into the reasonings of science. The Academie Royale de Medicine devoted six years of investigation to the subject before they made their report, and

could not establish a single fact of this nature.

In conclusion, M. Andral distinguished in what had been observed and written regarding animal magnetism, three series of facts. The first are undeniable, and are entirely within the domain of physiology and pathology: the others require confirmation. The third set of cases are those conspicuously false. The professor acknowledged that he had been more sceptical in his last than in his first lecture, delivered some days before. During the interval he had devoted himself to the study of the cases; had analyzed and scrutinized them; and thus satisfied himself that a great number are unfit to bear examination. He concluded by applying to the discussion the words of the learned physician Muschembrock—"*pauca facta nos gloriosos et temerarios faciunt; innumerabilia nos ad conclusionem parant.*

OBSERVATIONS
ON
THE DRY BELLY-ACHE OF THE WEST INDIES; IN REPLY TO DR. TURNER.

By Anthony Musgrave, M.D.
Formerly President of the Royal Medical Society of Edinburgh.

To the Editor of the Medical Gazette.

Antigua, January 7, 1833.

Sir,

"Dry belly-ache, as it is usually termed, even by medical writers, is perhaps the severest, in respect of suffering, of all the diseases to which the inhabitants of these islands are exposed; and (notwithstanding Dr. Chisholm's assertion to the contrary*) it has been also, within my own knowledge, one of frequent occurrence in Antigua. It has accordingly occupied much of my attention, and the result of the most anxious observation on my part has been an entire conviction that the published descriptions of its symptoms are inaccurate and defective—its real nature imperfectly understood, and its treatment very generally conducted on erroneous principles.

"The object of the present communication is to lay before the profession an outline of my own opinions and practice, which, at some future period of greater leisure and enlarged experience, may be so filled up and completed as to be rendered more worthy of attention*."

Such, sir, was the brief preface to a paper published in 1825, which I have transcribed, because it is sufficiently comprehensive to convey at once to your readers, that, so long as seven years ago, the subject to which it relates had excited considerable interest (in my own mind at least), and that I had persuaded myself of having arrived at conclusions so satisfactory, in a practical point of view, that I ventured to submit them with confidence to the profession, for the guidance of my juniors in this and the neighbouring colonies. When I add that the results of extensive practice, during the intervening period, have appeared to me only the more firmly to establish the correctness of my views as then promulgated, it may readily be conceived with what mortification† I read the letter from Dr. Thomas Turner, inserted in your Gazette of the 20th of October last; wherein the dry belly-ache of the West-Indies is attributed exclusively to the ingestion of lead through the medium of our eistern water; and he charges, somewhat cavalierly, upon the resident practitioners, that the disease is "imperfectly known to them, though it is of very common occurrence, proving fatal in many instances, and in others followed by paralysis of the hands and feet." This is a grave and humiliating imputation—one which, under any circumstances, or with reference to any disease, I should have been naturally anxious to repel, in common with my tropical brethren: but I feel myself more particularly called upon to do so on the present occasion, because, so far as I know, my own are the latest remarks on dry belly-ache which have been placed upon record by an actual observer—because I have reason to believe that the island and town, where I have resided for upwards of eighteen years,

* As a tropical disease, it seems, therefore, almost unnecessary to treat of dry belly-ache; seeing it now so seldom occurs in the western hemisphere, and never in the eastern.—*Chisholm's Manual of Tropical Diseases*, 1822.

* Observations on the Nature and Treatment of Hepatic Ileus; the Disease commonly denominated Dry Belly-Ache throughout the West-Indian Islands. By Anthony Musgrave, M.D. London Med. Repository, November 1825. Med. Chir. Review, January 1826.

† I have expressed myself *mortified*, because I entertain the highest respect for Dr. Turner, both personally and professionally, and should have been most happy, had he favoured me with a private communication, to afford him all the information in my power on this or any other subject.

are exclusively meant by Dr. Turner as the sources of his information—and because the gentlemen to whose cases he refers were patients of mine, both before and after the periods at which he prescribed for them in England.

It were presuming too much to expect that your readers should either carry in their recollection a paper published so long ago, on a subject possessing comparatively trivial interest for European practitioners, or be at the trouble of immediately consulting periodicals not always at hand: I shall therefore be held excused for recapitulating, in a very few words, that my former observations were intended to establish, 1st, the malarious origin of the tropical disease, called dry belly-ache, in constitutions, for the most part, predisposed by the use of spirituous liquors; 2dly, that the seat of the disease is always primarily and essentially in the biliary organs—for which reason it would be more properly denominated "hepatic ileus;" and, 3dly, that the cautious production of mercurial ptyalism, while inflammatory symptoms are obviated by the appropriate means, will be found the most successful mode of treatment which has yet been submitted to the profession. On each of these points it is now my purpose, with your permission, to offer a few supplementary remarks.

It is difficult to determine, from the almost contemptuous manner in which Dr. Turner mentions the practitioners of these islands, whether he means to insinuate our absolute ignorance of colic followed by paralysis having been ever ascribed to the effects of lead, or merely to express that we had overlooked the possibility of our tanks being deleteriously impregnated from our painted roofs. Even assuming, however, the least uncomplimentary inference to be the true one, and that he cannot but be aware that the "saturnine origin" of dry belly-ache would be the doctrine of the merest tyro or routinist in medicine, whose mind had never been occupied by one original idea, I must still acquit myself of the milder imputation, by referring him to my former observations on this subject, among which he will find it stated, that the water from a cistern attached to Government House, where the disease was then prevailing to an extraordinary extent, was, at my instance, chemically examined, so far back as the year 1817. In fact, so thoroughly imbued was I, up to that period, with the notions of Sir George Baker, Dr. Hunter, Dr. Percival, and others who have written in corroboration of their views, that when (on the occasion just alluded to) I saw several individuals attached to the same establishment suffering, in rapid succession, from what were regarded as characteristic symptoms, I entertained no doubt whatever of the agency of lead, and was only puzzled beyond measure to imagine from what particular source the poison had been imbibed. The house had not been painted for a considerable period. His Excellency's liquors, of the very best description, had all been imported by himself. The culinary utensils were carefully examined. Some of the patients never tasted spirits of any kind, and such as were consumed in very moderate quantities by others, were of unexceptionable age and quality.

Under circumstances so perplexing, the water naturally became an object of suspicion, as it was supplied by a painted roof more extensive, perhaps, than any in St. John's, and having several leaden gutters connected with it. But the most careful analysis, conducted by a gentleman * whose acknowledged attainments in this and other departments of science render his authority conclusive, yielded no trace of lead.

This was the first link in a strong chain of facts, which forced upon me the conviction that the origin so generally assigned to it must be rejected, and that we must look to other sources for an explanation of the occasionally *epidemic* prevalence of a disease which appeared to me to be no further identified with the colica pictonum of the mother country than by a general similarity of symptoms, such as may be traced in regard to numerous other affections, which, although scarcely distinguishable, arise from very different causes†; and the chemical result might of itself be deemed sufficient to set Dr. Turner right as to his alleged *discovery*. But when that gentleman shall have been

* A *Doctor*, but not a *practitioner* of physic, well known to Dr. Turner.

† Does Asiatic cholera bear no resemblance to the effects of mineral poisons? Are not tetanic symptoms produced by wounds, cold, worms, strychnine, &c.? Is not dropsy as well a disease of debility as the product of inflammation? How many causes shall we assign for epilepsy? But, to come nearer to our point, who shall set limits to the infinite variety of circumstances which give rise to hepatic derangement?

further informed that his letter on dry belly-ache furnishes a forcible illustration of the most fertile source of fallacy in medical reasoning—in other words, that his *facts* are *false;* that the disease *occasionally* occurs in town, but is to be regarded as belonging to the *country*; that the roofs of our buildings are by no means always painted, in St. John's, and not even generally so on estates; that the slaves, who are supplied in this island from ponds, and rarely, if ever, drink cistern water, suffer as frequently as other classes of inhabitants; that the neighbouring island of Montserrat, where springs abound and no cisterns are used, is equally liable to its prevalence; and that numberless cases could be detailed, occurring among individuals whose cisterns are supplied from roofs which have either *never been painted*, or are covered, not with shingles, but with *tiles*;—I am persuaded he will be the very first to acknowledge that his own opinions, not mine, have been unadvisedly adopted. To two cases remarkably in point, or I should rather say *conclusive* against him, I must not omit to refer. One has been alluded to elsewhere, in connexion with another subject*. It was that of a surgeon, now practising in Newcastle, who, while residing on the same estate, where his brother had previously died of a third or fourth attack of this complaint (*and where the cistern was supplied through wooden spouts*† *from the tiled roof* of that portion of the sugar-works termed the boiling-house), suffered from similar symptoms seven times within the short period of two years, recovering when removed to town, and relapsing as often as he returned to his former abode; but who was effectually released from any recurrence of the disease by permanently changing his residence, first to a distant part of the island, and subsequently to England.

The second case has unfortunately presented itself in the person of a highly-respected friend; the same to whom we were indebted for his analysis of the water from Government House, in 1817. He has, within the last month, experienced a second attack of this distressing affection, and I may remark that the infinite importance of his life, both as a public and private character, would have keenly concentrated my attention, had any stimulus been wanting, to every circumstance connected with his illness.

Here, again, we have a patient residing ten miles from St. John's, the roof of whose house is of wood, *which has never at any time been painted*; of habits unexceptionably temperate, but whose hepatic and chylopoietic functions generally have for some time past been manifestly deranged. Where, in this case, are we to look for the *fons et origo?* The reply will be more conveniently given in a subsequent division of my subject.

Having thus proved, beyond all controversy, the *impossibility* of applying Dr. Turner's theory to a large majority of cases of dry belly-ache, as a tropical disease, I must now go further, and submit, that, if that gentleman had taken the trouble to make himself acquainted with the more recent experiments of our best analytical chemists, he could scarcely have overlooked the *improbability* of lead being imbibed into the system, through that medium, in quantity sufficient to prove seriously injurious; even supposing the basis of his opinion (the general use of water from painted roofs) to have been correctly founded. On this point Dr. Christison, in his excellent work on poisons, observes, "Hence, perhaps, even in a town, but, at all events, certainly in the country, it would be wrong to use, for culinary purposes, rain or snow-water which has run from *lead* roofs or spouts *recently* erected. When the roof, or spout, has been exposed for some time to the weather, the danger is of course much lessened, if not entirely removed; because exposure to the weather encrusts it with a firmly adhering coat *of carbonate, through which*, as already observed, *even distilled water will not act**." Now it must not be forgotten that the lead, on such of our roofs as are really painted, (with the exception sometimes of gutters, which must very soon acquire the protecting crust†), is not only already in the state of *carbonate*, but so completely enveloped by the oil and other substances composing the coloured paint,

* Observations on the unmixed Effects of Mercury on the System, with a few practical Remarks on some of the most important Tropical Diseases. By A. Musgrave, M.D. Edin. Med. and Surg. Journal, vol. xxviii. for July 1827.

† Wooden spouts are never painted inside, but are protected and made water-tight by pitch.

* Page 392, first edition.

† The water is never conducted into a cistern until some weeks after the paint has been laid on.

as to be altogether insusceptible of an action which is admitted to be exceedingly slight, even on the polished surface of the metal.

Dr. Thomson, of Glasgow, also, while he readily admits that "most spring waters attack lead, maintains, nevertheless, that the lead is only held in suspension, not in solution; and that the quantity suspended in such waters after they have passed through lead pipes, pumps, or cisterns, is far too minute to prove injurious to those who make habitual use of them *." Granting, therefore, (for the sake of argument only,) a slight saturnine impregnation actually to exist in the water of our tanks, it would seem by no means ascertained that it must necessarily be productive of deleterious effects; indeed we have the high authority of the last-mentioned distinguished chemist for the fact, that, while he resided in Edinburgh, many years ago, he could always detect a minute trace of lead suspended in the water, which, at that time, was brought six miles in leaden pipes; and yet I am not aware that colica pictonum has ever prevailed in that city †. It is to be remarked, that the surface exposed, in this and all similar instances, was purely *metallic*, and that the water was derived from *springs*. May not so slight a trace, therefore, be accounted for by the formation of some partially soluble salt of lead; I mean through the influence of one of the acids (probably the muriatic) existing in combination among the saline matters which spring waters hold in solution, acting to a certain extent on the crust so well described by Dr. Christison, even after it had been formed; an effect which would not have been produced had rain, and not spring water, been the agent?

Had the object of this communication comprised simply a refutation of Dr. Turner's opinions, I might here have concluded, under a conviction that I had fully and saisfactorily accomplished it. But I observe that Dr. A. T. Thomson, in his late paper on the salts of lead ‡, has attributed the paralysis supervening on dry belly-ache, in the case of a gentleman from Grenada, to the ingestion of lead through the medium of rum contained in his sangaree *; and I know that some, even of our colonial practitioners, are so wedded to the ancient doctrines, that it is difficult to persuade them that the disease can occur independently of lead, however impossible it may be to detect or even conjecture its source. Besides, the subject in all its bearings, theoretical and practical, has grown into vital importance in this part of the world, in consequence of the extended prevalence of the complaint among all classes of inhabitants; and I have therefore determined to spare no pains in removing, as far as it may be in my power to do so, all existing doubts as to its true source and nature. The first step necessary to the attainment of this object, appeared to me to be to subject all those liquids which might by possibility be the vehicles of lead, to such chemical tests as are admitted by unquestionable authorities to be decisive; and Dr. Nicholson, who has shared my professional labours for the last eight years, was good enough to undertake the task. His taste for practical chemistry rendered him more competent to it than myself; and the following is a memorandum of results in his own words.

Exp. I.—Two pints of water, collected from the roof of Mr. F——'s † house, having been reduced by evaporation to four ounces, was subjected to the following analysis:—

To a portion of it, slightly acidulated with nitric acid, liquid sulphureted hydrogen was added; but no precipitate was produced.

To another portion, not acidulated, hydro-sulphuret of ammonia was added, but the fluid remained perfectly transparent.

A solution of carbonate of potash being added to a third portion of the con-

* Experiments in Scudamore's Analysis of Tunbridge Water, 1816.
† Op. Cit. p. 51.
‡ Medical Gazette, September 1st.

* I presume he means *punch*. Sangaree is made with wine, and is synonymous with negus.
† One of the gentlemen who consulted Dr. Turner, and was supposed to have had his paralytic hands restored by a course of Harrowgate water. The paralysis recurred, however, on his return to Antigua, and was again removed by a voyage to the United States, although he had not, on this last occasion, the benefit of sulphureous springs. The relief, in both instances, is ascribable to the effects of change of climate only; a measure strongly recommended in my first paper, and the absolute necessity for which, after repeated attacks of dry belly-ache, subsequent experience has amply confirmed. This patient died in England, in the course of the last summer, of dropsy, as I have been informed by his relatives.

centrated water, a very slight cloudiness took place, denoting the presence of a minute quantity of an alkaline earth.

Exp. II.—One pint of rain-water, collected from a large extent of roof, which was painted ten years ago, and having fifteen feet of gutter laid with sheet lead, was evaporated to two ounces, and tested with the same reagents used in the first experiment, with precisely the same results.

Exp. III.—A pint of new rum, purchased in one of the retail shops of this town, was evaporated to dryness, and the mass treated with dilute nitric acid. The solution was filtered and evaporated to dryness; the residue digested in boiling distilled water, and tested with liquid sulphureted hydrogen, hydro-sulphuret of ammonia, and a solution of sulphate of soda. A minute trace of lead was rendered sensible, but not till after the expiration of twelve hours*.

Exp. IV.—A quantity (about three drachms) of carbonate of lead was well agitated for some minutes in eight ounces of rain-water, and the phial allowed to stand for five days. To the clear fluid, after filtration, the above tests were added without disturbing its transparency in the least degree.

Exp. V.—A portion of Madeira wine, possessing rather a sweetish taste, was slightly acidulated with muriatic acid, and saturated with a stream of sulphureted hydrogen gas, without betraying the slightest trace of lead.

A portion of brandy, procured from a retail shop, was treated in the same way, and with the same result.

* This result corresponds, in some degree, with what has been elsewhere stated, although the trace was exceedingly faint. "It has lately been discovered that *gallic acid* and *tannin* are capable of combining with lead in solution, and of forming a perfectly insoluble substance, which falls to the bottom of the vessel. On this account, liquors which have been kept in oak casks for a certain time, must be freed from lead. This explains a fact, with respect to the effect of new rum in the West-Indies, of some importance. This spirit, when newly distilled, is found to contain traces of lead, derived from the leaden rims of the coppers and the leaden worm used for its condensation; but, by being kept about twelve months in oaken casks, it loses its deleterious properties, and no longer exhibits any traces of this metal." (Paris's Pharmacologia, vol. ii. 376.) "This fact is mentioned by Mr. Sylvester, and by him applied to the discovery of a new test—the gallic acid." (See Eclectic Repertory, Philadelphia, vol. iv. p. 454; Beck's Medical Jurisprudence, 2d Edition, p. 480.) Dr. Hunter admits the fact of the deposition within twelve months, without offering, however, any explanation of its cause. (See Medical Transactions, vol. iii. pp. 244, 245.)

ON THE

TREATMENT OF CHRONIC BUBO BY PRESSURE.

To the Editor of the Medical Gazette.

Windsor, Feb. 25, 1833.

Sir,

Having read in a late number of the Medical Gazette a paper on the pathology and treatment of bubo, from the pen of Mr. Judd, Scotch Fusileer Guards, I have thought that I might do some good by recommending, in addition to his sensible and judicious directions, another mode of treatment for that most troublesome form of disease, which I can take upon me to say will seldom disappoint any surgeon who will be at the pains to practise it assiduously and attentively. That mode of treatment is pressure made upon the affected part by a firm compress, large enough not only to cover, but to overlap, all the swelling, and kept wet with a saturnine solution, or any other evaporating lotion that the surgeon may prefer.

I was first led to a knowledge of the efficacy of this method when on the Staff of the South-west District at Plymouth, in the years 1805-6. The winter season was an open moist one, like the present. Inflammatory swellings of the tonsils and glands of the neck were frequent, but above all bubo from the gonorrhœal or true syphilitic irritation*, with all its vexatious, and sometimes even fatal consequences, prevailed in every regiment of the garrison to a degree that I had never witnessed before, with the exception of one regiment—the Cornish Militia, where there was not, and had not been, a single case of it for a course of years, as was verified by examination of the hospital register. Mr. Serjeant, the surgeon of the corps, insisted that the troublesome accidents in the other regiments were attributable to the inert and mistaken practice of their medical staff, and to prove this he accompanied me to the hospitals, where a selection was made for him of bubo under all its conditions, but more especially when in a state of active suppuration, and all these were made speedily to disappear under his treatment, not

* I believe it has never yet been proved that bubo, whether proceeding from chancre or gonorrhœa, is any thing else but an irritation,—or that the matter contained in it is capable of communicating infection, which it must have been, had it been caused by absorption alone.

unfrequently within forty-eight hours. It signified little how full of pus they might be—and some were almost fit for the lancet—if they could but stand the squeeze without bursting they were dispersed like the rest; and if they did then burst they were under the best possible application for evacuating, supporting, and contracting the sac of an abscess; for what can a common poultice be, if devoid of firmness, but the evaporating medium at the standard heat of the skin, (for to this it must speedily come, whether applied hot or cold,) which it softens and relaxes, while it cools. His method was the moistened compress, applied by a bandage of *washed* calico something more than the ordinary width, and at least six yards long, taking a turn first round the top of the affected thigh, and then round the body alternately, which gave excellent purchase for the pressure, the patient being confined to bed all the while, and the evaporating lotion constantly applied. The medical officers of the garrison, without a single exception, had the liberality to follow the new method, and after that we were no more troubled with open bubo at Plymouth.

My subsequent experience of after years has confirmed what I then learnt. At Lisbon, more especially when in superintendence of a large body of French prisoners of war, where the same affections were frequent, it was applied with the same success. Some had actually died from the consequences of open bubo, before the method of prevention by pressure had been tried, and the poor fellows, generally so tractable and good-humoured, (for such they actually were, with all their faults, even while our enemies,) had lost confidence in their new medical attendants. They did not at first like the trial, regarding it in the light of subjecting them to an experiment, but nothing could exceed their satisfaction, when, at the end of a short time, on the first removal of the bandage, they found their troublesome incumbrance vanished: their expression of surprise at the *non est inventus* was at times amusingly ridiculous. I really and truly believe the method of pressure which will effectuate the absorption even of osseous matter, to say nothing of pus, to be excellent, and if a more extended recommendation, through the pages of your widely-circulated journal, will hereafter save the patient from the unknown dangers of open bubo, and the surgeon the vexation of treating it, I shall feel much gratified;—but before I have done I would wish to make a few observations upon the applicability of mercury as a remedy for glandular swellings. As a topical discutient, when not carried so far as to affect the constitution, being most powerful and penetrating, it is probably one of the best, more especially if applied in the manner directed by Mr. Judd, but as a constitutional remedy I hold it to be uniformly pernicious, and however proper a mild mercurial course may have been, before the appearance of bubo, it ought then to be suspended. To the scrofulous mercury has ever proved an insidious poison, and we justly consider it inadmissible in all obstructions and inflammations of the lymphatic glands. But although I was, I believe, the first who ventured to doubt the infallibility of the Hunterian creed, in a paper written from Portugal in the year 1813, (vide Medico-Chirurgical Transactions, vol. 4,) and the indispensibility of mercury to the cure of syphilis, I cannot go so far as to sanction the omission of so certain, safe, and speedy a remedy, when properly applied, in other cases, either of primary or secondary symptoms. The Hunterian creed, at one time so firmly established as the creed of the age and nation, has been shown to be utterly baseless, more especially by the late lamented Mr. Rose, in a paper published in the 8th volume of the Medico Chirurgical Transactions, June 1817, four years afterwards, and in another, by Mr. Guthrie, in the same volume; but the supereminence of mercury, as the best and surest remedy, is indisputable; and great as its acknowledged virhave been found to be, for superseding, by its alterative power, the hepatic, rheumatic, dysenteric, iritic, and indeed every other inflammation, (with the exception of the glandular,) which can be brought under the operation of its comparatively slow progressive agency, it is in none so marked and efficacious as in the syphilitic. It there stands, unquestionably, first and foremost as a remedy, and ought in the first instance to be tried in every case, until proof be obtained of its being unfavourable to the constitution. Whoever, then, rejects it altogether, because the symptoms can be cured without it, or because its abuse has often led to

had consequences, is surely as much a bigot, and that, too, on the wrong side, as the upholder of the ancient creed, who mercurializes even unto the death, amidst the carious bones and fiery irritable ulcers which the mercury itself has created.

W. FERGUSSON, M.D.
Inspector-General of Hospitals.

FLATULENT COLIC AFTER DELIVERY, SIMULATING PERITONITIS.

To the Editor of the Medical Gazette.

SIR,

SHOULD you deem the following case, which lately occurred in my practice, likely to prove instructive to the junior members of the profession, you will oblige me by inserting it in your valuable periodical.—I am, sir,

Your obedient servant,
D. RICHARDSON.

5, East Cliff, Brighton.

I should designate the case as one of flatulent colic occurring after delivery, simulating peritonitis. The following is the history:—

On Thursday morning, January 31st, at five o'clock, I was called to attend Mrs. H. With regard to the labour, nothing remarkable occurred: it was natural. The following day she was doing well, and was directed to take a dose of castor oil, which operated the succeeding morning. As she felt a little after-pain, she took opiates on this day. At my visit on Sunday morning, February 3d, she was doing very well. On the evening of that day I was summoned to attend by the nurse, who stated that her mistress was in great pain, and expressed a fear lest inflammation should supervene. As the bowels had been well opened, I determined to see whether the pain could be controlled by opium, but as this proved ineffectual, I resolved to open a vein. At this time the pain was severe, the pulse quick, and the tongue white; the blood, however, did not flow freely, and I only obtained six ounces, part in a tea-cup and part in a basin. I ordered her a grain of calomel, and half a grain of opium every fourth hour. On Monday, February 4th, the symptoms were more favourable, the pain was less, and it returned periodically. I directed her to take a grain and a half of opium as occasion required; but upon visiting her on Tuesday morning, February 5, I found her much worse. The pain was exceedingly acute, obliging her to cry out with agony; the tongue was very much furred; the pulse was 90; the abdomen very tender to the touch; the bowels had been freely open; the lochia, although not entirely suppressed, were diminished, and altered in character; the first portion of blood drawn in the cup was buffed; the second, in the basin, was not so. The grand point to determine was, did these symptoms arise from inflammation; and after duly weighing all the circumstances, I was of opinion that they did not, notwithstanding their analogy. The following were the reasons for my decision: first, there had been no rigors; this, however, is not, according to my experience, a universal symptom of peritonitis. Secondly, the pulse, although quick, had not that character of hardness familiar to those conversant with inflammatory disorders; it was, to an experienced touch, a weak pulse. Thirdly, the patient had intervals of ease from the pain, which, however, were very short. Fourthly, the pain was not in the region of the uterus, but in that of the transverse arch of the colon: in this latter situation, too, she complained of the greatest tenderness. "My inside," said she, "feels as if it was drawn into knots." She had stated, moreover, on the previous night that she derived great relief from the expulsion of flatus, which statement she now confirmed. I therefore judged that the symptoms were those of flatulent colic, rendered obscure, indeed, by the peculiar condition of the patient. As she had an opiate by her, I directed her to take it immediately, and afterwards five grains of the confection of opium, five minims of the tincture of opium in peppermint-water, every third hour. On visiting her in the evening, I found the pain greatly mitigated, and the tenderness much diminished. On the following morning, February 6th, the pain was very slight; and on the third day after the severe symptoms, she welcomed me into her apartment, having entirely recovered from her complaint. Having discovered the cause of the symptoms, I then directed her to abstain from flatulent vegetables, previous to which her

diet had consisted of gruel, and mutton-broth, with a small quantity of turnip. I could discover no other source from whence the gas had been extricated. Had I been contented with a superficial view of the case, and bled her to the extent usually necessary in inflammation, I am convinced I should have placed her life in jeopardy, and she could not have recovered so soon. Experience confirms the truth, that no one symptom, taken separately, constitutes inflammation; but our judgment must be formed from a careful consideration of all the circumstances of the case. In the above instance an accurate diagnosis was the more necessary, for peritonitis was rather prevalent at that period. I had at the time two cases under treatment.

LIGATURE OF THE COMMON CAROTID,

For Attempted Suicide.*

By W. E. Horner, M.D.

Professor of Anatomy in the University of Pennsylvania.

On Monday, June 18th, 1832, a criminal named Washington Taylor, æt. 34, was brought up before Judge King, to receive a sentence of six years' confinement in the state penitentiary, for counterfeiting. Upon the sentence being passed, he immediately drew a knife, and plunged it into his throat, a little below the angle of the lower jaw, and on the right side; he then withdrew the knife, and not satisfied with the effects of it, he plunged it again into the same region of his throat, half an inch from the other wound. I was passing the court-house at the moment of this proceeding, and from that circumstance was accidentally called in by one of the persons in pursuit of medical aid.

I found the criminal in the court-room, sitting upright; a handkerchief, soaked with blood, was held by the persons present over the wounds; it restrained somewhat the bleeding, but very imperfectly. On its removal the blood gushed out in a large stream, the size of a little finger (but not per saltum), from the wounds, and of an arterial colour. Having got this glimpse of the parts, I directed an assistant to apply the end of his thumb to them, and to press firmly against the front of the cervical vertebræ, while I went home, a distance of two and a half squares, for my instruments; on my way I met accidentally Dr. Emerson, and engaged his assistance.

On my return, I saw that the pressure employed had been systematic enough, to restrain almost wholly the hæmorrhage. I then had the patient inclined half-recumbently on a settee, and changed the pressure to the trunk of the carotid at the lower part of the neck, which arrested the hæmorrhage very insufficiently; I then dilated the wounds, by converting the two into one. I spent some minutes fruitlessly in attempting to take up the divided vessels; but the incessant column of blood pouring from them, concealed them so completely that I found it impracticable to succeed. By running my finger into the wound, I felt that the knife had passed in the direction of the carotid arteries and internal jugular vein, between the vertebræ and pharynx; and it was evident, from the copiousness of the hæmorrhage and the redness of the blood, that a large artery was wounded—either one of the carotids, or one or more of their large primary branches. The extreme danger of the individual left no further time for attempts in this region; I therefore determined to take up the primitive carotid, which I did by extending the wound downwards for two inches, and passing a ligature around the vessel on a level with the thyroid cartilage. The operation was very much embarrassed by the parts being continually overflowed with blood, so that I could scarcely get a glimpse of them for a moment at a time.

The patient resisted with all his might these proceedings, and protested with a loud voice against them, declaring incessantly his desire for the wound he had inflicted to take effect. Immediately on the ligature being drawn around the artery, the bleeding stopped completely; he became relaxed, and seemingly fainty; and his voice, which had been previously coarse, fell to a whisper, and could not be raised above it. The respiration, however, was not disturbed. I apprehended that the par vagum had been inclosed in the ligature, and felt half disposed to put on another a little below, and remove the first. The danger from the hæmorrhage was so pressing, that not having an aneuris-

* American Journal of the Medical Sciences.

mal needle at hand, I had used a common one, with the point foremost, and passed from within outwardly. The hurry of this operation, and the obscurity of the parts from blood, made it impossible therefore to use the caution requisite to avoid the par vagum; and the sudden failure of voice led me to suspect this accident; but after watching the respiration for some time, it appeared to proceed so tranquilly that I determined to let the ligature remain, and especially as it answered so completely the purpose of arresting the bleeding. The operation being finished, and the parts bound up, the patient was sent immediately to the penitentiary in a carriage, and put under the professional charge of Dr. Bache.

July 12th.—The patient is nearly well; his respiration is good; the voice is still in a whisper, though improving, and regaining its former tones. I think, therefore, that the cause of the feebleness of the latter must have arisen from turning off the supply of blood to the larynx through the upper thyroid artery. The ligature has come away.

In our common dissections of the carotid we find it in front of and against the muscles of the transverse processes. In this case I was surprised to find it much in advance of those parts: is this common, and is it produced by the muscles of the throat drawing it off?

DISLOCATION OF THE PATELLA.

To the Editor of the Medical Gazette.

SIR,

IN a letter which appeared in the last Gazette, under the signature of Mr. Oldknow, that gentleman furnishes the particulars of a case which he describes as resembling that lately transmitted to your journal by myself. I trust that you will afford me the opportunity of shewing, that between the two reports a very material difference exists.

In my case, the external margin of the patella was resting upon the external condyle of the femur, and not upon the articulating pulley at all; its posterior surface was looking *forwards* and *rather* inwards, consequently the anterior must have been looking *almost* directly backwards. In Mr. Oldknow's case, the external margin of the patella was in the middle of the articulating pulley; its posterior surface directed *towards the opposite limb*; its anterior *outwards*.

Mr. Oldknow's case resembles very closely that quoted by myself from Rust's Magazine, as one margin of the patella was in contact with the trochlea of the femur, and the surfaces looked directly outwards and inwards. The only difference between the two is, that in Mr. Oldknow's case the external margin was in contact with the trochlea; in Dr. Wolfe's, the internal.

As I have shewn that Mr. Oldknow's case is not a parallel one to that communicated by myself, but with a very slight difference similar to the one I quoted from Rust's Magazine, it affords no ground for an opinion contrary to that which I have offered—that a dislocation of the patella outwards, on the external condyle of the femur, with almost complete eversion of the bone, could not occur in a normal condition of the parts, and that to the deformity which existed in my case must be entirely ascribed the peculiar character of the accident.

I am, sir,
Your obedient servant,
W. S. WARD.

House-Surgeon's Apartments,
St. Bartholomew's Hospital, March 7, 1833.

MEDICAL GAZETTE.

Saturday, March 16, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

WAYS AND MEANS AT THE LONDON UNIVERSITY.

WHEN last we noticed the affairs of this school, we assumed the correctness of the published report, and we find that we were not too hasty in doing so—it has since been adopted by the general meeting of the proprietors. But there is something so inconsistent between the fact of adopting that report, and one or two of the resolutions said to have been passed at the same meeting, that we are induced to look into it once again,

to try if we can reconcile what, we have no doubt, the public as well as ourselves think a little in need of explanation.

The report says that the affairs of the place are, at this moment, in so hazardous a condition, that certain schemes must be immediately put in practice to rescue it from its embarrassments: by the 1st of October, 1833, there will be a balance of 3715*l.* due by the institution, without visible means of payment; and the chief scheme at present suggested is to appeal to the public—to get at least 1000 subscribers to lay down 20*s.* each, by way of an annual subscription: in short, the managers say that, if they go on, the expenses of the place cannot be less (using, too, the strictest economy) than 4000*l.* per annum, whilst they cannot calculate on more than 3000*l.* income: they therefore naturally desire a subsidy of 1000*l.* a year, as the least that will keep the concern afloat. We suppose it is in consequence of having perceived the pinching husbandry which such an expedient would entail, that the proprietors have thought proper to advertise that the public are invited to subscribe *not above* 2*l.* *each*—20*s.* evidently not being deemed sufficient.

Lest it should be supposed that we deal too much in generalities regarding this matter, we will lay before our readers some extracts from the report; not taken from certain pages to which there were some objections made, but from parts the accuracy of which seems to have been admitted by all.

"At the beginning of October last," say the Council, "the balance against the University was 2946*l.*; and thence arose considerable difficulty at the close of the last session, as it was impossible to open the present session without obtaining some advance of money, in order to meet the exigency. The unfavourable state of the classes during that year, had been commonly ascribed to the dissensions which had previously prevailed; and it was generally admitted that a fair trial of the University could only be obtained in a new session. Had the Council convened a general meeting, and laid the circumstances before the proprietors, it is more than probable that the public disclosure of the state of the finances of the University, and the discussion consequent upon it, would have had a very injurious effect upon the entries of students for the session."

So, "with a view to a general provision for the opening of the classes," a resolution was passed, declaring the expediency of raising 1500*l.* "for the immediate purposes of the University," and the sum of 1100*l.* was accordingly, by loan, procured;—which, by the way, affords a sufficient explanation of that sentence in the opening address—"The University is now prospering*!"

Again: in a subsequent page, the Council say,

"The University will have, at the close of the present session, a debt of about 4000*l.*, an annual expenditure, on the very lowest scale of reduction, varying from 3500*l.* to 4000*l.* per annum, and an annual income of from 2500*l.* to 3000*l.*; no considerable improvement of which can, within any short period, be expected." "In order to establish the University on a permanent footing, an increase in its funds of not less than a thousand a year is *essential*. The Council, however, wish to impress on the proprietors the importance of providing a still larger fund. At the present estimated rate of expenditure, the Council are compelled to use the most rigid economy, and to deny to the professors many things that would be highly useful in their course of instruction. However, 1000*l.* per annum will be *sufficient* to enable the institution to proceed."

We also find it said, in another page,

"The Council will be able to complete all their engagements with their present students, but, at the close of the present session, unless some of the plans suggested in the sequel, for giving support to the institution, be adopted, they may be reduced to the

* "Address delivered at the opening of the Medical Session, 1832," page 16.

necessity of giving notice that the institution cannot re-open upon its present footing."

Then come the "schemes" submitted for consideration. 1. The procural, if possible, of a charter; which, however, is but faintly suggested by the Council, and is apparently looked upon as a "forlorn hope," by the proprietors. Mr. Warburton, in his speech on the second day of the meeting, gave it as his opinion, "that they were not yet in a condition to apply to government for a charter *." 2. The disposal of a piece of waste ground in front of the University, which "it is estimated might let at a rental of 276*l.* per annum; although the Council are informed that at present it would be difficult to procure a tenant. 3. To set up an hospital on the said piece of ground, on a plan and scale which we shall notice more particularly presently. And, 4. To call upon the proprietors and the public to subscribe a small sum annually (viz. 1000*l.* a year, or upwards), for the support of the institution.

Such are the principal facts contained in the report: we have reviewed them attentively more than once, and we must confess ourselves perfectly at a loss to comprehend how, after adopting such a statement as correct and incontrovertible, a resolution stultifying the whole proceeding should have been passed, to the effect that, as the prospects of the institution have materially improved, (!) they have resolved to take such steps as are necessary to uphold it, trusting that in progress of time it will accomplish the objects for which it was originally founded! Probably all that we are to understand by this odd resolution is, that the proprietors think it better to go on at all events —better to live and be merry, than die in despair: with all their improved prospects, we find that they advertise to invite subscriptions, and intimate that they still intend not to lose sight of the hospital.

As to the appeal to the public to levy contributions for present support, far be it from us to interfere with the benevolent intentions of the charitable: so far as such ways and means will contribute to the assistance of the Gower-street school, they shall have no let or hindrance from us; but when it is attempted to divert the current of public benevolence towards the trading speculation of an hospital—proposed to be erected for the purpose of recruiting the finances of an educational body reduced to difficulties—we raise our express protest against the measure. There are, however, so many curious absurdities about the attempt, that we cannot let it pass without a few further remarks.

It is generally understood that the Council are men of business: let us see with what tact they set about this business of an hospital. Some time ago, a prospectus was circulated in order to obtain subscriptions, and the committee, we are told, exerted themselves "with great energy and some success." The result has been that 2300*l.* have been subscribed, and the Council think that more money would be forthcoming if the building were once begun,—by way of a bait to lure the public. We fancy the worthy Council reckon without their host in this matter: we would recommend them to cast their eyes about, and see if this be the ordinary mode in which the erection of expensive buildings is safely effected. They next state the estimate which has been presented to them, and certainly the fact of their publishing such an estimate, apparently without a suspicion of its chimerical nature, is a strong indication of rare simplicity. With the astounding truth before them, that the

* It was amusing to see a paragraph in some of the papers last week, stating that a large dinner party of dissenting clergymen, at the British Coffeehouse, Cockspur-street, came to a resolution, over their bottle, to petition parliament for a charter for the London University! *Qu.* Is there a room in the said Coffeehouse large enough to dine a dozen people?

showy façade and theatres in Gower-street have cost little short of 150,000*l.*—or that that sum, or upwards, is sunk in the present building—they yet are simple enough to fancy that an hospital, containing 165 beds, with furniture and apparatus requisite for the reception of patients, might be erected for 10,000*l.* Surely they are utterly forgetful of the heavy charge which they thus bring upon themselves, by implication, of having spent 150,000*l.* most lavishly, or they are utterly ignorant of the real expenses to which such an hospital as that proposed would amount. It is a monstrous absurdity—if, indeed, it be not something more questionable—to presume to tell the public that such an estimate is feasible. Why — take the Charing-Cross Hospital, which has been raised under circumstances comparatively prosperous—with resources long contemplated and well-ascertained: it is constructed for the reception of only 100 beds: it has been managed in the erection with the most rigid economy: it is not yet completed: and for the bare walls alone, without a particle of "furniture or apparatus," it has already cost 10,000*l.* We will not quote other instances of the expense of hospital building—though we are amply furnished with the means of doing so—lest it should be thought absurd in us gravely to expose so glaring a miscalculation as that of our honest Council. Pass we to another of their estimates—the income of the hospital, supposing it built. They expect, they say:—"by fees of students, 3000*l.*; by subscriptions, 1000*l.*; total, 4000*l.*" Who will not smile at this most singular assertion? Whence the 1000*l.* per annum subscriptions are to come, to be sure, they do not even hint, nor shall we further inquire, any more than we do about the 3000*l.* in fees from pupils (!) while the sanguine projectors reckon on no more than 80 or 100 pupils to be added to the school. This, the Council say, "would be, *if realized*, a more profitable speculation than that of letting the ground on building leases"—and we think so too—especially as there is no prospect of getting tenants. "This estimate, however," continue our financiers, "assumes three most important things: 1, that if will be possible to obtain funds sufficient for building and furnishing the hospital; 2, that the hospital, when built and furnished, will produce funds sufficient for its own support; and, 3, that the hospital, so supporting itself, will cause an increase of not less than 50 pupils to the medical classes of the institution." This is the most sensible consideration that seems to have struck the Council regarding the hospital scheme; nor do they seem altogether destitute of prudence when they observe, that it would be very awkward if the hospital were called upon for ground-rent, and should not be "able to pay;" and we will add one extract more, indicative of a wholesome caution on the part of the same managers:—"If the sum of 4000*l.* or 5000*l.* were subscribed, it would probably not be difficult to raise a sufficient sum to complete the hospital" (certainly not difficult when 4000*l.* a year income might be so easily realized!) "on the security of the ground on which the building stood; but *should the hospital fail, a mortgagee might take possession of this piece of land;* and the prospect of the various difficulties and vexations which he would have it in his power to produce, might induce the proprietors to pause before they transferred the power which they confided to the Council, of raising money on the ground opposite to the institution, to that of raising money on the ground attached to it, however accurately defined and limited."

The latter part of this paragraph relates to another project which has been broached—namely, to raise the hospital as a wing of the present building, and thus reserve the ground opposite for tenants, if they can be had. But if it

be deemed unobjectionable to have an hospital in such immediate proximity, we confess we cannot see why a part of the actual building itself might not be appropriated for the reception of patients, even though it should incommode the general classes. There would be economy in such a plan, and perhaps no small discretion.

It is put beyond a question by the report before us, that no part of the institution in Gower-street is doing well, except the medical school and the boys' day-school; the former for reasons which we may be induced fully to explain on a future occasion—the latter for reasons that we do not care to trouble our readers with; but it is clearly seen that the departments of general science and literature have failed; so that to all intents and purposes the existence of the institution in Gower-street, as an *University*, even if it had a charter, is in a state of mortal decay.

"Here be truths," unpalatable, perhaps, but not unuseful in the moral which may be deduced from them,—truths derived from the written, printed, and published report of the Council—and solemnly put forth by the latter, as containing facts free from all reserve and uncandid dealing. Many think that the disclosures which have now come to light have been too long delayed, and that a system of wilful delusion has been a little too grossly practised upon the public. It is well, say we, that the veil is even now removed. There are, on the other hand, a number of persons who are in the habit of holding that honesty is not the best policy, and who are indignant that the Council should have acted as they have done. It is the maxim of those persons to affect most tranquillity when their circumstances are most desperate; and they are not ashamed to maintain, that if the institution in question were really hard pressed, then was the time when it should seem most confident, and then should it by no means throw itself on the benevolence of the public: nay, one notorious personage of this class—notorious for practising this precious doctrine (though with what wretched effect every one knows), thus eagerly inquires:—"Do *men of business* when they wish to raise a loan amongst their friends, or when they are desirous of *making a push to improve their circumstances*—do they, we ask, represent themselves as insolvent, and express an apprehension of not being able to reopen their warehouses or their banking-houses?" The question is asked by a person of great experience: if we might venture an answer, we should say—men of business who are *rogues* never do.

We have seen also the counter-statement of the professors—as it is called—intended to neutralize, if possible, the statement of the Council. We think it an utter failure. It expresses merely the "confidence," and the "conviction," and the "assurance," and the what not, of the writers,—that every thing is going on well in the institution; that there is nothing at all discouraging in its affairs; and that, as to the calculations of the Council, if certain "more favourable" calculations were adopted instead, the deficits would be much less than they now are. The signatures to this document are principally those of the medical teachers; the other names, we believe, are those of the masters in the boys' school. Though said to be the production of the "Professors," we miss the names of not a few, nor the least respectable of those who rejoice in that title, and who might be expected to appear at the present crisis with the rest of the group. Altogether it impresses us as a thing of so little pith, that we lay it aside with the purest indifference, along with the subject itself—for the present.

VACCINE COMMITTEE.

A Committee of the House of Commons has been appointed to investigate the subject of vaccination. It is now sitting, and collecting evidence chiefly as to the question, whether the supply can, or cannot, be efficiently kept up without a National Board.

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SIR ASTLEY COOPER.

The King of the French has bestowed upon Sir Astley Cooper the decoration of the Royal Legion of Honour. The honour was conferred upon the distinguished Baronet through the medium of Prince Talleyrand.

——

DR. ROBERT BROWN.

The Academy of Sciences in Paris has elected Dr. Robert Brown to be Foreign Member, in the place of Scarpa. There were numerous men of science in all parts of Europe nominated as candidates; of those, none had more than seven votes in their favour, whereas Dr. Brown had twenty-six.

UNIVERSITY OF EDINBURGH.

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To the Editor of the Medical Gazette.

Edinburgh University, 9th March, 1833.

Sir,

In the article in the London Medical Gazette for February 16, entitled, "College of Physicians—Fellows and Licentiates," the following passage occurs:—

"It would not be difficult to point out licentiates [of the Royal College of Physicians of London] who * * * have matriculated in Edinburgh; and by repeating the same process two or three times, have on the last occasion come down from the north full-grown doctors, without ever having been missed from London."

As I am confident you must feel not less unwilling to make, than ready to correct an erroneous statement tending to injure this university, I beg to inform you that you must have been misinformed as to the present academic rules, otherwise you would have known that an imposition of the kind alluded to cannot be practised here.

What may have been possible some time ago, it appears equally immaterial to the interests of the Edinburgh university, and to the argument in the passage quoted from the Gazette, for me to inquire. I doubt altogether the accuracy of the statement you have made. But at all events, for some years past no person can possibly have graduated here without having been a regular student in some university for four years, and during at least one of these a regular student in the university of Edinburgh.

Those candidates who have studied during a part of the required term of years in other universities, must produce certificates to that effect; and those who attend this university must sign the university-album once every month, in proof of their presence. We have considered this regulation to be a sufficient check on any attempt at imposition of the kind you mention, and it has now been acted on for eight years. But besides, for some years, measures have been taken, by means of which every Professor is able to ascertain the regularity of attendance of each pupil who attends his class as a qualification to meet the rules of any public medical body which gives degrees or diplomas; and certificates founded on such proof of attendance, are the only evidence which will be received from candidates for the Edinburgh degree for any course of lectures attended here subsequent to the academic session of 1831-32.

You will perceive, then, that there is no call for the recommendation which follows in the Medical Gazette the statement quoted above.

I have the honour to be, sir,
Your most obedient servant,
R. Christison,
Dean of the Faculty of Medicine.

Note on the preceding Letter.

Dr. Christison does us no more than justice in assuming that we are "not less unwilling to make, than ready to correct, any erroneous statement;" but we must add, that after reperusing the article alluded to, and collating it in a spirit of the utmost candour with the preceding letter, we have been unable to perceive that we have made any statement which requires correction. We did not make the assertion with regard to the existence of physicians in London who had obtained their degrees in the manner stated, without having particular instances in view, although, had we

named them, it would have given a personal and offensive character to remarks intended to be general. All that Dr. Christison's letter goes to prove is, that whatever "may have been possible some time ago," the event in question cannot have occurred, "at all events, for some years past;" and to this assurance, on such good authority, we have pleasure in giving publicity. Our correspondent "doubts altogether the accuracy of the statement we have made;" to which we reply that his *esprit de corps* misleads him if he supposes that such things were never done; and we would crave leave to ask what circumstance led to the necessity of the modern regulation, that "those who attend this university must sign the university-album once every month, in proof of their presence;" or of that still more recent plan, "by means of which every Professor is able to ascertain the regularity of attendance of each pupil;" or, lastly, why it was thought expedient to establish "a sufficient check on any attempt at imposition," unless imposition had been practised, and the previously existing check found insufficient? We are glad to find that our recommendation to remedy the abuse has been anticipated; and so far from having any desire "to injure" the university of Edinburgh, we shall be happy to learn that it continues to flourish, and long to enjoy the services of the present learned and accomplished "Dean of the Faculty of Medicine."—Ed. Gaz.

ACCUSATION OF PLAGIARISM BROUGHT BY DR. GRANVILLE AGAINST DR. LEE.

To the Editor of the Medical Gazette.

Sir,

At the meeting of the Westminster Medical Society, of the 2d instant, Dr. Granville charged me with having taken the facts and opinions contained in my paper, "On the Structure of the Human Placenta, and its connexion with the Uterus," from his lectures, and from a paper by Professor Lauth, in the Repertoire Generale d'Anatomie, for 1826.

Anticipating that an account of what he actually stated would appear in the weekly journals, Dr. Granville "thought it proper" to send me a letter containing his own version of what had passed.

Not choosing to reply orally to accusations brought against me in writing, and fearful of trusting myself to speak extemporaneously on a charge at which I felt so indignant, I committed my defence to paper, and read it to the Society last Saturday. In my answer, I have not thought myself called upon to confine my observations to the *amended* statement transmitted to me by Dr. Granville, but have extended them to the remarks which he actually made at the Society, as detailed in a published report of the proceedings, the accuracy of which has been confirmed by the testimony of several members who were present.—I am, sir,

Your obedient servant,

Robert Lee.

Golden Square, March 11, 1833.

Dr. Granville's Charges against Dr. R. Lee.

16, Grafton-Street, Berkeley Square, March 4, 1833.

My dear Sir,—In accordance with that spirit of forgiveness by which I have, and ever shall be, guided towards my friends and acquaintances, whatever their treatment of me may be, I think it proper to acquaint you that the subject of your claims *to the discovery of a distinct circulation in the ovum*—or, in other words, of the non-existence of an immediate communication by direct blood-vessels from the uterus to the placenta, and *vice v rsâ*—having been brought forward, by Mr. Chinnock, at the last meeting of the Westminster Medical Society, I felt myself compelled, in replying, to deny the originality of your claims, and point out the authors, who, many years before you, had published the result of their *experiments* and *anatomical* examinations, by which they had been led to the conclusion you adopted in your paper in the Philosophical Transactions. As in duty bound also, I asserted (and fortunately my MS. notes, and some memoranda published many years before you directed your attention to midwifery, will prove the accuracy of the assertion) that you had attended my lectures ere you had made the slightest inquiry, or could possibly make the slightest inquiry, into these matters; and that you could not but have learned at those lectures that I invariably expressed doubts of the correctness of the received doctrine, and stated, that, from having ascertained by experiments made in the presence of pupils and Mr. Cuthbert,

that there was a membrane which enveloped closely the cotyledons of the placenta, and dipped among them, without any laceration, or the slightest orifice of blood-vessels on its surface, it was impossible any direct transmission of blood from the mother to the child could take place. You cannot have forgotten the one experiment in particular, when, in your presence (I believe), certainly in that of two or three pupils, I injected the membrane in question, or rather I *raised* the membrane in question, by injecting under it some ink through the umbilical vessels, without lacerating it, or the least oozing of the fluid through it; and that the placenta so prepared was kept in a flat glass, in spirits, for a great length of time, open to the inspection of many.

However, it was not for the purpose of revindicating the claims of the teacher over those alleged by the pupil, that I stated the preceding facts, but rather with the view to take away any merit of priority which might be supposed to belong to them; for I was ready to withdraw my claims on the subject, in favour of Lauth, of Strasburg, who, in the year 1826, had published a paper on the Connexion of the Placenta with the Uterus, establishing incontrovertibly and by *experiments*, and not merely by observation, the principle which you adopted five years afterwards.

Nor would I have done even this common act of justice to an illustrious foreign physiologist, at your expense, had I not been taxed with having neglected to name, (as a *counterpoise* to the eminent physiologists of the Continent, twenty of whom I enumerated) as proving that even in England physiology was eminently cultivated, "Dr. Robert Lee, the author of the paper on the Connexion of the Placenta with the Uterus." The declaration I was thus forced to make was not a voluntary act on my part; else, had I been so disposed, I should have addressed, immediately after the reading of your paper at the Royal Society, a letter to the Council, pointing out where the original idea of that paper was to be found. But my regard for one who had received instruction from me, induced me to forbear from such a course; and although I have had to regret, on more than one occasion, that you should have been so unaccountably silent about the authors of many of the new facts, notions, ideas, intentions, and practical instructions, of obstetrical science, which I so unreservedly communicated to you from time to time, during a period of several years that I allowed you the range of the Dispensary, the Benevolent Institution, and my own study, from the moment that you first took to the art of midwifery until you began to publish your various essays, still nothing but a direct appeal (I can almost say *charge*) from a member of the Society, *coram populo*, could have drawn from me the avowal of what I solemnly declare to be nothing but the truth.

I will now add, that, in making the avowal in question, I took care to state that I was far, *very far*, from thinking that you had either intentionally forgotten my claims or that you had knowingly been the plagiarist of Lauth; but that the facts were as I stated them, and that, disregarding in toto what concerned myself, I placed the issue of priority of the discovery in question, not between you and myself, but between you and the Professor of Strasburgh; whose work must have been in the library of the Medical and Chirurgical Society when you were one of the secretaries to the Society. If, therefore, said I, Dr. Robert Lee, whom I am called upon to name as an English physiologist, to counterbalance Tiedemann, Baer, Magendie, Cuvier, Chaussier, &c. &c. is not original in his discovery of the connexion of the placenta with the uterus, but Lauth is (and, in good truth, many more there are before *him*), then the charge brought against me by Mr. Chinnock, of neglecting native physiologists in the obstetrical department, by omitting the name of Dr. Robert Lee, falls to the ground.

I have now, and with the utmost candour, and in the spirit of amity, related to you what has passed, and leave to you to deal with it as your best feelings shall dictate.

Believe me, very truly,
A. B. GRANVILLE.

Dr. Lee's Answer to the Charges of Dr. Granville.

MR. PRESIDENT,—At the last meeting of the Society, Dr. Granville made two accusations against me: the one that I had obtained my ideas respecting the placenta from his lectures, the other that I have borrowed them from Dr. Lauth, a professor at Strasburgh; and that, in fact, "his paper was an anticipated translation of mine."

With regard to the first accusation, permit me to say that it is my firm conviction, after a careful examination of dates, that I never could have been present at any lecture delivered by Dr. Granville on the human placenta, and its connexions with the uterus; and that, in 1826, when he performed the experiment of injecting the umbilical vessels with ink, and raising the membrana propria, I was not in London, and for more than two years before had been absent on the Continent. Dr. Granville, I believe, commenced his short

career as a lecturer in October 1824. From notes which I have preserved, I find that I was present at the lectures delivered by him from the 1st to the 18th October, but in none of these lectures did he touch upon the anatomy of the gravid uterus in the latter months of gestation. On the 29th October, 1824, I quitted London for Russia; and during the remainder of 1824, the whole of 1825 and 1826, I never had the slightest correspondence with Dr. Granville, and could not, therefore, have known what doctrines he taught during this period, or whether he had any pupils to listen to his instructions.

At the commencement of 1827 I returned to London; but an attack of fever with which I had been affected in the Crimea, prevented me from entering, for some time, with activity, on any professional pursuit, and I am at present unable to say whether or not Dr. Granville continued to give lectures.

But suppose I had been actually present to witness the experiment of injecting the umbilical vessels with ink, and insufflating air under the membrana propria, and admitting that I might have heard from Dr. Granville of this experiment, (*a circumstance of which I have no recollection,*) I am still greatly at a loss to discover what new light I could possibly have derived from the information thus obtained, as to the structure of the placenta and its relations to the uterus. More than half a century before Dr. Granville arrived in England, the fact was known to both the Hunters, that the *membrana decidua* passes over the uterine surface of the placenta; and what else does this experiment, on which Dr. Granville lays so much stress, demonstrate?

Dr. Granville asserts, that the only new fact which I have put forth was taken from his lectures, delivered previous to 1826; wherein, when on the subject of generation, he not only expressed his doubts as to, but denied, the existence of the decidua reflexa. He then distinctly professed—he says—the doctrine which I have since proclaimed in the paper alluded to.

The members of this Society will, I am sure, feel astonished at the boldness of this statement, when they find, on consulting the paper in question, that it contains no allusion whatever to the decidua reflexa; not a word being said respecting either its existence, or the mode of its formation. Elsewhere I have proved, in direct opposition to Dr. Granville's opinions, that the decidua reflexa does exist in the early months of pregnancy, and that the description given of it by Dr. William Hunter is perfectly correct. How, then, can it, with any sense of justice, be affirmed that I have borrowed my ideas respecting the decidua reflexa from an individual who entertains opinions diametrically opposite to mine?

But this is not the first charge of plagiarism which Dr. Granville has preferred against me, although it is the first he has ventured publicly to make. In the year 1828, before presenting to the Royal Society my paper on the Functions of the Internal Canal and Liver of the Human Fœtus, (and which has also appeared in the Philosophical Transactions,) I was anxious to obtain Dr. Granville's opinion as to the novelty of the facts it contained, and whether any foreign author had ever before described similar appearances. Before the paper had been half read through, he exclaimed, with vehemence, "You have taken the facts from my lectures: I taught precisely the same doctrine several years ago, when *you were my pupil*; and you must have borrowed the facts from me." I declared that I was wholly unconscious of having borrowed them from any person, and that I would instantly put the paper in the fire if he could prove to me that the facts belonged to him. His MS. lectures were forthwith produced at my request, and narrowly examined both by Dr. Granville and myself, but not a trace could be detected in any part of them to shew that Dr. Granville had ever alluded to the appearances which it was the object of the paper to point out. The claim, I need not say, fell instantly to the ground. He insisted, however, afterwards, that Meckel had done so, if he had not! and that precisely the same phenomena had been described by Meckel. The work of Meckel was also immediately searched, but his opinions, though in a few points bearing some resemblance to mine, were found to be in other respects so essentially different that the paper was immediately after presented and read before the Royal Society, and published in their Transactions. After such an occurrence as this, surely Dr. Granville had no reason to feel either offended or astonished, if my papers on Uterine Phlebitis, Puerperal Fever, and the Structure of the Human Placenta, and its Connexions with the Uterus, were never submitted to his inspection before they had been publicly read.

As to the second accusation, I have to profess my entire ignorance of Dr. Lauth's having published upon the subject before me. In the letter, addressed to me by Dr. Granville on the 4th instant, he says that his friendship for me was the only cause why he did not at the time my paper was read send a letter to the Council of the Royal Society to state where the original was to be found. Being somewhat stunned at first by the formidable character of the charges preferred against me, and not

knowing where to find Dr. Lauth's paper, I called on Dr. Granville on the morning of the 5th instant. On expostulating with him on the impropriety of his conduct in permitting the Royal Society to publish a paper pirated, as he believed, from another author, and in allowing sixteen months to pass away without saying a word about his own claims, he at once stated, as an excuse for not performing his duty to the society, that he had not heard my paper read—that he had not seen the abstract of it printed in the proceedings, and distributed to all the Fellows, and that he was unacquainted with Dr. Lauth's paper till mine appeared last June.

Now, however, that I have examined Dr. Lauth's paper, in consequence of Dr. Granville's allusion to it, I cannot but express my astonishment at the charge of plagiarism against me. The essays are as different as it is possible for two papers on the same subject to be. The descriptions they contain bear no resemblance to each other, and the conclusions are diametrically opposite. Dr. Lauth says not a word about the great semilunar openings in the lining membrane of the uterus, which are closed by the decidua during pregnancy, from which the blood in uterine hæmorrhage flows, and in which uterine phlebitis generally commences; nor does he allude to any connexion between the uterus and placenta, except by lymphatic vessels. I defy Dr. Granville to point out a single expression which entitled him to assert, as he did, that I have used "the very words of Dr. Lauth, and that his paper is an anticipated translation of mine."

The description which I have given of the human placenta, and its connexion with the uterus, was neither borrowed from Dr. Granville's lectures, nor from Dr. Lauth's paper, nor from Velpeau's Elements—as another obstetrical writer has maintained—but was drawn from a careful examination which I made of six gravid uteri in a recent state, and numerous placentæ expelled in natural labour, at the British Lying-in Hospital, from 1827 to 1831. These preparations are still preserved in the museums of Webb-Street School, Royal College of Surgeons, and King's College, London, where they may be seen by all who take an interest in the subject.

Dr. Granville has committed a serious error in supposing that I commenced the study of midwifery under his auspices in 1824, or that I was ever his pupil in the manner he has represented. The university tickets of Professor Hamilton, of Edinburgh, dated 1813 and 1814, which I now hold in my hand, and a volume of MS. notes of his lectures, which I took at the time, and which every member may examine, prove that exactly twenty years ago I was engaged in prosecuting the study of midwifery under that celebrated teacher, and was attending the practice of the Lying-in Hospital of that city. This was at a time, I believe, antecedent to that, when Dr. Granville quitted the naval service, where he could have enjoyed but few opportunities of studying this branch of the profession: certainly it was several years before he had settled in London. Before I had made the acquaintance of Dr. Granville, I had likewise spent the greater part of the winter of 1822 in Paris, chiefly for the purpose of obtaining a more complete knowledge of midwifery from the lectures and practice of Professors Desormeaux and Capuron.

Dr. Granville must be aware, for it was distinctly stated to him at the time, that it was by *the practice* of the institutions to which he belonged that I was anxious to benefit; and that my object in applying to him at all was to prevent the necessity of proceeding to the Dublin Lying-in Hospital for a more extended field of experience than I had yet enjoyed previously to establishing myself in London as a physician-accoucheur. In proof of the truth of what I now state, it is only necessary to recal to his recollection the numerous cases of embryotomy, arm presentation, convulsions, and hæmorrhage, which he entrusted to my sole care as early as October 1823, when it was impossible for me to have profited in any way by his instructions. The society, I am persuaded, will not believe that Dr. Granville could have been guilty of such a criminal neglect of his public duty, as to commit the sole management of such formidable cases to a mere tyro in obstetrics.

Besides, how could Dr. Granville at this time, consistently with the trust reposed in him by the distinguished Russian nobleman alluded to, have ventured to send me to Russia, for the purpose of taking charge of the Countess Woronzow, at her approaching confinement, if he had believed that in 1824 I was just commencing the study of midwifery by attending his lectures? In truth, though not so advanced in years as Dr. Granville, I was at the time, and consequently am now, the elder accoucheur of the two.

The paper in question having been originally laid before the Royal Society, it appears to me that the proper tribunal to try the matters in dispute is the Council of that learned body, and I have accordingly expressed to the Secretary my earnest desire that measures may forthwith be taken thoroughly to investigate the charges of plagiarism against me. If I have been guilty of purloining the opinions of others, let me be driven with disgrace from the society of honourable men; but if innocent of the charges brought against me, as I feel conscious I am, I

trust that Dr. Granville, whatever his opinions may be respecting the turpitude of plagiarism, or whatever his estimate of the value of literary integrity, will find that in this country, at least, men of science cannot with impunity be unjustly stripped of whatever merit is their due.

[We are at all times extremely unwilling to lend our pages to controversial matters of a personal nature, and should have declined inserting the preceding had it not contained the statements of both parties, and in their own words. Having done thus much, we take leave to say that the discussion cannot be continued in this journal.—Ed. Gaz.]

HOTEL DIEU.

POISONING WITH SULPHURIC ACID — DEATH IN SEVEN HOURS — AUTOPSY; — WITH REMARKS,

By M. Dupuytren.

Poisoning with sulphuric acid (said M. Dupuytren) is one of the most terrible kinds known. The action of the substance is always confined to the *primæ viæ*. However, it sometimes destroys, by its corrosive power, a part of the stomach, and then extends its violence to the neighbouring viscera, and occasionally to the whole of the abdominal cavity. In considering the phenomena which attend this poison we should keep in view the anatomical and physiological bearings of the alimentary canal, in order the better to understand the effects of this destructive agent, and the nature of the changes which it produces.

The cavity of the mouth cuts the axis of the body at a right angle; sometimes it becomes oblique from above downwards and from before backwards, at the moment that fluid is introduced; and often the head is thrown so much back that the cavity becomes vertical, forming one line with the pharynx and œsophagus. In this case, the contact of the liquid with those parts is almost instantaneous. The nearly transverse position of the stomach also, its great capacity, its *culs-de-sac*, the peculiar position of its lower orifice, which is, as it were, turned upwards—all these are so many circumstances favourable to the retention of the liquid swallowed. It is important to take this anatomical view of the parts, that we may know how it is that some of them escape so well in the rapid contact of the acid as it passes into the interior.

As to the internal lesions, we shall have a good example of them by attending to the following case.

A female, bent upon committing suicide, in consequence of some domestic annoyances, procured a quantity of sulphuric acid, and swallowed it. She was immediately seized with the most dreadful symptoms; a burning heat pervaded the whole length of the œsophagus and the stomach; the pain was excruciating; eructations abundant; nausea; hiccup; presently, repeated vomiting of liquid matter, which effervesced on the floor; constant agitation and distress; a feeling of cold from without. She was carried into the Hôtel Dieu without loss of time, where she was treated with magnesia, milk, solution of gum arabic, emollients, and every thing in the shape of a counter-poison, but all in vain; the wretched woman died in seven hours, after suffering extreme torture. M. Husson had the management of the case: but, upon examining the body, the lesions were so remarkable that he wished to have M. Dupuytren's opinion of them. The Baron directed attention chiefly to the primæ viæ. In the interior of the mouth the mucous membrane had become thickened, white, or greyish, and was easily peeled off in some places. The epidermis of the lips was easily separable in the same way, and exhibited a semilunar space, the boundary of which marked the limits of the glass from which the deceased had drunk. The tongue and palate were completely stripped of their mucous membrane. In the throat the symptoms were of the same character, but much aggravated. The œsophagus was lined along its interior with a grained tunic, which was marked with longitudinal (*verticaux*) bands, or furrows: this was the mucous membrane specially acted upon by the acid. In the stomach was found a muddy liquid, part of which was densely amalgamated with the coat of the viscus, and formed upon it a grained layer. The whole surface of this organ was nearly covered with black irregular spots, with a puffy condition of all the tissues: it presented the appearance of animal matter violently cauterized and burnt: the pylorus was completely covered in this way, and the duodenum was similarly affected.

May a patient be saved who has taken sulphuric acid? That this should be the case, said M. Dupuytren, would require two conditions—physical and moral. By physical condition I allude to the state of the stomach, which may modify considerably the action of the poison. When the organ is empty it is contracted, and presents its walls defenceless to the operation of the corrosive. On the contrary, when it contains a greater or less quantity of alimentary matter, it is this foreign matter which is generally acted upon; and if the poison be not abundant, the organ itself suffers little.

As to the moral condition, we should observe that this is not less deserving of notice: the act by which a sufficient quantity of acid is taken to produce fatal consequences, is always accompanied by such

a condition. It is then the object to commit suicide; and it is for this reason that accidental poisoning is always so much less serious: for when the acid is taken by mistake, inadvertence, or surprise, the event is generally favourable. This is not difficult to explain. When a person incautiously sips the acid, he is made aware of the presence of deleterious liquid as soon as it touches his lips; and if it be swallowed with avidity, the first mouthful may go down, or perhaps be detained in the fauces by a spasmodic contraction of the pharynx, whence it is immediately rejected. Hence, in the greater number of cases of poisoning by mistake, the sulphuric acid acts less destructively, by reason of the small quantity taken, and perhaps also the inferior quality of the acid itself: to which we should not forget to add, that mistakes of this nature commonly happen to persons who have no ill intent—who have, perhaps, been eating and drinking heartily but a few minutes before: the circumstances, therefore, are very different in the two cases.

REMARKS ON THE EMPLOYMENT OF CAUTERIES AND MOXAS.

The application of cauteries and moxas is attended with the happiest results in diseases of the bones and joints. Its immediate effects are a pain more or less acute, and the formation of a dry or moist eschar, which is produced in the tissues disorganized, whether they be combined with the cauterizing matter or not. Its secondary effects are a revulsive irritation, excited by the pain which it occasions on the skin; and presently after an inflammation, which I have called eliminatory, followed by a loss of substance, and an abundant suppuration arising from the subcutaneous cellular tissue. In the course of six or seven hours the action of the cautery is exhausted, and the bandage may be removed, as the eschar is fully formed. This eschar is of a deep yellow or brownish hue, with its circumference moderately red, swollen, and painful. After some days the swelling subsides, and the crust becomes gradually detached, beginning from its margin towards its centre; and this process is complete some time between the eighth and the twentieth day.

It is not my design at present (continued M. Dupuytren) to treat minutely of the particular situations which are best adapted for the cautery; but I may mention, that, in choosing the parts, we ought to give the preference to those which are abundantly supplied with cellular tissue, not marked by bony projections, nor tendons, nor the central portions of muscles. There are a few spots which deserve a special selection: for example, in the arm we ordinarily choose the slight sinus which exists between the lower attachment of the deltoid and the upper insertion of the anterior brachial muscle. In the thigh we almost always place the cautery at about a few fingers' breadth above the inner condyle of the femur, on the line of cellular substance which is marked in front by the interior portion of the crural, and behind by the third adductor and the gracilis muscles. The situation which should be preferred in the leg, is the space included between the inner margin of the tibia and the corresponding side of the gastrocnemius muscle, below the tendinous expansion formed by the sartorius and the gracilis.

In numerous cases it is desirable to produce the formation of eschars on the skin slowly, in order that the irritation may be the more sensible and sink more deeply. This indication is most commodiously fulfilled by the moxa.

Both sorts of cautery of which we have been speaking give rise to a sore, or ulceration, which suppurates regularly, more or less abundantly, and terminates in a cicatrix. For the purpose of preventing this termination, and keeping up the suppuration as long as possible, it is usual with practitioners to introduce common peas, or orange pippins, or other foreign bodies.

Now this practice is sometimes good, but I have often seen it do serious mischief, and augment that which it was intended to remove. The extreme irritation which the presence of these foreign bodies causes, extends to the articulation or the diseased parts of the bones. The patients are a prey to fever, thirst, sleeplessness—symptoms which do not disappear till the foreign substances are taken away. Some practitioners, who have formed an idea that the disturbance originates in the cautery itself, fear to renew it; and thus abandon a valuable resource. Convinced, however, that the whole inconvenience arises from the introduction of the substances in question, I have for many years ceased to use them. When I have applied the cautery, or the moxa, I allow the eschar to fall off, and the ulceration to suppurate without irritation; but as soon as the cicatrix is formed, I immediately reapply new cauteries in the vicinity of the old, until I have procured the desired amelioration. In this way I secure all the advantages of those powerful revulsives without any of their inconveniences.

A large number of patients suffering under diseases of the articulations of the shoulder or the hip, or the vertebral column, have been treated in the Hôtel Dieu with this remedy during several years: most of them have experienced its good effects, and many have gone out completely cured.

EXCESSIVE PUNCTUALITY AT THE COLLEGE OF SURGEONS.

To the Editor of the Medical Gazette.

SIR,

I AM a member of the College of Surgeons, and have been so ever since the year 1817. Having completed the ordinary occupations of the day, I left home this afternoon, in time, as I hoped, to hear Sir Charles Bell's lecture at the College. I was unfortunately hindered by carriages in Holborn, so that when I reached Lincoln's Inn-Fields the door was shut, and I was told that I could not be admitted, and that, too, with some degree of rudeness. Now, sir, if the audience consisted only of boys, or of young men whose time was unoccupied, and who required this expedient, to ensure punctuality, there might be some grounds for the practice; but when it is considered that no class of men are so liable to interruptions as medical men, and that in their course through the streets at four o'clock in the afternoon, and that too, perhaps, through the most frequented part of London, their progress may be (as was my case) inevitably interrupted—under these circumstances it is, in my opinion, a very imperious and unwarrantable measure, to bar the door, when the clock strikes four, to every member of the College, old or young, and thus deprive him of the gratification which he desired, and which he may have laboured all the day to obtain; and I think that, considering that the persons desiring admittance are men who are presumed to be of years of discretion and of the feeling of gentlemen, it may be concluded they would not create unnecessary interruption: and who, of all the audience, is there so selfish who would not rather lose a sentence of the lecturer than be the means of depriving a fellow member of the lecture altogether? It is a fault in all close bodies to have too great a fondness for shewing authority, and placing restrictions upon the general body, where none ought to exist; and I know of no other body, besides the College of Surgeons, which insists upon punctuality to the minute, and none of which the members might so justly claim a right to indulgence.

I am, sir,
Your obedient servant,
C.

Saturday, March 9, 1833.

P.S.—I was at the door of the Hall at precisely two minutes after four. The porter said the door had been shut five minutes. My watch was right this morning by three time-pieces, of which one was a chronometer, and which is kept to Greenwich time by a watchmaker.

DEVIATION OF THE MENSES.

THE following curious instance of anomalous menstruation has been communicated to the Medical Society of Paris, by M. Bonfils, of Nantz, and is published in the *Transactions Médicales*, for October last. A girl of the town, twenty one years of age, nervous temperament, had long been subject to hysteric spasms, especially just before menstruation. From the period when her menses first appeared, which was at the age of nine years, she menstruated regularly, the discharge continuing about eight days each period. Almost always, however, especially when she was chagrined, menstruation was accompanied by a sero-sanguinolent discharge, and often one of pure blood from the left mamma and axilla. In June 1824, she was admitted in the "*Maison de Secours*," of Nantz, in the fifth month of pregnancy, with a syphilitic affection. She stated that during the first month of utero-gestation, she had had a copious and continual uterine discharge, which weakened her much. During the following months she menstruated as usual, and the flow was always accompanied with a sanguinolent oozing from the left axilla and mamma. She was delivered at the seventh month of a living child; the lochiæ appeared and followed the usual course, and after six weeks the patient was transferred to the venereal wards; she was then put under treatment for the venereal affection. On the 26th of February 1825, her menses reappeared, at the same time there was a discharge of blood from the parts already indicated, and which uninterruptedly continued until the 6th of the following March. During this period, when these parts were wiped dry, in a few seconds the skin, which was of a natural colour, was observed to become covered, for the size of a five franc piece, with a multitude of extremely small drops of blood, which, enlarging and uniting, formed in four or five minutes, two or three large drops, which, running together, flowed from the body. All the other functions were perfectly performed, and the patient did not apparently suffer from the discharge.

On the 7th of March the sanguineous discharge from the vagina still continued abundant, but that from the axilla was replaced by another, which took place through the skin of the left flank, from a space of the size of a two franc piece. The patient had also a bloody taste in the mouth, and even expectorated some drops of that fluid. On the 8th and 9th, the discharge from the mamma continued, whilst that from the flank ceased, and another was established on the back, a little to the left, and towards the middle of the

space between the superior and internal angles of the scapulæ. The surface from which the discharge flowed, was two inches long and one broad. The next day a discharge was established from a new place, viz. the epigastrium, the others continuing. The 12th, vaginal discharge considerably diminished; the flow from the other parts however continued, and from the epigastrium became more abundant. The patient was leeched to the vulva, and the next day bled from the arm. On the 14th, the menstrual evacuation from the vagina increased, and the flow from the back and epigastrium ceased; that from the mamma continued. On the 15th there appeared a slight oozing of blood from the lower and external portion of the left thigh. On the 16th the menses had ceased towards midnight, and re-appeared at three o'clock the next afternoon. The discharges from the thigh and breast entirely ceased. The 17th, the menses were suppressed at five o'clock in the morning, and re-appeared at three o'clock in the afternoon, as before. During the 18th, 19th, and 20th, there was a cessation of all the discharges. During the 21st, 22d, and 23d, the patient lost a few drops of blood from her left axilla, and during the night only, and the discharge appeared occasionally for the six succeeding days. The succeeding monthly evacuation was accompanied by only a slight oozing from the left mamma, and which continued but eight days.

In August 1826, this woman was again admitted into the "*Maison de Secours*," when she stated that for a year she had menstruated regularly and naturally, without having had any anomalous discharge. She was a third time admitted, in June 1827, for a syphilitic affection, when she stated that at the menstrual periods in April and May, her menses had been preceded, accompanied, and followed, by a sanguinolent oozing from her axilla, the left mamma, and flank; and in June, July, and August, the same circumstance occurred.

SECRETION OF SALIVA.

Dr. C. G. Mitscherlich, of Berlin, met with a rare opportunity lately of examining the secretion of pure human saliva, unmixed with the mucus of the mouth. The stenonian duct was closed in one of his patients, and instead of it there was formed a fistulous opening on the exterior of the cheek, through which the salivary product of the parotid gland came out according as it was secreted. During meals the quantity of the secretion was very remarkable; and the more so the more solid and grateful the nature of the food: on the other hand, it ceased altogether when the masseters and the tongue were at rest, and when there was no stimulant present. Dr. M. found that at the ordinary meals, during the four and twenty hours, there were secreted from 65 to 95 grains of saliva from the one parotid, whilst during the same period the fluid discharged from the mouth was not less than six times as much—containing probably, besides the product of the five other glands, and the mucus of the mouth, no inconsiderable portion of a watery exudation from the mucous membrane. The saliva during meals was alkaline; at other times acid. Its specific gravity varied, for unascertained reasons, between 1·0061 and 1·0088. Dr. Mitscherlich's analysis accords pretty exactly with that of Berzelius and Gmelin. —*Medicinische Zeitung.*

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *March* 12, 1833.

Abscess	4	Hooping-Cough	33
Age and Debility	39	Inflammation	66
Apoplexy	9	Bowels & Stomach	2
Asthma	25	Brain	2
Cancer	6	Lungs and Pleura	8
Childbirth	7	Insanity	3
Consumption	73	Liver, Diseased	5
Convulsions	43	Measles	5
Croup	3	Miscarriage	1
Dentition or Teething	15	Mortification	3
Dropsy	12	Paralysis	6
Dropsy on the Brain	26	Rheumatism	3
Dropsy on the Chest	3	Small-Pox	27
Erysipelas	2	Stone and Gravel	1
Fever	6	Thrush	1
Fever, Scarlet	4	Tumor	1
Gout	1	Unknown Causes	6
Hæmorrhage	2		
Heart, diseased	3	Still-born	19
Hernia	1		

Decrease of Burials, as compared with the preceding week 129

METEOROLOGICAL JOURNAL.

Not come to hand.

NOTICES.

Mr. Litchfield's communication has been received.

If Mr. E. Jones will call at our publishers in a day or two, he will get a letter regarding his case.

"Constant Reader."—M. Magendie's processes, we believe, have not yet been published.

"M. M. M."—The two things very frequently co-exist; but we think there is no sufficient reason for supposing that they stand in the relation of cause and effect.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 23, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

INSANITY.

Various terms employed.—I am now about to speak of that kind of unsoundness of intellect which is called *insanity*. You will recollect that unsoundness of intellect comprises idiotcy, imbecility, and insanity. Insanity is called sometimes lunacy—mental derangement—mental aberration—hallucination—alienation—madness.

Definition.—Now, in speaking of mental deficiency, I stated that it was not every kind of mental deficiency that made an individual imbecile or an idiot. The various feelings of the mind may be deficient and very inconsiderable, so inconsiderable as to be all but absent, and yet the individual may not be an idiot. So I stated that certain intellectual faculties might be deficient, very deficient, such as the faculty of music or calculation, and the person not be at all an idiot. So aberration of mind in insanity does not exist merely because there is something wrong in the mind. There may be much very wrong in the mind, and yet the person not be at all insane, just as there may be a great defect in the mind, and yet the person not be at all an idiot.

Now in the first place, derangement of volition does not constitute insanity. A person may have palsy of motion, and yet he is not insane. He may wish to move his limbs, and be unable to do so; or he may wish to move them in one direction, and they may go in another, in a directly opposite motion, but yet he is not on that account insane. Neither does a want of the external senses constitute insanity any more than it does idiotism. There may be mere palsy of the senses; there may be a want of sensation from disease of the external organs of sense, and yet the person may be perfectly rational. Neither does it refer at all to the knowing faculties, such as music and calculation, which may be called internal senses; these may be more or less wrong, and yet the person not be insane.

Just, therefore, as the want of effective volition, just as the want of external sensation, just as the want of any one of the knowing faculties, does not make a person an idiot; so a wrong operation of volition over the voluntary muscles, an arm going one way when the person wishes it to go in another, is not insanity. A person labouring under chorea, labouring under tetanus, is not insane. So a wrong sensation does not constitute a person insane. He may have double vision, he may see two fingers when only one is held up, yet on that account he is not insane. Neither if a person see images, figures, spectres, is he on that account insane if he do not believe that their existence is real. Some persons see objects which really do not exist, images of objects which have no existence, and they know that such things do not exist, and, therefore, they are not insane: they are aware that it is a mere deception.

Some see, under these circumstances, appearances of human beings, brutes, and various animals, but they are perfectly aware that it is entirely a morbid appearance. One of the most remarkable instances of this description occurred at Berlin in the person of a bookseller named Nicolai. He saw an immense number of objects, people, animals, and brutes, at cer-

tain times, but he was aware that it was all the effect of morbid excitement. He had gone through considerable mental application, and being aware that this was all a delusion, he was no more insane for seeing them than a person would be for thinking he saw two fingers when you held up but one. You know that Brutus and Socrates are said to have seen, the one the shade of Cæsar, and the other the *familiar spirit*, as he called it; but if neither the one nor the other believed this they were not mad; or if they merely believed it in accordance with the belief of the day, then they were not mad; but if they knew better, and yet believed these things, then, of course, they were deranged. Hence there may be false perceptions, and yet the individual may not be mad, but a person may be mad, and also have a false perception. Many men absolutely mad think they see things which they do not; but many persons without a false perception see something that has no existence, but knowing it has no existence they are not deranged; and again, many persons absolutely mad never see any unnatural appearances whatever.

Monomania.—But in insanity you observe in a great number of cases an absurd belief, and this may refer to something past, there may be a fixed opinion altogether absurd upon matters that have passed, and there may be an absurd opinion as to something present: for instance, they may see things which other people do not, and they may positively believe it. Insanity, therefore, may be an absurd belief as to things present and things past, and thirdly, that absurd belief may refer to a mere abstract opinion. Persons may believe something so preposterous that every body will consider them mad for so doing.

I will give you instances of all this. The cases are recorded of a butcher, who firmly believed that he saw a leg of mutton hanging from his nose, and therefore he was certainly mad; of a baker who fancied himself butter, and refused to go into the sunshine lest he should melt. A painter thought he was soft—he was so in mind—he thought he was so much putty, and that he could not walk without becoming compressed like putty. Others have fancied themselves glass, and would not sit down lest they should crack. Now Luther was an instance of an absurd opinion of this description. Luther, although he was so able a man, was mad on some points: all people have their weak points, and he had his. He fancied the devil was in him, (and so the Roman Catholics thought) and he heard him speak. Luther's christian name was Martin, and in Hudibras there is the following couplet upon it:—

"Did not the devil appear to *Martin Luther* in *Germany* for certain?

You find it stated in a note to this passage, that "Luther, in his works, speaks of the devil appearing to him frequently, and how he used to drive him away by scoffing and jeering him; for Luther observes, that the devil, being a proud spirit, cannot bear to be contemned and scoffed: "I often said to him, devil, I have bewrayed my breeches, canst thou smell that?" You will find this in the note: I could not utter any thing so indelicate. Luther used to talk to the devil, and the Popish writers not only believed that the devil was in him, but some of them affirm that he was got by an incubus, a kind of young devil; and at length, when he died, was strangled by the devil.

Dr. Ferriday, of Manchester, had a patient the same as Luther: he fancied he had swallowed the devil, and he would not discharge the contents of his alimentary canal through a benevolent feeling, lest he should let him loose into the world. I heard a gentleman speak of a man who would not make water lest he should inundate the country: he thought it would come from him in such torrents that the country would be washed away. There was a similar case to this relieved by lighting a fire round the patient, and making him endeavour to put it out lest the house should be burned down. Many persons fancy there are frogs, serpents, and snakes, within them; and one woman fancied that a whole regiment of soldiers were in her. One man fancied he was too large to go through a door-way, and when he was pulled through he screamed, and fancied he was being lacerated, and actually died of fright. Another woman, instead of fancying that she had a regiment of soldiers in her, fancied that she had a monster in her genitals; and when she got rid of this idea by the contrivance of her physician, she took another fancy, viz. that she had been dead, and had been sent back to the world without a heart, and was the most miserable of God's creatures. At the Friend's Retreat, near York, one patient writes, "I have no soul; I have neither heart, liver, nor lungs; nor any thing at all in my body, nor a drop of blood in my veins. My bones are all burnt to a cinder; I have no brain; and my head is sometimes as hard as iron, and sometimes as soft as a pudding." One man, it appears, thought he had not got his own head: he is described, you will recollect, in Moore's Fudge Family at Paris. He says—

"Went to the mad-house—saw the man,
Who thinks, poor wretch, that, while the fiend
Of discord here full riot ran,
He, like the rest, was guillotin'd;

But that when, under Boney's reign,
(A more discreet, though quite as strong one,)
The heads were all restor'd again,
He, in the scramble, got a *wrong one.*

Accordingly, he still cries out,
This strange head fits him most unpleasantly;
And always runs, poor dev'l about,
Inquiring for his own incessantly."

Bishop Warburton, in a note to one of his works, speaks of a person who thought he was converted into a goose-pie; and Dr. Arnold saw a man who fancied himself in the family way. Pope describes, in his Rape of the Lock, many of these fancies. He says, in giving a sketch of hypochondriaeal persons—

" Unnumber'd throngs on every side are seen,
Of bodies chang'd to various forms by spleen.
Here living tea-pots stand, one arm held out,
One bent; the handle this, and that the spout:
A pipkin there, like Homer's tripod walks;
Here sighs a jar, and there a goose-pie talks.
Men prove with child, as pow'rful fancy works,
And maids turn'd bottles, call aloud for corks."

A man in the University of Oxford fancied himself dead, absolutely dead, and lay in bed waiting for the tolling of the bell; but not hearing it at the time he expected, he fell into a violent passion, and ran and tolled it himself. He was then spoken to on the absurdity of a dead man tolling his own bell; and it is said that he returned and was afterwards sound in his intellect. However, he must have been pretty nearly in his senses at this time; he must have been ready for sanity, or such a change would not have been effected by a mere mental cause like this. Simon Brown, a dissenting minister, wrote the best answer to Tindal's work, entitled, Christianity as Old as the Creation; but notwithstanding the great powers of mind displayed in this work, he thought that by the judgment of God his rational soul had perished, and he had only brute life; and he absolutely inserted this in the dedication of his work to the Queen; but it was afterwards suppressed. Baron Swedenborg, a very learned and able man, thought that he had communications with the Almighty for thirty years, and that he had been shewn by the Almighty the mysteries of nature. Many think he was right; but no one could have that idea without some insanity. As some believe this, I mention it as an instance adduced by others of partial insanity. It is similar to the case of the celebrated Pascal, who, while he was working the problem of the cycloid curve with great powers of intellect, was tied by his own desire in his chair, lest he should fall into a yawning gulf before him. He laboured under this partial insanity while his powers of mind were otherwise as strong, and he was as much in his senses, as other people who have no madness whatever. One patient in the Retreat near York, wrote the following verses on the patient who described himself as having neither heart, liver, brain, nor any thing else.

" A miracle! my friends; come view
A man, admit his own words true,
Who lives without a soul;
Nor liver, lungs, nor heart has he,
Yet sometimes can as cheerful be
As if he had the whole.

" His head take his own words along,)
Now hard as iron, yet ere long
Is soft as any jelly;
All burnt his sinews and his lungs;
Of his complaints not fifty tongues
Could find enough to tell ye.

" Yet he who paints his likeness here,
Has just as much himself to fear
He's wrong from top to toe.
Ah! friends, pray help us, if you can,
And make us each again a man,
That we from hence may go."

In insanity, therefore, you see that all the faculties are not deranged; there may be merely an absurd belief upon some one point, and the patient may otherwise be in his senses. Many, indeed, who are deranged, will read and understand what they read; will paint, will exhibit mechanical contrivances, will work, and will talk rationally on many subjects—nay, more than that, some will shew extreme sagacity in accomplishing their mad purposes, in concealing their mad impressions, and convincing others of the truth of their mad notions. In a case of madness tried at Chester, before Lord Mansfield, the patient was so clever that he evaded questions the whole of the day in Court, and seemed perfectly sane to every body, till Dr. Batty came into Court, and knowing the point of the man's derangement, asked what had become of the princess with whom he had been in the habit of corresponding in cherry-juice? Instantly the man forgot himself, and said it was true, he had been confined in a castle, where, for want of pen and ink, he had written his letters in cherry-juice, and thrown them into the stream below, where the princess had received them in a boat. This man had had sagacity enough during the whole of the day to answer correctly all the questions put to him in Court, Lord Mansfield being the presiding judge.

This, however, is not all, for some persons in insanity have some of their mental faculties increased. Dr. Rush says that he had a female patient deranged, who composed and sang hymns and songs delightfully, and yet she never shewed any talent for either music or poetry before. There was a partial excitement of the brain while another part was going wrong. He said that he knew two similar cases, where in insanity a great talent was shewn for drawing. Dr. Willis had a patient, who, in the paroxysms of insanity, remembered long passages of Latin authors, and took

extreme delight in repeating them; but only during the period of the paroxysms. Dr. Cox mentions a musician, who talked madly on all subjects but music, and his talent for this appeared increased; his performances on the violin were strikingly singular and original. Dr. Rush mentions the case of a gentleman who was deranged, but he often delighted and astonished the rest of the patients, and the officers of the institution, by his displays of oratory when preaching. Pinel also, the French physician, mentions the case of a man who was very vulgar at other times, but in his paroxysms of insanity he discoursed very eloquently upon the revolution, while standing upon a table in the hospital, and with the dignity and propriety of language of the best educated man.

Similar occurrences in Fever.—Now similar circumstances to these have been seen in fever. When the brain is under the excitement of fever, a person will sing very correctly who has shewn but little talent for singing before; and sometimes, although an individual may be delirious, yet he will speak very eloquently upon certain subjects for a short time; for, of course, this does not last long.

General Insanity.—Some, however, are not so happily circumstanced, and in their insanity are wrong upon all points. You may have persons deranged on only one or more points, while the rest of the faculties are sound; or you may have them deranged on one or more points, while one faculty or more will be increased; but you may have them wrong on all points. In the latter case they will ramble from one point to another, display great inconsistency, and exhibit a wild association of ideas. They will be incapable of fixing their attention sufficiently to speak correctly, or to read. So wrong are they, that very likely they do not recognise those with whom they were formerly intimate; or if they do recognise them, it is in a very strange manner; and they have generally a very imperfect memory altogether—most likely have false ideas of nearly every thing with which their memory is charged. Their absurd opinions too are likewise general; perhaps they reason very incorrectly on every thing, or they probably make no attempt at reasoning at all. In partial insanity, which is called *monomania*, insanity on a single point, when they do reason correctly from a starting point, yet it is to be remembered that the starting point itself is partially incorrect. But in intense insanity they do not make an attempt to reason at all, or they reason in the most incorrect manner. So much with respect to the intellectual faculties.

Influence on the Propensities and Sentiments.—But in insanity the propensities and sentiments are frequently disturbed. Some are so far disturbed as to be superstitious; some again are very respectful; some again are very impious. There was one madman who cursed God for his creation, and especially for having given him a human form, and he wished to go to hell to avoid the disgrace of associating with the Deity. A person saying to him it was a bad day, he replied, "Did you ever know God make a good one?" Some are thievish, some are modest, some are very silly, some are lascivious, some are depraved in their sexual feelings, some are very cheerful, some are melancholy, some are fearful; sometimes violence and tranquillity, or melancholy, alternate. You recollect the passage in Shakspeare:—

> ——— "This is mere madness,
> And thus a while the fit will work on him;
> Anon, as patient as the female dove,
> When that her golden couplets are disclos'd,
> His silence will sit drooping."

Identity of Mania and Melancholia.—There is no real difference between mania and melancholia. You will find the latter term employed by many writers to signify madness connected with great depression of spirits; and you will see it employed by Pinel to partial insanity—that is, to monomania; but it is improper. There is no essential difference between mania and melancholia; one faculty of the mind is disturbed in one case, and one in another. One person may be gloomy and another cheerful, but the latter is just as mad as the former; a person may be gloomy today, and cheerful to-morrow.

Influence on the Feelings.—In insanity, every feeling of the mind may, in its turn, be excessive, or every feeling may be defective, or at least overcome by other feelings; and every feeling may likewise be depraved, and, in consequence of the varied state of feeling in insanity, you have various physiognomies: you have one madman with the physiognomy of pride, holding up his head as high as he can, and looking with scorn on those around him; in others you will see the physiognomy of suspicion—a hanging down of the head; in others you will see the physiognomy of rage—a frowning of the eyes and a derangement of the features. You have the passion displayed in insanity according to the state of the feelings.

In some instances of insanity you have nothing but the feelings affected: there is no aberration of intellect, but it is a disease of some of the feelings. There can be no question that some have an irresistible desire to commit murder. They are sane in every point but that, but they

are irresistibly impelled to commit murder, and the moment they have committed it they have confessed it, and expressed the greatest regret. Many have felt the fit of desire coming upon them, and have entreated their friends to confine them, to prevent them from doing it. This derangement of the feelings will sometimes take one turn and sometimes another. There can be no doubt that some have felt an impulse to destroy in a particular manner—by burning. Some have felt an impulse to destroy themselves—to commit suicide; and others, not only to murder individuals, but to murder particular kinds of individuals—to murder their children. There was a person who was said to have three times attempted to set his college on fire, when I was at the University, and at last he was tried for it; but as he was acquitted, I suppose he had not made the attempt. It was ascertained that, when he was young, he had attempted to drown a child, yet nobody ever suspected him of being mad. You may recollect the instance of a man who murdered a very excellent gentleman and his lady—Mr. and Mrs. Bonner—at Chiselhurst, in Kent. The murderer was a footman in the family, and one night he left his room, went up stairs with a poker to the apartment of his master and mistress, and beat their brains out, for no reason whatever. He was asked his reason, but he could give none. He said that he had always been treated by them with the greatest kindness, and all he knew was that he felt suddenly in the night a desire to kill them, and he supposed the devil had prompted him to the act. No other sign of insanity was detected in him, and, as at that time it was not supposed that such an occurrence could arise from insanity without other proofs of insanity being evident, he was hanged. Gall mentions the case of a person at Vienna, who went to witness an execution, and was seized with a propensity to kill. At the same time he had a clear consciousness of his situation. He expressed the greatest aversion to such a crime; he wept bitterly, struck his head, wrung his hands, cried to his friends to take care and fly away. He felt the inclination, he regretted it, and entreated every one to prevent it, by putting him in prison. Pinel mentions the case of a man who exhibited no unsoundness of intellect, but who confessed that he had a propensity to murder which was quite involuntary, and his wife, notwithstanding his tenderness for her, which was real, was near being murdered, he having had time only to warn her to fly. In the interval he expressed the same remorse, felt disgusted with life, and several times attempted to put an end to his existence. In a work by Mr. Hill, you will read of a man who was tried at Norwich, in 1805, for wounding his wife and cutting his child's throat. He had been known to tie himself with ropes for a week, to prevent him from doing mischief to others. One of the members of a family in London, whose maid-servant was executed for attempting to poison the whole family with arsenic, is said to have used these words—"Do, for God's sake, get me confined; for if I am at liberty I shall destroy myself and wife. I shall do it unless all means of destruction are removed; and therefore do, good friend, have me put under restraint. Something from above tells me I must do it, and I shall." Arsenic was put into a pudding, and the maid-servant was executed for it; many persons being perfectly convinced of her innocency.

Respecting the disposition to destroy by fire, Gall mentions that he saw a person in prison, at Friburgh, who had set fire to his house four times in succession, and after he had set fire to it he tried to put it out; and once he seized his child, lest it should be burned. The moment he had set his house on fire he was contented, the orgasm was over, and he was as anxious as any one to see it put out: but four times he set fire to his house. Some have an irresistible desire to steal, without any other mark of insanity. Gall says that the first king of Sweden was always stealing trifles. Instances are mentioned of a German who was constantly pilfering, and of another who had the desire entered the army, hoping that the severe discipline there would restrain him; but he gave way to the desire even there, and was very near being hung. He then became a Friar, with the same hope; but he still felt the same desire, and carried all the things he could to the cell, but as he could only get trifles he was not noticed, and he went on with his propensity. He also mentions that a person at Vienna, in the habit of stealing, hired a lodging to deposit his thefts, and when he had got a stock he sold them. He only stole household matters. The wife of a celebrated physician, at Leyden, never went into a shop to buy any thing without stealing; and a countess at Frankfort had the same propensity. Another lady, notwithstanding all the care with which she was brought up, had the same desire to pilfer. You will find it related of a physician, that his wife was always obliged to examine his pockets in the evening, and restore the things she found there to his patients: he always took something, as well as his fee. Meritz speaks of a criminal who, at the point of death, at the moment he was about to be executed, stole the confessor's snuff box. Dr. Burner, who was one of

the physicians to the king of Bavaria, speaks of a person whom he knew very well, who enjoyed abundance, and had been well educated, but, notwithstanding that, he was always stealing, and was made a soldier by his father, and at last he got hanged. The son of a celebrated and learned man, who was very clever, and respectably connected in every respect, could not resist this propensity; and I could go on furnishing you with instances without end, of individuals who apparently did this from insanity—not from any criminal motives, but absolutely from a blind desire too strong for them to resist. So the sexual desire has been so inordinately strong in some people, that it has been said that a criminal, going to execution for a rape, has been anxious to repeat the crime as he was proceeding to the gallows. I know it is so with respect to an impure mode of gratification—masturbation. I was told of an instance by a medical man not long ago. The individual was rather idiotic, and he had the desire so strong that he would entreat his family to run out of the room: he could not resist the impulse to gratification. He cried and lamented it, but he had no power over it whatever.

You see, therefore, that the definition of insanity must be two-fold—that there may be an aberration of any mental power from a healthy state, with inability on the part of the patient to discern that it is unhealthy; the man believes something absurdly wrong, but he is not aware of its absurdity. But there may be, without this or with it, an aberration of any mental feeling from the healthy state, without the ability to discern its unhealthiness, or without the power and the will to resist it.

I mentioned, for example, that in one case of insanity you shall have all the faculties disturbed; the patient is not mad on any particular point, but it extends throughout; he is universally mad—does not recognize his friends—or if he do, it is only momentary; he has no power of attention, and is in a state of great anxiety.

In cases of mania you certainly may tell a madman almost as soon as you look at him; at least, custom enables us to see madness in a man's face. The term "mania," is employed by some to signify madness in general; but by others it is restricted to that form where there is universal madness.

Definition.—The definition of insanity is twofold. It may be stated to be, *an aberration of any mental power from a healthy state, with an inability on the part of the individual to discern its unhealthiness*; because if an individual know a thing to be absurd, he is not mad. If a person see the devil in the middle of the day, and is sure it is not the devil at all, of course he is not mad; but if the man sees it, and believes it, and plagues you to death to believe it is a reality, provided he has been better educated, he must be mad. But this is not the whole of the disease, and not the form in which it will sometimes appear, and therefore we must add to the definition, an aberration of any mental feeling from a healthy state, without an ability on the part of the patient to discover that it is an unhealthy state—or the power to resist it. If an individual have feelings so strong that he cannot control them, he is not an accountable being—he is insane. This is the definition of Spurzheim, and it is the best I have seen; I have met with no other that satisfies me. It is a general definition, and it includes all the forms you can give in a minute definition of insanity. I have reflected much upon it, and I think it will apply to every case.

Intellectual Aberration.—Now with respect to the first part of the definition, that in which there is an intellectual aberration, it may relate to a matter of external sense, or to a fact which may be present or past, and in that case there can be no doubt of a person's insanity. If a person firmly believe something to be actually a fact, to be present, to be existent, which you know is not the case, and which all the world knows is not the case; supposing, for example, he believes that a leg of mutton is hanging to his nose, then you know he must be mad. If the aberration refer to a matter of fact that is present, you may declare him to be mad; or if it refer to something which is past, on which you are equally certain, and on which he has had an opportunity of being well informed when in his senses, you may then conclude that he is mad. If he be certain that he lived two hundred years ago, then there can be no doubt that he is mad. Supposing, however, that it does not refer to a fact past or present, but to a mere opinion, then there may be considerable difficulty. Supposing the aberration to relate to an opinion, in order to constitute him mad, it ought not to be a subject on which there is some difference of opinion, but an opinion palpably absurd to all other people in the same situation of life, or superior to him. If we did not make an allowance for education, for country, and for external circumstances, every sect in religion, for example, might consider the votaries of another sect to be mad. Every Trinitarian would consider an Unitarian to be mad; and every Unitarian would consider a Trinitarian to be mad; Quakers would consider Jumpers to be mad, and Jumpers would consider Quakers to be mad. Every allowance, therefore, is to be made in a

matter of opinion, for difference of education and difference of situation. The notions entertained by one nation altogether would be considered perfectly absurd by another nation; and therefore it must be an opinion upon matters on which all persons of the same country, age, situation, and education, will allow to be positively absurd. Now if in this country a woman were to insist on burning herself to death after the decease of her husband, we should consider it insanity; but in India it is not insanity, because they have been educated to believe it proper. It was mentioned in the House of Commons by Mr. Buxton, in 1821, that in the Presidency of Fort William, 2366 widows destroyed themselves in the previous four years, and some of these were only twelve or thirteen years of age. One was only eight; and one only eleven was so obstinate when she was not allowed to burn herself to death, that she fasted from food for four or five days; and although the local authorities prevented her from immolating herself on her husband's grave, she saved some of his bones in order that, when the first opportunity occurred, she might then destroy herself. Now such an act as this would be considered in our country as downright insanity; it could scarcely arise from any thing else. You know that the ignorant have pronounced philosophers mad over and over again. Democrates was pronounced mad by the common people, because he dissected a body to investigate the causes of insanity; but Hippocrates told the people that they were mad, and not Democrates. A jury, in a case of this description, who were equally well informed persons with the philosopher, would have been the only people capable of determining the question. If you empannel a jury to determine the madness of a person, they should be equal or superior to him. If you take persons inferior to the person supposed to be mad, they through their ignorance may conceive him to be mad, when he is only a man of superior knowledge to themselves. If the matter, therefore, refer merely to opinion, there may be considerable difficulty as to the sanity or insanity of the individual; and no one is capable of judging who is not equal to the individual, or even superior to him; and every allowance should be made for education, and for all external circumstances. If we take these precautions we may disregard the complaint—that the madman was as much in his senses as the rest of the world—but the majority was against him, and therefore in custody he was placed.

Propensity to commit Murder.—Supposing, however, that it is another form of insanity—a propensity, and a propensity to murder, which the patient could not resist; there the great difficulty is to ascertain whether this is real or not—whether the individual could not have resisted it—whether he had been giving way to some vile feeling, or had been the victim of an irresistible passion. Now, in pronouncing a person who has committed a crime insane—as having been unable to resist the temptation—we must ascertain first whether there has been any motive or not. If any motive can be discovered, then you may be justified in saying that the individual is a culprit—is not mad. There should, in the first place, have been an evident reason for it.

Generally, however, where there is some irresistible feeling there is, at the same time, some wrong notion. When persons have committed murder from an instantaneous desire to destroy, they have generally had, at the same time, some wrong notion—some imagination that it was a voice from heaven that called them to commit the deed. Generally, but by no means always, where there is a deed committed there is a wrong notion; so that we have less difficulty than we otherwise should have. In many of these cases, where there has been no motive, the patient himself, as soon as the deed has been over, has actually declared that he had no motive, and has expressed the greatest remorse for what has been done. On other occasions they have declared they had no motive, but they have laughed at the deed—considered it a matter of indifference—not concealed it, but given themselves up to justice. In other cases, before the deed has been done, they have requested people to confine them, and prevent them from doing what their feelings prompted them to do. They have been known to implore others to confine them, lest they should commit the deed which they have afterwards perpetrated.

Information to be derived from the Shape of the Head.—Now to those who attend at all to phrenology, this is not only not wonderful, but considerable assistance may be derived from examining the shape of the head. The shape of the head does not shew a man to be mad; a man with one-shaped head may go mad as well as another. A stomach of one shape will be subject to dyspepsia the same as a stomach of another shape, or size. It is absurd to suppose that in insanity there must be a particular shape of the head; but it is a general fact, that if a person have any one peculiar feeling of the mind, which phrenologists believe to be situated in a particular part of the brain, and the correspondent part of the head be correspondently largely developed, there can be no question that that strong feeling will take the lead of the other feelings. To put phre-

nology out of the question, when a person is born, whatever feeling or passion is remarkably predominant in the individual, so as to take the lead, if the other proportions of the brain be too small, such an individual is likely to go mad. Now, if it be a fact, that the brain in different parts is proportionate to the natural intensity of the different feelings, then that part of the head may be expected in general to be proportionately large; and if you be told of an individual who is supposed to be mad, being the victim of a particular feeling, certainly any one who attended to phrenology would examine the head, and see whether there was a large development corresponding with the passion which appeared irresistible; and if you found such a correspondence, that would be an additional reason for inclining to the belief that the individual had been the victim of a feeling that was irresistible. This was shewn strikingly in the case of Bellingham, who murdered Mr. Perceval. Bellingham was a man of weak intellect, and you will see in the cast of his head, that the anterior parts of the head are miserably developed, whereas the lateral parts, posterior and anterior, were largely developed, so that the man's passions were evidently much too strong for him to resist, and the passions particularly developed in him were pride and destructiveness. Now that man was executed because there was no proof at all that he was insane; but if any one look at his head, he would incline to a favourable opinion, and though he would not set him at large to do such mischief again, yet he would not deprive him of life. He might still be in existence, but, at the same time, he should have it put out of his power to do any injury to his fellow-creatures. You will see a large development of pride and destructiveness, and that part of the brain being large, has gained an ascendancy over the rest, and has been liable to excitement. You will find in a great number of cases of insanity, that the character of the individual corresponds with the form of the head; and it may be of great use, when the question is, whether the deed has been done through violent passion, has been done by irresistible force, or the patient could control it, to examine the head. If you have other reasons to believe that the deed has been done irresistibly, it is an additional reason if you find the head peculiarly developed. The shape of the head is not to be depended upon solely, but to be taken into consideration in conjunction with other circumstances.

Insanity may be inferred from Injury of the Head, or Affections of the Brain.—Another circumstance to incline you to believe that the individual was insane is, if he have had an injury of the head. If a person have once sustained a real injury of the head, of course that organ is very likely to go wrong. If you find an incomplete organization; if you have no ostensible reason for the act, but, on the contrary, you have reason to believe that the man was the victim of irresistible impulse, and you know that he has had an injury of the head formerly, you would be doubly inclined to the opinion, and you would urge mercy to the judges, on account of the injury of the head. Another thing to be considered is, whether he has had a fit of apoplexy or paralysis; if he have, then you might suppose that the man's head was going wrong when he did the deed. Another circumstance will be the existence of insanity in his family. If you see an individual do a criminal act, and you have strong reason to believe that he did it through insanity, although he has never had an hallucination, yet if you find insanity in his family, nay, if you find that no injury of the head has ever existed; if you find there is no insanity in the family, yet if you find that this man was once insane on a former occasion, then you have strong reason to believe that this very act was only the recurrence of insanity. If the previous attack have been short, if the person's peculiarity of mind have merely amounted to great eccentricity, yet if he have done an extraordinary criminal deed, you may then have strong reason to suppose that it is to be set down to the cause of insanity.

These are circumstances that will assist your judgment, when a person has shewn no hallucination at all, but merely done a deed which you suspect must be the result of insanity:—In the first place, there should be no motive for the deed. Then, secondly, it is to be considered, whether, at the moment he did it, he confessed that he had no motive, and gave himself up to justice. In the next place, whether the patient may not have been quite indifferent to the deed; had no motive, and not been aware that he had done any great injury. In the next place, whether this has come on in a paroxysm, and the patient has been aware of it, and wished to be confined. Then, if there be an agreement of the head with the passion; then, if there be insanity in the family, or the individual have been previously insane, or there have been other diseases of the nervous system, as apoplexy or paralysis; under these circumstances the individual is mad in the vulgar phrase, but he is not mad legally. In many of these cases, however, there is not such great difficulty, because you can easily make out the existence of some fancied motive—some wrong idea has generally been observed.

Persons pathologically, though not legally, insane.—Now although, legally speaking, it is quite necessary to prove that a man has been wrong in some of his notions, either relating to facts present or past, or in some matters of opinion, although it is necessary to prove that he is absolutely deranged on that one point, or that he is the victim of some one irresistible feeling—to say legally that he is mad; yet pathologically we may say, that a great number of people who are at large, are mad; a great number of people at large are in any thing but a healthy state of the brain. They have one feeling too strong, or they have a ridiculous notion upon some point, but it is so slight that it does not disqualify a person for carrying on the affairs of life, and therefore it is only said that such an one is "a strange fellow," "an odd fellow," and he passes. But, pathologically speaking, a large number of people are more or less cracked, who go about: legally speaking, however, a man ought certainly to have a mental power in a state of aberration from a heathy state to such a degree as to disqualify him from conducting the ordinary business of life; or be the victim of some strong feeling which leads to the injury of others or of himself.

If it be a mere matter of opinion only, on which a person is, pathologically speaking, mad; as, for instance, supposing an individual has an unfounded fear of disease, and a fear of death, we call it merely hypochondriasis, and it does not justify us in calling him mad. If a man who has nothing the matter with him, because he coughs twice a day, is satisfied he is in a consumption, and because he spits a drachm of mucous in the twenty-four hours, is satisfied that he is rotten in the lungs, or full of abscesses, this is a morbid feeling; but as it would not lead to a criminal act, or to any act which is dangerous to others, we do not say he is mad, we only call it hypochrondriacal; but the nature of the thing is exactly the same. Many persons act on most occasions very absurdly. Some will not dress as other people dress; some will not eat as other people eat, and they will do a number of things more or less extravagant; but because the degree is less, because they do no act which is injurious to others, we do not call them madmen at all; they merely pass as eccentric individuals; but some one in the family will carry his eccentricity to a higher pitch, and then it is necessary to shut him up: it is absolute madness. Unless the deeds done are criminally injurious to the individual himself, or to others, we have no right legally to say that the person is mad. Suppose he squanders all his money away, not for the gratification of a particular feeling, but in a way which is quite contrary to what all other people do; or supposing that he inflicts punishment upon himself, and attempts to murder himself or others, or commit depredations on the property of others, we are not justified in saying legally that he is mad, although, medically, we are quite satisfied that he is in an unsound state.

Less precaution required in pronouncing an individual insane, after Death.—But although it is necessary, when treating a person alive as a madman, to use all these precautions, and to be perfectly satisfied that the individual has done deeds not simply injurious, but *criminally* injurious to himself and others; yet, when a person is dead, there is an end to it, and we are allowed to incline to this opinion on much more general grounds than we otherwise could. When a person is alive, of course it is a serious thing to treat him as a madman, and, whatever his eccentricities may be, we are not allowed to say that he is legally mad, unless he does things criminally injurious to himself or others. If he be guilty of such acts, we may be justified in saying he is mad. But, suppose he is dead—suppose he has destroyed himself, then we are allowed on the slightest grounds whatever, if he have merely said a word or two of nonsense, to say that he is legally mad. When a person has committed suicide, and the act cannot be committed again, then the least probability that the person was mad is admitted by law. It is mercy in the other case, where a person is alive, which induces the law to compel us to give evident proof before we say a man is mad, because it would be cruel to confine him without; but when a person is dead, it is necessary to prevent him from being treated as a self-murderer, and it is a mercy to make it appear as much as possible the result of a morbid state of mind. Therefore, when a person has committed suicide, we say that he is mad on ten thousand times slighter ground than we can say so if he be alive. There can be do doubt, in my opinion, that many criminals are not called mad who really are so. I have no doubt that thousands have been executed unjustly, and no doubt thousands more will be executed, whose crimes were the result of insanity—who were not responsible agents.

Difficulties in forming a Prognosis.—There may be extreme difficulty sometimes in ascertaining that an individual has any absurd belief at all; and there is a difficulty on the other side of the question respecting this absurd belief. Occasionally it is almost impossible to ascertain, whether a man is mad from the cunning of madmen. When persons are mad, they frequently have sufficient cunning to deceive any one who is not thoroughly acquainted not only with

the habits of madmen in general, but with the belief of the particular individual. It requires very great skill sometimes to bring a person to speak on the point on which he is absurd.

Besides the case which I have mentioned of the man who underwent a most severe examination without exposing his complaint, until asked by Dr. Batty, who knew the point on which he was insane, what had become of the princess with whom he corresponded in cherry juice, we have another instance too striking to be omitted: "I well remember" (says Lord Erskine) "that since the noble and learned Judge has presided in this court, I examined, for the greater part of a day in this very place, an unfortunate gentleman who had indicted a most affectionate brother, together with a keeper of a madhouse at Hoxton, for having imprisoned him as a lunatic; whilst, according to his evidence, he was in his perfect senses. I was, unfortunately, not instructed in what his lunacy consisted, although my instructions left me no doubt of the fact; but not having the clue he completely foiled me in every attempt to expose his infirmity. You may believe that I left no means unemployed which long experience dictated, but without the smallest effect. The day was wasted, and the prosecutor, by the most affecting history of unmerited suffering, appeared to the judges and jury, and to a humane English audience, as the victim of the most wanton and barbarous oppression. At last Dr. Sims came into court, who had been prevented by business from an earlier attendance. From Dr. Sims I soon learned, that the very man whom I had been above an hour examining, and with every possible effort which counsel are so much in the habit of exerting, believed himself to be the Lord and Saviour of mankind; not merely at the time of his confinement, which was alone necessary for my defence, but during the whole time that he had been triumphing over every attempt to surprise him in the concealment of his disease. I then affected to lament the indecency of my ignorant examination, when he expressed his forgiveness, and said, with the utmost gravity and emphasis, in the face of the whole court, 'I am the Christ;' and so the cause ended."

You see, therefore, the extreme difficulty which you may sometimes meet with in detecting the madness of an individual; that a very minute inquiry is necessary; that sometimes no minuteness of inquiry will do unless you are informed of the particular point on which the individual is deranged.

General Symptoms.—Besides the varieties of insanity, the variety of absurd notions—besides the variety of degree, and the absolute extent of this absurdity—the person being absurd on one notion, or on every thing, from having little intellectual power left, or very very little perception on a point—besides the variety of the native characters of individuals independent of their sanity or insanity, and the variety that must exist as to the derangement of feeling, as well as an excess or defect of feeling—there are many other circumstances which occur in insanity. The head, for example, is frequently hot, both in the various paroxysms and at the commencement of the disease. You will frequently observe the urine, both in the various paroxysms and in the commencement of the disease, to be red; the pulse to be quick, and full, and firm; the eyes and cheeks to be red; in fact, there is more or less of an inflammatory condition of the head. Then you will have pains and all kinds of odd sensations in the head—cracking, bursting, twitching pains of every description. You will hear insane persons speak of flashes of light, of double vision, of noises in their ears, and nothing is more common than deafness—deafness is the most common disturbance of the external senses in mad men. Sometimes there is a depravation of smell; they will fancy there is some intolerable stench around them, and they will speak out of their nose. I believe mad people are generally very fond of snuff. The integuments of the head, especially the posterior, superior parts, are often loose and spongy, so that if you gather up the scalp, you will find it fuller than usual and loose. The breath is very offensive, and some say there is a peculiar smell of the body, so that you can smell a madman. Some, however, think it very hard that a person should be called mad because he does not smell like a gentleman. The tongue is very frequently foul, and the mouth is filled with a viscid mucus, so that madmen are constantly endeavouring to spit it out. I presume there is a depraved habit sometimes of spitting about, and making things dirty; but, besides that, I have no doubt that the tenacity of the mucus is frequently a cause of it—it causes an unpleasantness which the patient attempts to remove by hawking and spitting. Some spit constantly in this disease, when it is not intense. I had a patient who was constantly insane, but who about every fortnight or ten days had a paroxysm. When he was in a moderately insane state, he spit nearly a pint a day; but as soon as an aggravation of the symptoms approached he spit less; and as soon as the paroxysm was established he never spit at all; and then, when it was declining, he began to spit again; and when it was over he spit as profusely as ever. You will sometimes observe ex-

treme appetite and extreme thirst; but sometimes there is an absence of both hunger and thirst—the patient seems to have no desire for either food or drink. Costiveness is very common in the disease; and sometimes you observe great muscular strength—so that an exertion is made far beyond what is possible in health. Sometimes insane people scarcely sleep at all; they will pass many days, perhaps weeks, without any sleep of consequence, sometimes without any sleep at all. Occasionally, too, there is a great resistance to external cold, but this is by no means universal; for many insane persons, through this notion, have been left to themselves, their extremities have mortified, and they have died. Now and then, however, there has been observed an extreme insensibility to cold, so that they have exposed themselves to frost and snow without suffering from it in the least. There is apparently even a great insensibility of the external senses, but this principally arises from the abstraction of the mind which is kept up in general within, so that the patient does not attend to what goes on around. Now and then the external senses, I presume, are diminished; for, as I just now stated, there is an extreme insensibility to cold, and frequently deafness. On the other hand, however, extreme sensibility has very often been noticed in the disease. Sometimes you will observe a sort of stupor, and this is not constant, but comes on occasionally in the disease. There are often various other diseases of the brain, such as epilepsy, paralysis, hysteria, catalepsy.

Invasion. — Insanity sometimes begins suddenly, and this is particularly the case where the insanity relates to a propensity. Persons have sometimes suddenly been seized with an irresistible propensity. That form of insanity begins often suddenly, but in other forms where there is an absurd notion, or where there is general delirium, it may begin suddenly; but for the most part, insanity is ushered in by an oddity of manner and behaviour. There is a great degree of loquacity noticed, persons talk much more than they are accustomed to do, and will burst into foolish fits of laughter. On the other hand, they are sometimes previously observed to be very taciturn. On other occasions, persons before the disease, are observed to be extremely passionate; in a different state as to temper to what they are accustomed; and some, instead of being passionate, are sulky. Some are extremely civil: I have known such civility that you would fancy that the person was going to eat you; they will beg you to stop to dine, when you have dined; they will beg you to stop to supper, and then to take a bed. I have been astonished at them, and I have afterwards learned that these good people have been in a madhouse. Frequently, too, there is a quickness of manner, there is no loquacity, no civility, but a hurried way of doing every thing; and frequently there is observed a want of a proper attention to their affairs: they do not take the same interest in their affairs that they did before. Again, this disturbance of feeling is frequently observed before the full formation of the disease; there is a want of affection to relations and friends, and more or less a change of general habits. These are the chief circumstances which precede the full establishment of the disease when it does not come on suddenly.

Duration.—In regard to the continuance of the disease, it will vary from a few weeks to the rest of the individual's life.

Rarely occurs in Children.—The disease very rarely occurs in children comparatively. The unsoundness of intellect in children is generally idiotcy. Children have very weak passions; they are very little influenced by external circumstances before mixing with the world and forming connexions, and of course their passions are little liable to be unfavourably excited, and they have much less intellect than adults; so that altogether they are much less subject to insanity. Still, however, children may be insane: although their soundness is usually idiotcy in various degrees, yet occasionally they are insane. Dr. Haslam gives a case of insanity in a child, and so does Mr. Greenwood. I think I have seen several instances of this, where it has been characterised by no delusion, but by very violent rage. Whether, when it begins in childhood, it continues for a long life, I do not know: I cannot say whether such individuals do or do not die prematurely.

Lucid Intervals—Intermissions. — But although insanity may continue during the rest of the patient's life, it sometimes has remissions, and even intermissions. People are not only much less mad at one time than another, but sometimes they are not mad at all. Now these intervals of sanity are called *lucid interwals;* but for the most part a lucid interval is nothing more than the diminution of excitement. The patient is not less mad, but he is less violently excited than before, and therefore it is fancied that he is sound; but in a great number of these cases you have only to touch the string, and the madness shews itself again, the patient being only more tranquil, less evidently mad than before. The greatest caution is required in believing that a person is in a lucid interval, that is, in believing that a person is in an intermission of the disease.

Periodical.—Occasionally the disease is not only intermittent, but periodical. I

was once shewn an individual in a madhouse, who was said to be deranged every three years for a certain time. I was applied to by a patient in 1814, and as the case struck me, I made a particular note of it. He was 41 years of age, and five years before a stone had struck him on the temple. The following and three subsequent years, in the month of March, he had paroxysms of laughing, yawning, stretching, convulsions, the secretion of urine was sometimes copious, and sometimes scanty; there was great vivacity of spirits; he spoke and believed all sorts of absurdities, and at that very time also his bowels became costive, though at other times they were freely opened. This was an instance of insanity. He was only mad in March—the time at which hares are said to suffer derangement. The disease evidently arose from the blow inflicted on the temple five years before.

Alternation with other diseases.—The disease will sometimes intermit alternately with other diseases. It has been observed to alternate with disease of the lungs. I was once, when a student, shewn a patient in Guy's Hospital, who died of phthisis, and I understood that he had been previously deranged; that as soon as derangement ceased, phthisis began; but before that he was considered phthisical: whether he was in a state of phthisis, I cannot say. The stethescope was not used then, neither was the ear, but he was considered in a state of phthisis; he had pectoral symptoms: the insanity ceased, all the pectoral symptoms increased, and he died.

Spontaneous Cessation.—Insanity may exist for a long time, and then cease. Dr. Rush mentions a case of recovery after nine years, and he speaks of spontaneous cures after eighteen or twenty years. He only speaks of them; but in one case he witnessed recovery after nine years' duration.

Termination in Dementia.—Very often, however, insanity terminates in fatuity, and when it so ends, the fatuity is called *dementia*. Idiotcy, fatuity, and dementia, I mentioned were in reality the same thing; but if idiotcy come on in after life, it is called "fatuity;" and if fatuity be the consequence of insanity, it is called "dementia." But it is to be remembered, that if madmen live to be old—and some live to be very old—their mind, deranged as it is, must decline in the course of nature, just as the minds of sane people decline, just as all our minds will decline, and therefore one can hardly say that insanity has produced dementia, for the insane mind must fall into second childhood, exactly like the sane one. The disease, however, very frequently terminates, or is joined at last, by palsy, or perhaps by apoplexy, which proves fatal.

Tendency to shorten Life.—Madmen have lived to the age of eighty-seven. Mr. Tuke, in his account of the patients at the Retreat, near York, says that there were eleven patients there, between sixty and seventy years of age; four, between seventy and eighty; and one had arrived at the age of eighty-seven: yet upon the whole there can be no doubt that insanity shortens life. If a person in insanity live to a great age, it is lucky or unlucky for him, but in a great number of instances such persons do not live to be very old; just as is the case in connate idiotcy. Persons who have considerable idiotcy generally die before they arrive at the middle period of life.

Morbid Appearances.—When persons die of insanity, you, for the most part, find nothing sufficient to explain the symptoms. There is, perhaps, an appearance of disease in the head, especially if the person die early, and you inspect him at the moment of death. But it is to be remembered, that although frequently nothing is found to explain the symptoms, yet very few brains are dissected in a proper manner. Most persons run over an examination of the brain quicker than any other part: it takes so much time to open the head, that the rest of the business for the most part is hurried over, and many who do examine the brain, are not qualified for such an examination. Notwithstanding all this, however, there can be no doubt that little or nothing is frequently found in the brain of insane persons, just as is the case in the stomach in dyspeptic people. If you open the stomach of a dyspeptic person, in the greater number of cases I will be bound to say you could not tell the organ from that of other persons who have died with an excellent digestive apparatus. After pure asthma, you cannot tell that the individual had been subject to the affection.

But this is no argument against the disease being an affection of the brain. A disease may be corporeal, and yet the disease itself may not be structural—no affection of any organ may take place. It does not follow, because we say insanity is corporeal, that it is not a disease of the mind; we know nothing about that, except as to this world, and it is with this world that medical men have to do. It is a corporeal disease, but that does not imply that it must be a change of structure; a change of function may be quite sufficient. In diabetes, which destroys life, I have opened bodies over and over again, and not seen any thing to shew me that the person had had organic disease. Again, you may conceive that this must take place if you consider that individuals have been mad for years and years, and just before death they have recovered completely. A

lady of rank, in whose family there is insanity, told me, that her husband had been deranged for a great number of years, and at length he died, but just before death he recovered his senses. Dr. Marshall, who was formerly a teacher of anatomy in London, mentions a case where recovery from insanity occurred a few hours before death. Now if the disease had arisen from a structural affection of the brain—if the brain had been so disorganized that it could not perform its functions, of course such an event would not have occurred before death.

But you have proof enough of there being cerebral affection, to say nothing of the occurrence of the disease itself, because it proves itself to be a cerebral affection as much as dyspepsia proves itself to be a disease of the stomach. But you may have anatomical proof in these cases; for when the disease has continued long, you generally find some mark of disease in the head; you do not find any thing to explain the insanity, but you find something that shews there has been suffering in the head. For example, there is often fluid in excess in the brain or upon the brain, or the membranes of the brain are thicker than usual, or they are opaque; and the bones of the head are very frequently thickened likewise. The external table remains in its proper situation, but the diploe between the two is increased, a deposition takes place there, and the bones become thicker, and not only thicker, but sometimes they acquire an ivory hardness. Now insanity is not situated in the bones of the head, but when you see that there is such thickening, and you see that the membranes are thickened, and effusion is found in the membranes, then it shews that the head has been suffering.

Gall mentions that he found in many suicidists, in fact he says always, and frequently in great criminals, where there was no efficient reason for the action—where criminals had been influenced by violent feelings only, the bones dense and thick. Greeding mentions, that in 216 maniacs, he found the bones of the cranium very thick in 167. In 100 furious maniacs, he found in 68 that the bones of the cranium were very thick. Out of 30 imbecile individuals, he found the bones of the cranium very thick in 22. Gall mentions another interesting fact, and that is, that in the extreme old age of maniacs, the bones may grow thin again just as they do in sane individuals. You know that in sane individuals the bones become very thin in certain parts, and though in insanity you may have them thickened, yet they will become thin again, exactly as in sane persons.

Of course, besides these appearances, you may find various diseases in the brain itself; but you must not be surprised if, in cases which are not of long standing, you do not find any disease at all. If the case be of long standing, and you find the bones diseased, you may also find disease of other parts. I had a case last year*, which occurred in a woman who had a disposition to injure herself, and there was violent pain in each ear. She was deformed, and laboured under chronic bronchitis. She was placed near a window, caught cold, and died suddenly. After death, over each ear, there were strong adhesions to the dura mater, and the brain itself just over the part was in a state of vascularity. You may in insanity find different parts of the brain more or less inflamed, and the appearances which inflammation more or less induces, such as thickening and softening, and various organic affections, just such as you would *à priori* expect.

I may mention, in connexion with this remark, that over the parts which are particularly excited, you will frequently find the temperature higher than at other parts of the head. Nothing is more common than to find one part of the head hotter than another. If we have been studying for some hours, we feel the temperature of the forehead to be much hotter than it is either at the top, the back, or the sides of the head. So, when persons' feelings are excited in insanity, you will find—the remark has been made by those who have more opportunity of observing it than myself—that a local increase of temperature is frequently induced.

Causes.—In regard to the causes of insanity, they of course are predisposing and exciting, just as is the case with other diseases.

Predisposing Causes.—Among the predisposing causes, the most remarkable is hereditary predisposition. I should think there is no disease to which the human frame is subject, which can be so hereditary as insanity. When I say disease, I mean disposition to the disease, because if a person do not have a disease break out till he is 30, 40, 50, 60, nay 70 years of age, yet if the disposition to it be given to him by his parents and ancestors, we say it is hereditary. That is the ordinary mode of speaking; but some people object to this word hereditary. I should suppose, however, that if a man inherit an estate from his father, if he do not come into its possession till he is 90 years of age, it is just as hereditary as if he receive it the day he is born. It is a mere quibble to limit the word hereditary. But insanity, in a large number of cases, is hereditary, and I do not think it is so difficult to wear out the hereditary disposition to any disease as it is to insanity. It seems to require more of dilution, more crossing of the breed, than any

* Med. Gaz. Vol. viii. page 168.

other affection; for it comes on in third and fourth cousins, and although it has disappeared in one generation, it so frequently returns that there is the greatest danger of its arising in almost every other descendant. Scrofula, gout, and various things, will cease by good management and by favourable circumstances; but as to the disposition to insanity, it is certainly one of the most undilutable, if I may use the expression, imaginable.

The importance of attending to the existence of insanity in families has been very much dwelt upon by some writers; and I must confess that, if I were going to be married, there is no disease that I should be more anxious to inquire whether the family was free from than this. Dr. Spurzheim, among others, has written on the subject; but it is just as well dwelt upon by Burton, in his Anatomy of Melancholy, and in his usual facetious and singular manner. He enumerates among the causes of melancholia, hereditary disposition, and he says—"*Parents a cause by propagation.*—That other inward inbred cause of melancholia, is our temperature, in whole or part, which we receive from our parents. Such as the temperature of the father is, such is the son's; and look what disease the father had when he begot him, his son will have after him, and is as well inheritor of his infirmities as of his lands." He then enumerates a number of hereditary diseases, and proceeds to remark—"Some other causes are given which properly pertain, and do proceed from the mother. If she be over-dull, heavy, angry, peevish, discontented, and melancholy, not only at the time of her conception, but even all the while she carries the child in her womb, her son will be so likewise affected, and worse. If she grieve over much, be disquieted, or by any casualty be affrighted and terrified by some fearful object heard or seen, she endangers her child, and spoils the temperature of it; for the strange imagination of a woman works effectually upon her infant." He concludes thus:—"So many several ways are we plagued and punished for our fathers' defaults, insomuch that as Fernelius truly saith—'It is the greatest part of our felicity to be well-born, and it were happy for human kind if only such parents as are sound of body and mind should be suffered to marry.' An husbandman will sow none but the best and choicest seed upon his land; he will not rear a bull or an horse except he be right shapen in all parts, or permit him to cover a mare except he be well assured of his breed; we make choice of the best rams for our sheep, rear the neatest kine, and keep the best dogs; *Quanto id diligentius in procreandis liberis observandum.* And how careful, then, should we be in begetting of our children! In former times, some countries have been so chary in this behalf, so stern, that if a child were deformed in body or mind they made him away; so did the Indians of old, by the relation of Curtius, and many other well-governed commonwealths, according to the discipline of those times. 'Heretofore, in Scotland,' saith Boethius, 'if any were visited with the falling sickness, madness, gout, leprosie, or any other such dangerous disease, which was likely to be propagated from the father to the son, he was instantly gelded: a woman kept from all company of men; and if by chance, having some such disease, she were found to be with child, she with her brood were buried alive.' And this was done for the common good, lest the whole nation should be injured or corrupted. A severe doom, you will say, and not to be used among Christians, yet more to be looked into than it is. For now, by our too much facility in this kind, in giving way for all to marry that will, too much liberty and indulgence in tolerating all sorts, there is a vast confusion of hereditary diseases, no family secure, no man almost free from some grievous infirmity or other, when no choice is had, but still the eldest must marry, as so many stallions of the race: or, if rich, be they fools or dizzards, lame or maimed, unable, intemperate, dissolute, exhaust through riot, as he said, *jure hereditario sapere jubentur*—they must be wise and able by inheritance. It comes to pass that our generation is corrupt, we have many weak persons, both in body and mind, many feral diseases raging amongst us, erazed families, *parentes, peremptores;* our fathers bad, and we are like to be worse."

Now this is good advice, but it is not to be carried to the unwarrantable pitch of gelding unfortunate people; but undoubtedly it ought to be attended to much more than it is. I think it sin and wickedness to marry a person in whose family there are many instances of insanity, and it is appalling to read the accounts of deaf and dumb charities, and blind charities, where you see individuals have married, and have produced child after child deaf and dumb, and child after child blind. I think, when one or two children have been produced blind or deaf, that it is wickedness for procreation to be continued. You will see sometimes as many as six children born deaf or blind in the same family. I should think it would be desirable, under such circumstances, to ascertain, if possible, which of the family the disease arose from, and that divorce would then be very allowable, so that only one should be deprived of such a luxury.

To shew you how very hereditary this

disease is, I may mention that Dr. Burrows says, that six cases out of seven in his private practice were of an hereditary nature. In the Salpêtrière, there were 320 female lunatics, 105 of whom had the disease hereditarily. Out of 264 cases, treated by Esquirol in his private practice, 150 were hereditary.

Where insanity is hereditary, it is very common (I believe I mentioned the circumstance before, when speaking of other diseases of the nervous system,) to see other members of the family not deranged, but with some nervous disease or other. I know one family where two or three are deranged. The father is not deranged, but he speaks badly, and has twitches of the face. Two other children of the family are sane, but have twitches of the face. Where one is insane, another is frequently a little odd in his manner, odd in his thoughts, but not sufficiently so to be called deranged. Where there is insanity in a family, you will observe some individuals with very strong feelings, but yet they do not overbalance the mind, so as to produce insanity.

PASSAGES FROM A RECENT LECTURE

By Dr. Badham,
Professor of Medicine, Glasgow.

Authority of the Public Teacher—Clinical Medicine—Medical Examinations; their inadequacy—New Regulations in Glasgow College—Advantage of connecting Ancient with Modern Medicine, &c. &c.

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And now that we are on this subject, need I impart to you the true principle on which, in relation to his pupils, the authority of a public teacher of medicine depends? Of course it rests not simply on his personal experience; for no man has seen enough, or understood enough, perhaps, of any disease, to embrace the whole of the relations of medicine even to that disease. Of many diseases he may not, of some he cannot, have seen a single example, though in a six months' course he is expected to treat of almost all. How many diseases, besides, are obscure, complicated, anonymous, and not in any way available to the teacher who has pledged his faith (as I should be very sorry to do,) to a system of nosology? Yet if the professor be *par negotiis*—if his brain be rightly organized, I think you may confide in him as far as reasonable confidence can, or ought to be given, on very intelligible principles. Seeing and observing as carefully as other people, he is under the necessity of reading much more than others; in order to make that reading available, he must necessarily reflect a good deal; for opinions that are to be first distinctly formed, and then publicly supported, involve too much responsibility not to have been acquired with some pains and accuracy. The professor is, or should be, therefore, *par metier*, a medical philosopher, not addicted, at least in our day, to own himself the subject of any jurisdiction. On these necessities of his condition depends his authority with his pupils; the authority with which a reasonable mind, much exercised on a large collection of facts, and familiar with the reasonings of others on similar facts, fairly invests him. He is a critic in constant occupation; a critic immediately interested in the honour, truth, and consistency of his art; a critic whose office it is to ascertain and define the limits of fact and of probability. We neither wish nor expect to be quoted by you with an αυτος εφη; we do not dictate to you, but we reason with you from the chair; giving you opinion as opinion, and inviting you to think and decide for yourselves. We bring near to you what is at present remote; we facilitate what is difficult; we elucidate what is obscure;—and doing, or endeavouring to do, all this, are entitled (and we generally find you ready to give us far more than we would claim) at least to the authority of an Edinburgh reviewer on the corn laws, or a Quarterly disputant on the tithes. And should we be, moreover, as we ought always to be, engaged in the charge of clinical instruction, our very errors and failures, our consistency with our own doctrines, or departure from them, are still sources of your improvement: here, in all human concerns, παθηματα, μαθηματα; sufferings are lessons; and you may, you ought, and you do, inquire whether favourable results are our work, or nature's prerogative, and inauspicious ones to be candidly ascribed to the deficiency of medicine, or want of sagacity in her interpreters.

While I touch on this subject, let me observe, that it can never be sufficiently regretted, in relation to the paramount interests of a great medical school, that offices naturally conjoined should be unnaturally, as here, divorced; that the clinical duties of the infirmary should not be, at least during the academical session, participated, without stipulation or encumbrance, by the existing professor of medicine, and by those other physicians who are intimately connected with the medical school. That none can exercise them

here who do not pledge themselves to an onerous attendance on the duties of that infirmary for the space of two entire years, you know. At Edinburgh it was, and is the practice, to the great benefit of all the parties concerned, that the medical gentlemen of the University should each, in turn, succeed to a clinical charge in the hospital. For my own part, I should at all times have been ready to have undertaken, as I lately did undertake, this beneficial labour for three months—the half of our winter session. An infirmary, recollect, has a double relation to the public, and it would be difficult to say which is the more important; the cure of its sick is one, but the instruction of its alumni is another. In Glasgow the physicians are permanent (some, of course, must be), while the surgeons are changed too often. One of these latter gentlemen has hardly turned up his sleeves when he is expelled by another; yet there are not a few who are inclined to consider the permanency of a surgeon in an hospital as a great benefit, not merely to himself, but to his art. Now while I thus advert to the exclusion of the medical professors of the University from the infirmary, except under conditions, no one who hears me will apprehend that this remark can have an invidious application to the permanent and meritorious physicians of that establishment—gentlemen to whom the public owe great obligations, and with whom I live in habits of friendly intercourse. I speak merely as the professor of medicine in this University, and it is the only *ex cathedra* opinion which I utter as such. I am quite aware that the individual who finds himself in my actual position, is not formally excluded from the Royal Infirmary; on the contrary, he is a perpetual and *ex officio* governor of that institution; but then he is also a professor, and after six such months in harness, most of us require to be turned out to grass. A daily lecture, (often two) from the last oak leaf to the first crocus, is one of the things that cannot be accomplished by steam. Horses on the north road work hard, and a good deal against the collar; and his insides may constitute as pleasant a party as ever was booked, but the coachman is not sorry to repose. A journey is a journey; and therefore I conjecture that the professor of medicine will seldom be the permanent physician to the infirmary of this city,—which is, however, no reason for his not being an occasional one.

And now that I am discoursing to you of what might be accomplished for the benefit of our medical school, if the occupant of my chair were engaged in clinical instruction (quite aware, however, that you do enjoy such instruction, although it be not his, whose duty it is only to impart to you the Pandects of our science), let me mention another purpose to which I wish it were possible to hope, that a more intimate union with the Royal Infirmary might at some future period conduct us. The examinations for medical degrees are just beginning; I distrust all such examinations. If I were at once clinical professor, and in possession of the necessary academical authority in my own person, the candidate for a medical degree should be conducted to the clinical ward; half a dozen cases of disease, acute and chronic (picked cases, but not puzzling ones), should be offered to his consideration. Our aspirant to the *summi medicinæ honores*—the candidate for the privilege we confer, "*in cathedram doctoralem ascendendi, prælegendi, disputandi*," and other desirable immunities, should be invited to investigate these diseases by touch, sight, and interrogation (by hearing, too, for he should positively be able to use a stethoscope); he should expose to the medical examiners the conclusions to which he might arrive, and the reasons of them; he should tell us the natural situation of parts, and their morbid liabilities; he should maintain his diagnostic, and not his thesis; and he should conclude by a summary of the nature, the pharmacy, and the doses of the agents he proposes to employ. On such an examination, which would be susceptible of infinite variety, and very easy to conduct, I would more willingly confer the diploma, than on any oral examination whatever, and by whomsoever conducted.

In these days of reform, to be thus *rerum novarum cupidus*, is not very open to reproach; but we must wait a little; the time of figs is not yet. I shall presently have to interrogate you *more majorum*, on the interesting foramina of the sphenoid bone, the distribution of the eighth pair of nerves, the play of the cardiac valves, the mechanique of respiration, the chemistry of digestion, the symptoms of hypothetical diseases, and the intangible absurdities of medical ontology—all which, excepting the last, you will have gotten by heart, and you will pass, and I shall have discharged my duty, but not according to my apprehension of it; for in oral examinations we must have either generalities that none can miss, or accuracy that few can attain. Now if the good old plan must be continued, let it be reformed. Printed examination papers, maturely digested by the examiners, should be placed before the candidates, as at Oxford and Cambridge; and with six hours' leisure, but perfect seclusion, these papers should be returned to the competent authorities, with the an-

swers rendered to them. I am quite sure that some of you would not flinch from this ordeal, and that, after a time, the greater number, aware of its existence, would meet it without reproach; indeed, it were well that the public knew, better than it does, of what stuff a considerable number of our medical alumni is actually composed. I have had many gentlemen in this class, and hope to have more, who have hovered about these smoky walls for seven or eight years, who have gone through six months' courses (and not a few of them several times over), in the ancient languages, in mathematics, in logic, in moral and experimental philosophy—who have, in short, performed a complete course in the gowned classes, before they put their hands upon the ark of medicine, or even entered the anatomy school. I do not undertake to celebrate Glasgow, as you well know, in every relation; but I do say, that a complete Glasgow education implies about as comprehensive a scheme, and is as effectively accomplished, as any in the world; and I scarcely need observe, that when the hardy plant trained in our conservatory has been transplanted to the fertilizing banks of the Isis (a fact which the patronage of the Balliol bursaries vested in our hands gives us ample opportunities of knowing), we seldom fail of our fair proportion among those who win at Oxford the highest of her distinctions.

All this is digression, but digression with an object—an episode; but the remaining cantos of the epic will presently be resumed. My pupils, for the last six years, are used to these resting-places; this is one of the largest; they come in *pro re nata*, and we always contrive to find our way back again. Sometimes these objects may be less important than now, but they are never without an object. The only result of some of them may probably be what I intend it to be—to shew that I do not deem it essential to be inexorably tiresome in the discharge of a strict line of duty; that I hold even medicine to be not insusceptible of grace; the necessary relief of a dry subject may possibly be effected without stale anecdotes or marvellous cases. The stability of the column need not be impaired by bestowing a little pains on its capital.

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I have just concluded a long investigation of the diseases of the chest, and have said very little of certain medicines which you often see employed for their relief, under the name of expectorants; and upon the whole, you may marvel that in so long a course I have celebrated so few medicines, and appear to attach such light value to their combination; that, in short, I dictate to you no prescriptions. My abstinence from this topic is, however, not more agreeable to common sense than in strict conformity to the fashion of the times. You find no prescriptions in any sensible medical author: you have no formulæ in Cullen. Polypharmacy sleeps—*requiescat*. The fact is, that we do not know how to make drugs more efficacious (with few exceptions) by combination. Such books as —but I will not name any—are worse than useless. Not that you may yet venture to deny your patient his two-ounce draught; he will not yet permit himself to be cured without a certain quantity of abhorrence, to be vanquished by virtuous determination, at least twice a day. A sick man, however, has his mantle-piece less embellished with these lachrymatories than in the good old times of the Gold-Headed Cane. The *medecine expectante* of Britain always gave these draughts, and many a basket full of phials was conveyed from the chamber during a six weeks' illness. The *medecine expectante* of France, in place of them, always gave the Hippocratic *ptisane*. Both, not unwisely, waited upon nature, (except in acute cases, or in chronic ones possessing a specific remedy) and both endeavoured to be actively idle, or at least not impertinently intrusive, till she should have leisure to declare herself. I cannot discommend their discretion when I consider what medicine is.

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We have generally given you some hints on the ancient history of a disease before we entered upon its technical one; and we presume this practice to impart some curious and collateral information that may be turned to good account. It is of some moment in medical statistics to shew that what is fixed, and what is migrative and intercurrent, was always so; that the τα εξωθεν, always told heavily in all climates, and among all people. One might, perhaps, safely venture to maintain that Helen was not pitted by the small pox; but it would be incautious to assert that Agamemnon may not have been visited by gout, (Greek wines are strong), or Hecuba by rheumatism. Nor is a very alarming expenditure of time required to hint to you that Miltiades died of a sphacelated femur, which the surgeons could not manage; or that Agesilaus perished of a synocha fever, or Crassus of a pleurisy. A slight reference to ancient medicine is also positively useful; because to mark progress, we must have the point of departure; because it is well to know how much was accomplished with very limited means; because we can only in this manner trace the introduction of new medical agents; and because it is not uninstructive to mark how old things again become new, and how a Cappadocian of an early century may anticipate a Parisian

of the 19th in the very doctrine which he promulges as a novelty of importance. All this I hold to be useful, even though it conduct to the unwelcome conclusion that medicine was not regenerated by the discovery of the circulation, and that one might safely have trusted one's pleurisy to the physician of Pericles or Augustus. Then, as to epidemics,—but I forbear, and merely remind you that some of the observations I have made during the present hour will find their application to matter which remains for discussion, as others of them bear immediately on subjects that have been already treated.

I next intend to proceed to the inflammatory affections which have their seats in parts below the diaphragm. The first of them is gastritis, a disease which, in Dr. Cullen's acceptation of the word, you may not hope to see; but it is my intention to embrace under this division of the course the restricted inflammation of the mucous membrane, and also the functional disturbances referred by that writer to a remoter part of his nosology, under the too general title of dyspepsia.

As arrangement was never my forte, and as agreeable intelligence is never unwelcome, I may as well tell you now that our new statute about examination is ready to be promulged. To this enactment (as I never make objections to the substitution of one set of absurdities, or modes of administering them, to another) I acquiesced—*ἦκων, ακεοντι δε θυμῳ.*

You were liable to three examinations, of about twenty minutes each: you are now liable to one, of an hour's duration, or endurance. Now whether the examined, the examiners, or the public, gain any thing, or what, by this plan, as I yet require information myself, I am, of course, unable to impart any. You escape, and we too, the inflicted aphorism: you are no longer obliged to write, nor we (such of us, I mean, as were admirers of composition) to read the Latin essay. All this is past away. You will now be requested to construe, or, if I heard the clerk of the faculty aright, "made to translate" some passages from a Latin author, *viva voce*, in a lively voice.

Lastly, those who come to reside amongst us for an academical year, (having certificates of incumbency on the study of medicine for three previous ones in authorized schools) must attend two courses at least in the university. There is some other machinery which this reform bill covers, and scarcely covers, but in which you are not interested.

And is this all? Absolutely! I shall not see the day, but come it must, *arida cum tota descendet aranea tela*—ours can only be a patriarchal anticipation!

One of these days (the days are now getting longer) I mean to introduce the dear public to the examining schools (passim): the dear public now goes every where: it will be a new subject for the New Monthly. I think something may be made of it. The dear public goes to Almack's and to the drawing-room: why not shew it how Doctors are made, a process in which it is certainly a good deal interested?

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LECTURES

ON

DISEASES OF THE EYE,

Delivered at the Birmingham Eye Infirmary,

BY RICHARD MIDDLEMORE, ESQ.

PUSTULAR OPHTHALMIA.

PUSTULAR ophthalmia is another form of conjunctival inflammation; it is an inflammatory affection of the conjunctiva, attended with the formation of pustules in some part of the anterior surface of the eye-ball.

You know that children of a scrofulous constitution, whose eyes are affected with that form of ophthalmia termed strumous, are very liable to the formation of these pustules, either upon the conjunctiva or the cornea; but that is not what I am now considering; it is an inflammatory affection of the conjunctiva, not necessarily connected with the ordinary indications of struma, to which your attention is directed.

Now pustular ophthalmia most commonly occurs in children, but you will not unfrequently meet with it in the adult, and it more commonly affects women than men. It is characterized by partial redness of the conjunctiva; the redness is not equally and generally diffused throughout the whole surface of that membrane; on the contrary, the vessels proceed in distinct fasciculi, generally running in a direction nearly parallel to each other; not interrupted by diffuse ramification, but pursuing a direct uninterrupted course, until they terminate in a pustule. More generally this takes place at the margin of the cornea, sometimes before they reach that part, and occasionally their course is continued for some distance upon it, where they terminate in the same manner—that is, in the production of a pustule. There is seldom any considerable intolerance of light, or any great general vascularity, or any material extension of the inflammatory action to more important and deep-

seated parts; frequently, however, there is a succession of pustules, a fresh one every now and then arising as the original ones disappear, or as they are healing and subsiding. Sometimes, as Mr. Travers has remarked, you will notice a pustule on opposite sides of the cornea, nearly in its transverse diameter; but they are very variable in this respect, and also in their size, their number, and their other characters.

With regard to their seat, I may mention to you that they most generally form at the margin of the cornea, although you will often see them on the sclerotic portion of the conjunctiva, at some distance from the cornea, and occasionally they will form upon the centre of the cornea itself, or indeed upon any portion of its superficies. However, they do not actually implicate either the sclerotica or the proper substance of the cornea, unless their size is unusually considerable, but are first formed in the cellular membrane connecting, in the one case, the conjunctiva to the sclerotica, and, in the other, the mucous covering of the cornea to its primitive or anterior layer. Such is the structure in which they originate, and such is the situation they occupy, subject of course to the same variations and exceptions as other morbid productions.

With regard to the characters of the pustules, I may tell you that, when upon the cornea, they appear like small red conical elevations, but when in other parts their colour is white, with sometimes a shade of yellow; if large, they are flatter—much less prominent certainly than when they are small. They are generally circular, as you would expect; for the effused fluids pressing equally on all sides, would, of course, cause the tissue in which they are deposited to admit of extension in every direction to the same extent, unless indeed when a small pustule happens to be situated close to the margin of the cornea; then the strict adhesion of the conjunctiva to that part prevents it from yielding so readily as in other situations, and we have consequently a crescent-shaped pustule produced, the convex margin of which is situated towards the periphery of the globe, and its concave edge towards the cornea. But if it form at some little distance from that situation, it may still spread equally in every direction, and preserve its circularity; that is, if it do not extend quite to the edge of the cornea, for then, of course, being prevented from extending in that direction, its contents would be forced along its margin, and the pustule would, on this account, acquire a crescentic appearance; in fact, the same rule obtains here as in the formation of a phlegmonous abscess. If pus be deposited in the cellular membrane beneath the skin, it will press equally on every side; but the skin in front, and the fascia behind, will not yield so readily as the cellular membrane; the pus therefore compresses that tissue in the lateral direction, and, if it be healthy, it yields equally to the compressing force, and in this way the cavity of such an abscess will acquire a circular border. However, this law is interfered with when the cellular membrane is unhealthy, has acquired morbid adhesions, or if it have acquired a more intimate connexion in one situation than another, or be of a more unyielding quality; these events are generally determined by the situation of the abscess, and the state of the part previously to its formation. If a fluid extend from a given point to an equal distance in every direction, its boundary must necessarily possess a circular form.

The contents of these pustules vary in their qualities; sometimes the fluid matters they contain are watery, when, as Beer remarks, they ought properly to be called phlyctennulæ; more commonly they are puriform, or contain a substance possessing mixed characters—at one time serum, at another pus, and at a third lymph predominating. The contents of the large flattened pustule, situated generally at some little distance from the cornea, are less fluid than any other, and in some instances would appear to be little more than a layer of lymph.

When a pustule forms upon the cornea, it may be extremely prominent: it is not generally so diffused—it does not possess so hard a base as when it forms upon the conjunctiva, in consequence of the stronger adhesion subsisting between it and the primitive corneal layer. It may then occasion great irritation, just as any other substance destroying the smoothness of the surfaces which move frequently upon each other would do. If its contents continue to increase, and its covering does not give way, it will extend backwards, producing by its pressure ulcerative absorption of the neighbouring layers of the cornea, and, by implicating the interlamellar cellular tissue, will likewise occasion sloughing of that part. In this way it may destroy the whole of the corneal layers for a limited extent; thus forming a fistulous opening into the anterior chamber, leaving behind (if the mischief do not extend laterally beyond a certain distance) a troublesome ulcer, and of course some degree of opacity. You will observe that this loss of the corneal structure may depend either on a process of gangrene, of ulcerative absorption, or of both combined. If a pustule forms upon the conjunctiva, the mischief only becomes important by destroying the equa-

lity of those surfaces which naturally glide upon each other with the most perfect freedom and exquisite precision; or otherwise, in consequence of its extension, leaving behind, in the event of healing, a most troublesome cicatrix, which, (in addition to the production of other evils previously stated,) by its close adhesion to the sclerotica, prevents that motion which takes place between these parts in their natural and healthy state.

There are many external sources of irritation, which, I have reason to believe, give rise to pustular ophthalmia—such as fine metal-dust and other particles floating in the atmosphere of a confined room, such as many artizans are exposed to; and I may add the use of gas, when employed without a proper attention to those circumstances which tend to moderate its heat and to steady and diffuse its light.

Parents are often alarmed at this disease in the eyes of their children: it appears to them to be very important and dangerous, and the pustule or pustules are, in their opinion, great blemishes, which they are very desirous of having removed from the eyes of their children. You can of course have no hesitation in assuring them of the perfect safety of vision; you may at once tell them, after you have satisfied your mind of the real nature of the disease, that the child will recover its vision perfectly, and that the spot or blemish will entirely disappear.

Treatment.—As pustular ophthalmia has generally been controlled, in my own practice, by a very simple plan of treatment, I shall scarcely think it necessary to refer you to the methods of others, whose peculiar views of the nature of the disease have modified the practice they have deemed it their duty to recommend for its cure.

If your patient's health be moderately good, if the disease be not unusually severe, and if the case fall under your care soon after the disease commenced, you would direct your patient to take a dose of some simple purging medicine, such as you might consider best suited to his habit of body; you would advise him to bathe the eye frequently with Goulard water, and to drop upon the pustule, every night and morning, a solution of the nitrate of silver, (about two grains to the ounce of distilled water). If the case be very obstinate, you may deem it prudent to bleed from the arm, or to apply leeches to the lower lid, and afterwards to place a blister at the back of the neck. These means comprise all that is necessary to complete the cure in this class of cases; but if the pustule on the cornea be large, and if it be extending, your treatment would be more active, and you would deem it right to arrest, by the agency of mercury, that action which gave rise to the deposition, and also to promote its absorption. Extension of inflammation to the deep-seated textures would of course require the adoption of the same vigorous measures, as disease of those parts, arising independently of such extension of mischief; and the other consequences of the malady would engage your attention on the ordinary principles; such, for instance, as ulceration of the conjunctiva, and the cornea, and their consequences.

Your patient may be teased with frequent relapses, and in such case it will be right to examine very particularly the state of his health, the nature of his employment, and to inquire into any other circumstance which you may believe to exercise an injurious influence upon the eye, and modify your treatment accordingly. If you believe it to be produced by disordered health, the rectification of such disorder will very properly occupy your attention; if from any source of external irritation, that irritation must be removed, at least for a time, or you may employ some mode of lessening its injurious influence. I have known a gentleman teased with frequent relapses of pustular inflammation of the conjunctiva, from reading by a large gas-light which he had lately begun to use in his study, and, on discontinuing its use, the disease ceased to annoy him. A young man was employed in filing metal, and when more closely engaged in his avocation than usual, the eyes always became affected with pustular ophthalmia. If, therefore, your patient be teased with frequent relapses, make those inquiries which will be likely to elicit some information relative to their cause, and you may, with scarcely any difficulty, remove or prevent the recurrence of a disease which for many years tormented him.

Sometimes it will be necessary to open a pustule on the cornea; if the tunic covering it do not readily give way, and if its contents are increasing, this measure will be advisable. Select a fine cataract needle, puncture the most prominent part of the pustule, and evacuate its contents; the ulcerated surface will be then exposed, and will be managed as a simple ulcer of the cornea. I am not aware of any measure so likely to cure a large and obstinate pustule of the cornea, to prevent its extension, and to limit the degree of opacity it has a tendency to produce, as that I have just mentioned.

Many surgeons are in the habit of touching these pustules with the solid nitrate of silver, worked to a very fine point, and I believe this method was formerly pretty generally adopted. I shall only say of this practice, that it is *always* painful

and unnecessary, and very frequently mischievous.

IRRITABLE INFLAMMATION OF THE CONJUNCTIVA. (IRRITABLE OPHTHALMIA.)

The conjunctiva is subject to a form of inflammation which I shall term irritable, because it is characterized by irritability and uneasiness, rather than by acute inflammatory action and severe pain; and also because it takes place under circumstances which indicate an irritable condition of the system. It is a disease to which women are very liable during suckling, particularly if they have continued to suckle their children for a longer period than is proper and natural, and more especially if the same thing has been practised on many former occasions. It is generally supposed that suckling prevents impregnation; women, among the lower classes of society, believe that, whilst they continue suckling, they cannot become pregnant, and on this account they often continue to suckle for a very long period, until, indeed, in many instances, irritable ophthalmia or amaurosis takes place.

If you examine the eye of a woman affected with irritable ophthalmia externally, without touching the lids, you will perceive that the tarsal margins are red and inflamed, and that they are much redder and more inflamed towards each canthus than at any other part; the lachrymal caruncle in particular will be much larger and more florid than usual; there will be a little glutinous discharge upon the tarsal border, and unless it be frequently removed, it will collect at the inner canthus; there will also be some degree of epiphora, from the inflamed state of the margin of the puncta, and a little intolerance of light; the lids will acquire some degree of irritability, they will be continually quivering as though the orbicular muscle were undetermined in its action, and rapidly though only partially contracting and relaxing in frequent succession; that closure of the lids, by means of which the lachrymal secretion is equally diffused over the surface of the eye, is effected very frequently, on account of the collection of the tears at the inner canthus, from the spasmodic closure and inflamed state of the margins of the lachrymal puncta. If you institute a more particular examination of the eye, you will find that the vessels of the palpebral portion of the conjunctiva are much enlarged; there is not, however, that diffused blush noticed in some other forms of conjunctival inflammation, by which its whole surface acquires an equally red and vascular appearance, but the redness is linear and partial, depending, in a great measure, on the enlargement of some of the more considerable branches of the conjunctival vessels, which, in many instances, may be accurately traced upon its surface; it will be also remarked that the junction of the skin and mucous membrane, that part at which the one gradually and almost imperceptibly acquires the characters of the other, is much involved in the mischief; it is extremely red and inflamed, and the secretion from the meibomian glands, which are situated so near to it, is altered; it is no longer mild and fluid, but tenacious and irritating. This inflammation does not often extend to the sclerotic conjunctiva; it is in many instances limited to that of the palpebræ. The sensation of sand beneath the lids is a very troublesome symptom of this irritable ophthalmia, as you would suppose from what has been said respecting the enlargement of the vessels on the palpebral portion of the conjunctiva; there is likewise much smarting and itching, a sense of stiffness of the lids, and a difficulty in separating them after they have been for a long time closed; the smarting and itching are much increased towards evening, particularly if the patient has been occupied during the day at any employment requiring minute vision, or been engaged in working at brilliant objects, or by candle or gas-light, or been much exposed to the dazzling rays of the sun.

It is sometimes attended with a slight dimness of vision, and indeed many patients, who have disregarded the inflamed state of the eye, are alarmed at the altered state of their vision. In such cases your treatment, like your prognosis, should be marked by the most extreme caution, for it may happen that the injury to vision has become too firmly established to be wholly removed, and if, calculating on the subsidence of the amaurotic symptoms on the cure of the external inflammation, you were to pronounce a favourable opinion without any qualification, your professional reputation might be seriously injured.

The red, raw, and inflamed state of the tarsal margins, and the increased degree of this condition at and towards the canthi, is so very characteristic of the malady that you can scarcely ever be mistaken as regards its diagnosis; but, if you combine with this circumstance the peculiarity and extent of the inflammation of the palpebral portion of the conjunctiva, with the nearly pale and healthy condition of its sclerotic division, and the absence of much increase of meibomian and conjunctival secretion; and if, also, you are satisfied that your patient has continued to suckle longer than is usual, and if she tells you that this diseased state of the eye came on whilst suckling, you will not be at a loss

to distinguish this form of conjunctival inflammation from its other varieties.

If it should appear to arise from prolonged suckling, or from any other clearly-ascertained cause, the removal of that cause will alone be, in many instances, sufficient to effect a cure; but even if this should not take place, it is very manageable by the adoption of remedial measures, and you may therefore very generally pronounce a satisfactory opinion respecting the result of such cases; bearing in mind, however, 1st, that if it have appeared on many former occasions, it may have effected those changes in the state of the conjunctiva which may never be perfectly removed; 2dly, that if it be allowed to continue, it may extend, and eventually involve more important structures; and, 3dly, that it may be combined with, or succeeded by, amaurosis; of the approach of which, indeed, it would seem to afford, in very many instances, a timely and salutary intimation.

But why, it may be asked, should long-continued suckling affect the conjunctiva in this particular manner? In the absence of any especial sympathy, or any direct nervous or vascular connexion, by which the nature of this occurrence may be elucidated, I have been led to imagine that the continuance of suckling for a long period, particularly in women who have suckled many children previously, produces a general derangement of the health, to which the origin of this disease may be fairly attributed. Derangement of the health, of a particular description, is prone to excite, in some individuals, disease of the eye of various kinds; and I am satisfied that irritable ophthalmia may arise from this cause, quite independently of suckling, from repeated observation of the fact, although it is much more frequently noticed in connexion with lactation.

Long-continued suckling and a disordered state of the general health, constitute the only causes of irritable ophthalmia with which I am so far acquainted as to speak at all positively with regard to them; but although I have never seen it unconnected with one or other of these states, it has appeared in some instances to receive, as its immediate or exciting cause (in connexion with that disordered state of health which may be termed its predisposing cause), various sources of external irritation—such as long-continued application to minute bright objects of the same size and colour, working very closely by gas-light, &c. The eye requires relief, like other parts; it requires that the objects upon which it is engaged should be occasionally varied – a succession or variation of objects is usually a source of great relief to an eye previously engaged for a long period in the contemplation of unvaried uniformity.

Treatment.—If a person who had never had any similar disease on any former occasion, were to apply to you with irritable ophthalmia, which had come on during the period of lactation, and if, on inquiry, you found that she had had many children in rather quick succession, and if she had continued to suckle them beyond the usual period, you would at once direct her to wean the child; and you would urgently insist upon the imperative necessity of this measure, without further delay, if any degree of dimness of vision, any symptoms of amaurosis, however slight, were present. At the same time you would direct her to use the zinc wash frequently, to apply a blister to the nape of the neck, to take some mild aperient medicine, and to smear a little of the unguentum plumbi upon the tarsal margins every night and morning. But in such case, you would personally explain to her the mode of using the ointment, and the importance of using it properly. Let a little of the ointment be rubbed in the palm of the hand with the tip of the finger, until it becomes liquid; then let the extremity of a fine camel-hair pencil be smeared with it, and, having separated the lids, draw the pencil, covered with the ointment, gently along the inclined edge of the palpebral border, and, in the evening, direct her to place a small portion of it at the inner canthus, and to allow it to remain in that situation until it is dissolved. Unless you accompany your prescription with directions of this description, the ointment, which is no unimportant part of the treatment, will be of little or no service: for patients generally content themselves with rubbing it upon the cutaneous surface of the lids, from an ignorance of the mode in which it ought to be used.

There is one other remedy which is of some importance, as a means of relieving that tingling smarting sensation and that spasm of the lids, which, as I have mentioned, are sources of considerable uneasiness: I mean the vinum opii. Let a drop or two of the vinum opii be introduced between the lids every night and morning; and, if it be thought by your patient too painful a mode of purchasing relief, you may direct the eyes to be frequently fomented with a decoction of poppies, or an aqueous solution of opium. This is the general treatment of slight cases, when they occur in women during the period of suckling, such inflammation never having appeared on any former occasion; but the inflammation may be very severe, and the degree of pain so considerable as to forbid the use of these stimulating remedies: you

would therefore commence your treatment by the application of a few leeches beneath the tarsal margin of the lower lids, (for, in nearly every instance, both eyes are affected,) and, instead of the zinc lotion and vinum opii, you would prescribe the Goulard water and the decoction of poppies, or the aqueous solution of opium; at the same time acting more freely upon the bowels than in the former instance, advising, as a measure necessary to permit the employment of proper remedies, the removal of the child: of course, unless the child be weaned without further delay, the cause of the disease will remain, and you will be prevented from adopting that active kind of treatment which the condition of the eye may require, from a very proper apprehension of its injurious influence upon the infant. Sometimes it does not appear during the period of suckling, but soon afterwards; and, in such cases, it rarely requires medical treatment.

Men are liable to it from working at particular employments, as we have previously mentioned. Such instances require particular investigation, and, having satisfied yourself with respect to the cause of the mischief, you would adopt your curative measures accordingly; and, generally speaking, the same medical treatment is necessary as for the management of irritable ophthalmia from suckling. Having removed the cause—that is, the local source of the mischief—you would, in slight cases, adopt the stimulant, and in severe ones, the soothing and depleting mode of treatment. The latter stages of the disease may sometimes require the use of a more active stimulant than zinc wash; such, for instance, as the diluted nitrated ointment, applied in the manner recommended for the use of the lead ointment, except that you would not judge it necessary to leave so large a portion of it for gradual solution at the inner canthus. Indeed this latter remedy is, in my opinion, extremely serviceable; not only in the latter stages of the affection, but also in that chronic form of the disease which sometimes remains after it has been permitted to continue in its acute form for a long period, or in those cases in which this disease of the eye has repeatedly occurred: an altered state of the conjunctiva, an unsubsiding enlargement of its vessels, an uneven granular condition of its surface, present the only injurious consequences it is prone to produce, and are always much benefited by the application of this ointment; or, if it be more obstinate, the sulphate of copper may be rubbed upon its most prominent points—upon the summits of the granular elevations.

I have stated that amaurosis is sometimes combined with irritable ophthalmia, and that the latter disease may be regarded as a monitory warning of the probable occurrence of amaurosis; but the nervous affection is to be considered as a distinct and separate disease, and treated in a totally different way from the inflammatory mischief, with which, indeed, it has no connexion, except inasmuch as they are equally produced by the same cause. They do not influence and reach upon each other; they do not modify and aggravate the symptoms peculiar to each form of disease. It may be necessary to mention that there sometimes remains a state of tinea, which is easily corrected by the remedies adapted to that affection, occurring under other circumstances. You will not find it necessary to adopt any peculiarity of treatment different from that required when tinea arises from other causes. Of course I do not now refer to that red and irritable state of the tarsal margins, so remarkably evident towards the angles of the eye at the commencement of every case of irritable ophthalmia; but to a mere state of tinea consequent on the prior existence of the disease under consideration.

REMARKS

ON

TUBERCLES OF THE BRAIN.

By W. Murdoch, M.D. Par.;

Formerly House-Surgeon (Interne) to the French Hospitals.

Children are exposed to all the diseases of adults, and to many peculiar to themselves. The disproportion between the development of the vascular and nervous, and that of other systems, at an early period of life, gives to all infantile maladies a character of acuteness almost unknown in the succeeding ages. Inflammation is violent and rapid in its progress, and, when not fatal in its consequences, often terminated by a prompt spontaneous resolution. In the same disorders, the pathological alterations are different before and after puberty. Pneumonia, for example, is generally partial or lobular in children, and instead of attacking at once a large portion of the lung, it fixes itself successively on separate points, which, if united, would form a considerable body of disease. The tubercular productions of children and adults have not exactly the same appearance; the infiltrated tubercle is more frequent in the respiratory organs of the former

than the miliary or the insulated; and tubercles in very young subjects have a special predilection for the absorbent glands of the mesentery, which are rarely affected with them in manhood. Our intention in this paper is not to carry these comparisons any farther; we shall limit ourselves to the study of the tubercular affections of the brain and its membranes, affections that have been almost exclusively observed in children.

According to the statements of MM. Andral and Louis, the encephalon of adults scarcely ever exhibits the morbid lesion of which we are treating; occasionally, however, small tubercles have been found in the brains of maniacs and epileptic idiots arrived at the age of maturity, but they are so rare, that a tubercle of the brain has not presented itself more than twice within these last three years to the person* who makes the post-mortem examinations of all the maniacs and idiots who die at Bicêtre. It is not so in young subjects; tuberculous tumors of the nervous centre are frequent, if not common, at the Hôpital des Enfans Malades in Paris; and during my sojourn of two years as Externe and Interne in that establishment, I had an opportunity of observing more than twenty cases of this fatal disease.

Morbid Anatomy.—The tubercles of the encephalon and its membranes may have four distinct forms:—

1st, Miliary tubercle (tubercule miliaire.) It is principally met with in the membranes of the brain, which, when it exists there, are dotted with innumerable granulations. I believe this form has never been found in the parenchyma of the cerebrum, or cerebellum, or on that part of the arachnoid which adheres to the dura mater. This affection is mostly concomitant with similar modifications of other serous membranes, particularly of the peritoneum or pleura.

2d, The flaky tubercle (tubercule infiltré par plaques) consists in a layer of tuberculous matter, situated between the membranes and external cineritious substance of the brain. It is often difficult to distinguish this modification from purulent infiltration, when the fluid molecules of pus have been absorbed. These flakes follow the direction of the sulci, are often extended along the fissura sylvia, and are modelled on the external surface of the hemispheres.

3d, The tubercle infiltrated in the substance of the brain (tubercule infiltré dans le tissu même du cerveau.) This variety is excessively rare; the only example of it known to me is the following:—A child died in January 1830, in the ward of M. Jadelot, at the Hôpital des Enfans. The body was opened by M. Blandin, interne, brother of the professor. A perpendicular section of the pons varolii exhibited a striking similitude to a sliced carrot or radish, the strata of nervous parenchyma and tuberculous matter being alternately arranged in concentric layers. I could not collect any satisfactory details on the symptoms which preceded death.

4th, The insulated tubercle (tubercule isolé), is sometimes found under the membranes, but oftener deeply seated in the medullary pulp: it resembles in form the common tubercle of the lung, and differs in size from a pea to a hen's egg. If divided with a cutting instrument, these tubercles seem denser than in other organs, have a peculiarly green tinge, and are in many cases encysted. When they are not encysted, the morbid production is immediately in contact with the nervous pulp. When, on the contrary, an enveloping cyst exists, it is evidently created by the pressure of the tumor on the circumambient cellular tissue, and varies considerably in thickness and structure. Sometimes it is a thin translucent membrane; sometimes a fibrous, or fibro-cartilaginous, envelope; and not unfrequently it is studded with calcareous, osseous, or tubercular points. I am inclined to believe, from my own observations, that the encysted tubercle is more usually found in the anterior part of the brain, than in the cerebellum or pons varolii. The insulated tubercles of the brain generally remain in the state of crudity; a small partial softening is occasionally found here and there in their thickness, but total suppuration of a large encephalic tuberculous mass never occurred to me in my post-mortem examinations. However, I have of late learnt that this general softening has presented itself to some accurate observers. It is certainly not at all so common in tubercular affections of the brain as in those of other organs; nor can I assign any plausible reason for this difference.

All parts of the encephalon are not equally exposed to tuberculization. It has been observed in the spinal cord, both at its

* M. Lelut.

upper and lower extremity. It is rare in the pons varolii, not uncommon in the thalamus nervorum opticorum and the corpora striata, and frequent in the upper part of the hemispheres, the cerebellum and membranes of the brain. The state of the medullary substance round tubercular lesions may be perfectly normal; it may be indurated, denser, and more elastic than usual, either from compression or chronic irritation. Another form of morbid structure round tubercles is what the French physicians call ramollissement blanc, a name given to a peculiar white, creamy, semifluid softening of the encephalic parenchyma. In cases of tubercle, this ramollissement is often the seat of numerous small coagula of blood. Other species of apoplexy* have perhaps presented themselves to pathologists, in young subjects; but as far as my observation goes, they are excessively rare; whereas, the particular extravasation in the softened pulp that I am now describing, is of frequent occurrence. Many of the most modern pathological anatomists admit, that in adults the softening of the brain round an apoplectic coagulum rather follows than precedes the effusion of sanguineous fluid. I should adopt quite a contrary opinion in the pathology of the early age. The small coagula above mentioned appear to result from the rupture of capillary vessels, the parietes of which do not furnish the same resistance to impulsion, and are not so well supported when the surrounding tissue is softened. These coagula are hardly ever larger than a small bean (haricot), and generally are not greater than a pin's head. The effused blood remains always red or black; the fibrine of the coagulum never becomes completely white or encysted, probably because the morbid ramollissement of the brain has destroyed the action of the absorbents, and disorganized the cellular tissue. The white pulp that immediately touches the coagulated blood is reddened by the infiltration of its most serous parts, and the colour becomes gradually less dark in proportion to the distance of the part from the centre of the extravasated fluid. To resume: the first nucleus of disease is the tubercle, softening follows, and apoplexy is subsequent to the latter.

Should the tubercle, instead of a chronic irritation, produce an acute inflammation, the softening will then have quite a different character; it will be of a dark brown or purple colour, as if there were a complete combination of blood with the tissue of the brain, and not unfrequently pus will be seen, either infiltrated and intermingled with the ramollissement, or in small distinct collections. Generally in these cases the sinuses of the dura mater are filled with coagulated fibrine, so hard that it may be drawn from them without rupture.

We have already advanced the opinion, that encephalic tubercles sometimes, though rarely, terminate by suppuration; but they undergo another change, which I shall endeavour to elucidate.

I had often remarked in my inspections of the brains of children, indurated cellular lines, similar to those that result from the cure of an apoplectic cyst. These lines, or cicatrices, exhibited an appearance not unlike those which corrugate the superior lobes of certain lungs, and which Laennec believed to be the parietes of a tubercular abscess, brought together by the powers of cicatrization; and although they were frequently incrusted with calcareous matter, I never suspected what they were till the autopsy of a child, æt. 11, induced me to think they might be vestiges of healed tubercles. In the brain of the child just mentioned I found in the centre of the corpus striatum of the right side a cellulo-cartilaginous line, intermingled with a cretaceous deposit, and several tubercular granulations. The child was almost an idiot, and had had for years a permanent weakness of the left arm. It is more than probable the corpus striatum had been the seat of a tubercle, which, having been absorbed, the sides of the enveloping cyst were brought together, and had formed this remarkable cicatrix. In the Journal Hebdomadaire, year 1830, number 80, a similar lesion is described by my colleague, Monsieur Burnet. In the centre of a convolution was found a cartilaginous body, hard and round, two lines in diameter, and presenting in its centre a cavity containing earthy matter. There were other tubercles in the brain, and is it not likely that the cartilage and earthy matter were the remains of a cicatrised tubercle?

Complications.—Tubercles of the encephalon scarcely ever exist without

* By apoplexy I mean extravasation of blood, with rupture of the fibres of the encephalon.

bringing on some acute or chronic affection of the organ. The usual complications within the cranium are arachnitis, encephalitis, softenings, hydrocephalus; and another serious complication is that of pulmonary consumption, of which, in such cases, we may distinguish three varieties. 1st, Tubercles of the lungs more developed than those of the nervous centre, which seem to be the produce of a consecutive or secondary formation, or eruption; 2d, tubercles of the lungs equally developed with those of the encephalon; 3d, tubercles of the nervous centre larger, and more advanced than those of the respiratory organs. In this case the size of the tubercles in the brain does not prove the priority of their existence; the tubercular granulations of the lungs may have been first formed, and have remained stationary since the growth of those of the encephalon; 4th, lastly, tubercles of the nervous centre may exist alone, the lungs and other organs being perfectly sound. This state of things is not common. I saw it twice only at the Hôpital des Enfans. The following case is one of those that came under my observation, but as I had not noted accurately the symptoms, I have entirely copied it from the thesis of my friend Dr. Dufour.

Cottene, æt. 7, plump, and well formed, was brought into the Hôpital des Enfans Malades the 29th June, 1828. She has been, according to her mother's account, four days ill. Symptoms,—constant vomiting of bile, fever, and cephalalgia.

June 29th.—Violent pain within the cranium, particularly on the left side of the forehead; abundant vomiting of bile; unequal inspirations; pulse small and frequent; ℥viij. of blood are taken from one of the veins of the foot. During the night somnolency, interrupted by sighs and complaints.

30th.—Drowsiness; unequal respiration; continual sighing; slow pulse; contracted pupils; no evacuations; cold affusions for four minutes; application of ice to the head; twelve leeches to the mastoid processes.

The cold affusion has dissipated to a certain degree the drowsiness; the pulse became more frequent; but at night the coma returned.

July 1st.—No change; cold affusion to the head. Potion, with four grains of tartar emetic, to be given by teaspoonsful every second hour. This potion produced no evacuation. The affusion has again dissipated the coma, and accelerated the pulse; but after a little time the child relapsed into the same state.

2d.—Somnolency; eyes fixed in a stupid gaze; the head has a tendency to fall back when the child is seated; she recognizes no longer the persons that attend her; the potion is suspended; seton to the nape of the neck; compresses, dipt in vinegar and water, to be constantly kept on the forehead.

3d.—Same symptoms; the whole body is inclined to the right; strabismus of the right eye; spasmodic contraction of the muscles of the face on the right side.

4th.—Spasmodic contraction of all the muscles on the right side of the body; coma; pulse 150; three leeches behind each ear.

5th.—Repeated convulsions in the right arm; coma; difficult deglutition.

6th.—During the night, delirium; convulsions of the right arm; spasmodic contractions of the muscles of the right eye. Death.

Postmortem Examination.—Head.—The arachnoid appears drier than usual on the convexity of the hemispheres. No infiltration of the pia mater. Under the basis of the brain gelatinous infiltration round the decussation of the optic nerves, in the fissura sylvia on the left side, and round the nates and testes. The convolutions of the brain are rather depressed. A spoonful of limpid serum in each lateral ventricle. The fornix and septum are not softened. Towards the outer part of the right ventricle a tubercle, as large as a hazle-nut. The white surrounding medullary substance is not softer than usual. A second tubercle, of the same size, situated under the right corpus striatum, and adhering to the membranes of the fissura sylvia. In the left hemisphere a tubercle, of the volume of a walnut, totally hidden in the substance of the brain, and pressing on the thalamus nervi optici and corpus striatum, both which are of a rose-colour, and softer than on the other side. All these tubercles are hard and yellow, and enveloped in a transparent thin cyst. Thorax and abdomen sound. No tubercles in the bronchial or mesenteric glands.

Symptoms.—I have occasionally met

with tubercles in the brain of scrofulous children, whose death had been caused by a malady completely foreign to the encephalon, and who during life had never even complained of the slightest headache. Indeed, had any cerebral symptoms appeared, they would immediately have been recognized by the then attending physician, M. Guersent, whose sagacity I have often admired in the diagnosis of this disease, and to whose kind instructions I am so much indebted. In many of the cases of tuberculous brain that fell under our observation, (in children not scrofulous) the patients had enjoyed all the plenitude of brilliant health until three or four days before their decease, nor did there ever exist the slightest suspicion of a morbid lesion. Some of them had been remarkable for the precocity of their intelligence, and the beauty of their features. However, in the majority of cases, morbid tumors within the cranium give rise to a series of symptoms which may be divided into general and special, or depending on the part of the organ in which the tumor developes itself.

The general symptoms are a cephalalgia, continual or intermittent, more or less acute, often limited to one part of the head, which the patient points out, and which corresponds with the diseased region of the brain. Vertigo, flushes of heat in the face, pulsations in the head, slowness of pulse, striking at a period of life when circulation is generally so rapid, epileptic convulsions which are often preceded or followed by violent retching. When the tubercle is situated near the basis of the brain, below the surface of the corpus callosum, many phenomena denoting mechanical compression are superadded to the above-mentioned signs. Progressive diminution of general sensibility, heaviness of the head, which falls backwards in the sitting posture, gradually augmenting paralysis, or spasmodic contraction of the limbs, amaurosis and surdity, if the optic nerve or portio dura is compressed. I never saw any peculiar precocious excitement of the genital organs in cases of tumors in the cerebellum. Cruvelhier doubts much that mechanical pressure alone ever destroys the patient, by slowly extinguishing the faculty of innervation. In all the cases hitherto noted, when the patient succumbed exclusively from tuberculous disease of the encephalon, dissolution was evidently caused by an acute or chronic inflammation either of the organ itself or of its membranes. Should the morbid production be near the surface of the brain, the general phenomena are alone observed; this part of the brain having less influence on sensibility and contractility, and accustoming itself more easily to the presence of a foreign body. In these circumstances the tubercle gradually grows in the nervous medulla till it arrives at the membranes; the mode of irritation is then suddenly changed, by its coming in contact with the pia mater and arachnoid, and an acute inflammation of these membranes usually ensues.

From one of the observations of Mons. Burnet, from those of Mons. Bouillaud, and my own, I shall presume to advance that tumors developed in the anterior lobes of the brain have a special influence on the intelligence and on the faculty of language. In the case of Mons. Burnet, the power of articulation was morbidly modified by the tubercle in the anterior lobe; and when I was Interne of Mons. Velpeau, at la Pitié, in 1832, a patient died from the effects of an abscess in the anterior lobe of the cerebrum, occasioned by a contusion on the forehead, with fracture of the skull. No paralysis was observed; the symptoms were a constant heaviness of the head, a remarkable slowness of intelligence, with difficulty of expressing any series of words, however short.

Diagnosis.—It is impossible, in diseases of the brain, to make use of the means employed in the medical examination of the abdomen and chest; the derangement of function is the only guide we can follow, and a most uncertain one it is; being discriminated only by slight shades in many maladies of the nervous centre. Some practitioners having studied these affections in old subjects, in whom the progress of morbid alteration is slow, have affirmed that diagnosis is easier in the pathology of the encephalon than in that of any other organ. Perhaps this may be true at a late period of life, but what difficulty will be found to distinguish the numerous cerebral disorders of childhood! Arachnitis, encephalitis, hydrocephalus, tubercle, softenings, &c. have appeared to M. Guersent of so difficult diagnosis, that he ingeniously calls the brain and its morbid affections *la*

bouteille à l'encre. However, should symptoms of compression long exist, and suddenly symptoms of acute inflammation supervene, it is probable that some tumor gradually increases, and, as tubercles are by far the most frequent, that the tumor is of tuberculous nature. Cerebriform cancer of the organs of innervation, not unknown in children, gives rise to the same functional disorders; but certainly the diagnosis is not here of the utmost importance, for the affection in both cases is mortal, according to all probabilities. Should symptoms of chronic lesion of the brain declare themselves during the progress of pthisis pulmonalis, may we not suspect the presence of tubercles within the cranium? Indeed, great information for diagnosis, in cases of cerebral tubercle, may be derived from the state of the digestive and respiratory organs.

The prognosis of tubercles of the nervous centre is nearly always fatal, nor can any rational treatment be adopted except that of combating the symptoms as they appear. If any cure be possible, nature alone can effect it; our principal study ought to be not to diminish her resources.

Rotherhithe, March 10, 1833.

RHEUMATISM TREATED WITH COMMON ARTICHOKE.

To the Editor of the Medical Gazette.

Sir,

The following are some cases of rheumatism treated with the common artichoke (Cynara Scolymus): a remedy which, to the best of my knowledge, has not before been employed for the relief of that very troublesome and obstinate complaint, but which, I think, promises fairly to be of essential service in many cases where the usual remedies fail. Under this impression I have sent you the present communication; and if you consider it worthy of the notice of the profession, you will much oblige me by giving it a place in your Gazette.

I was led to make a trial of the cynara from having accidentally witnessed its effects in the case of a lady, who had suffered severely from chronic rheumatism for several years, and had received but little relief from the usual modes of treatment. In this instance, some artichoke leaves were bruised, and the juice mixed with sherry; and a wineglassful of this mixture was taken twice a day *for a fortnight*, in which time it almost entirely removed large ganglions from the wrist, of three or four years standing, and completely relieved the pains in the joints. Several months afterwards, the swellings of the wrists began to re-appear, but the patient has never since suffered so much pain as she did before this medicine was taken.

Considering this a sufficient inducement for trying its effects more extensively, I obtained leave of the physicians of the Norfolk and Norwich Hospital to employ it in some of the cases of rheumatism there admitted, and made two preparations of it—a tincture and an extract. I made the tincture by macerating about two pounds of fresh artichoke leaves and stalks in two pints of proof spirit for fourteen days. This was too weak a preparation, and objectionable in several cases, on account of the large quantity of spirit which is contained in a sufficiently large dose. The extract was made by evaporating the expressed juice of the leaves and stalks to a proper consistence for making pills. With respect to the effects which the artichoke produces upon the constitution, I have very little to say; as I have hitherto been quite at a loss to ascertain how it acts. It exerts no appreciable influence over the functions of the skin; sometimes it clears the urine and increases its quantity, but not always; it produces apparently no stimulating nor narcotic effects; but when given in large doses it acts more or less violently upon the bowels, causing griping pains and purging, and as soon as this takes place it ceases to produce any beneficial influence upon the disease for which it is employed. This, *cæteris paribus*, gives it a decided superiority over colchicum, as the latter seldom does good till it begins to cause disturbance of the stomach and bowels.

Case I.—*Rheumatism of three months' duration—Cured.*

Henry Page, ætat. 17 years, admitted December 11, 1831. Says he caught cold three months ago, from lying in a damp bed; since which time he has never been free from rheumatic pains in his joints. The pain is now chiefly referred to the right knee and

ankle, and the instep of the same side is swelled, and so painful that he cannot bear his weight upon it. Health in other respects pretty good. Bowels regular; appetite good.

Sumat haust. purg. statim, et Tr. Cynaræ, ʒj. ter die.

20th.—Has experienced great relief since taking the medicine.

Augeatur dosis Tr. Cynaræ ad ʒij. t. d.

Jan. 3, 1832.—He is now quite free from pain, and the swelling of the instep has entirely subsided. Discharged cured.

Case II.—*Rheumatism of five months' standing—Failure of ordinary remedies—Successfully treated with Artichoke.*

Robert Bussey, 27 years of age, a post-boy, was admitted on the 8th of October, 1831, with chronic rheumatism of five months' standing, chiefly affecting the knees and wrists, which are red and much swelled. Was in the hospital twelve months ago, with the same complaint.

Sumat Pulv. Ipecac. comp. gr. x. o. nocte; Utatur Lin. Ammoniæ frequenter; Baln. tepid. ter hebdomed. Extr. Cynaræ, gr. iij. bis die.

18th.—Much freer from pain.

Cont. remed.

26th. — Improving. As the small quantity of extr. cynaræ which I had made was all used, he was ordered to take

Vin. Colch. gtts. xxx. ter die. Cont. Balneum.

November 1st.—Since last report he has been losing ground daily, and has now nearly as much pain as when he came into the hospital.

Sum. Vin. Colch. gtts. xl. ter die.

9th.—Not better; ankles very painful and swelled; skin cold; pulse languid.

Sumat. Pulv. Ipecac. c. gr. x. ter die, c. Tr. Guaiac. Am. gtts. xxx.; Pil. Aloes, c. gr. v. o. nocte.

13th.—Slightly relieved.

Cont. Med.

27th.—Complains of a great deal of pain in the right shoulder; wrists and knees still swollen and painful, especially at night, so as to prevent his getting any rest. I had now prepared some tincture of artichoke, and directed him to take ʒj. 3tiis horis; the other remedies being omitted, except the warm-bath.

29th.—Improving.

Cont. Tr. Cynaræ.

December 1st. Almost free from pain; knees and ankles quite recovered.

Cont. Med.

13th.—Quite well, with the exception of a slight swelling of the left wrist. Discharged.

From the nature of his occupation, this patient afterwards unavoidably exposed himself to cold and wet weather, and suffered a relapse, from which he was again relieved by the same means.

Case III.—*Chronic Rheumatism—Failure of Guaiac—Quina and Colchicum—Cure from Artichoke.*

William Bloom, 22 years of age, a footman, of a scrofulous habit, admitted January 28, 1832, with chronic rheumatism, affecting the shoulders and knees.

Sum. Tr. Guaiac. Am. ʒj. ter die. Baln. tepid. ter hebdomed.

Feb. 7th.—Complains of weakness and loss of appetite; perspires very copiously of a night, and upon very slight exertion. Pulse slow and languid.

R Inf. Rosæ, ℥iss.; Quinæ Sulph. gr. ij. Acid. Sulph. dilut. gtts. xv. M. ter die. Omit. Alia.

18th.—Health much improved.

Omit. Mist. Tonic. sumat Vin. Colchici, gtts. xl. ter die.

24th.—Had an attack of fever last night, followed by profuse perspiration. Bowels confined; pulse 96.

Omit. Colch. et sumat Magnes. Sulph. ʒv.; Magnes. Carb. gr. xv. statim, et Mist. Quin. Rosæ, ut antea.

26th.—General health again pretty good. Rheumatic pains as severe as when he came into the hospital.

Omit. Mist. Quinæ. Resumat. Vin. Colchici, gtts. xl. ter die; Cal. gr. iij. Opii, gr. ij. omni nocte.

29th.—Has experienced no relief from the colchicum. Pain of the knees severe and constant. Urine very high coloured and scanty.

Omit. Med. et sumat. Tr. Cynaræ, ʒij. ter die.

March 2d.—Less pain; urine quite clear, and passed freely.

Cont.

7th.—Very much better. No pain, except in the right knee.

Applic. Lin. Ammon. c. Tr. Lyttæ ad genu dextrum.

12th.—Improving.

Sumat 3iv. Tr. Cynaræ ter die.

16th.—Discharged cured.

CASE IV.—*Acute Rheumatism cured by Artichoke.*

John Gall, 28 years of age, admitted June 16, 1832, hostler, of good constitution, and rather a free liver. Never had a day's illness till seized with the present attack. A fortnight ago he got wet on two following days, and did not change his clothes for several hours afterwards. On the third day he was attacked very suddenly with pains in the knees and feet, which soon extended over his body generally, so as to "set him fast." Pains always increased by warmth; gets no sleep of a night, and has not been able to stand since the first two days. He is now incapable of turning himself in bed, of feeding himself, or of bending his body and limbs in any direction. Joints hot, but not swelled; pulse 80, and small; bowels open daily; passes urine freely; skin rather moist and hot; tongue furred; appetite good; feels most pain of a night, and is best when cool. No pain in the chest, nor difficulty of breathing. Says he is never an hour without pain in his limbs.

Sumat Tr. Cynaræ, 3j. ter die.

R Extr. Cynaræ; Extr. Hyosciam. a. gr. ij. omni nocte sum.

18th.—Can move his right arm a little; got some sleep during the night.

Cont. Med.

19th.—Slept six hours last night, and says he has much less pain than when he was admitted.

22d.—Gets a great deal of comfortable sleep, and, when still, is quite free from pain. Can move his legs and thighs freely, without pain, but when he attempts to raise his arms he feels pain in his shoulders. Tongue clean; skin warm and perspiring; has been able to feed himself since the 20th.

Cont. Med.

July 1st.—Quite free from pain, but complains of stiffness.

Descend. in Baln. tepid. semel.

19th.—Cured.

CASE V.—*Acute Rheumatism of Elbow and Wrist, cured by Artichoke—Improvement impeded by purging.*

William Stamp, 66 years of age, admitted October 13, 1832. Seven weeks before admission he was attacked with pain in the left arm, and is now never free from it. Elbow and wrist swelled and reddish; is obliged to carry his left arm in a sling, as the weight of it causes a good deal of pain in the shoulder.

Applic. Hirud. xij. ad Humerum.

18th.—No relief.

Rep. Hirudines ad Humerum.

19th.—As before.

Rep. Hirudines.

20th.—Shoulder slightly relieved.

Rep. Hirud. Sumat Pulv. Colchici, gr. viij. 8vis horis.

23d.—Has received no permanent relief from the treatment. Elbow very painful.

Empl. Lyttæ ad ulnam.

29th.—Stomach out of order, and complains of weakness.

Ordered a pint of porter daily. Omit. Pulv. Colchici, et sumat Extr. Cynaræ, gr. iij. 4ter quotidie.

31st.—Elbow still painful, but the pain is not constant. *Swelling of the wrist nearly gone.* Is not able to move his fingers without great difficulty.

Cont. Cynar. 2dis horis.

Nov. 3d.—Bowels much relaxed by the pills.

Sumat j. 3tiis horis.

4th.—Still purged by the pills.

Sumat j. 4tis horis.

Has received no relief from pain since the purging commenced.

6th.—No pain nor swelling in the arm. No purging.

Cont. Pil.

8th.—Has no pain in the shoulder or arm, but experiences great difficulty in moving it. Discharged.

CASE VI.—*Severe Rheumatism cured by Artichoke, after the failure of Cinchona, Colchicum, &c.*

James Loveday, 24 years of age, admitted October 6, 1832. About a fortnight ago, he was attacked with very severe pains in his wrists and knees; soon afterwards, his loins became affected, which obliged him to leave off work. The larger joints are swelled, stiff, and painful, especially when he is warm in bed, at which time he suffers so severely that he is unable to sleep. Cannot walk at all without a stick, and is not able to rise from his seat or sit

down without assistance. Bowels open; appetite good; pulse 90, and full; skin warm, with occasional perspiration.

Vin. Colch. 3ss. 4ter die. Cal. gr. ij.; Opii, gr. iss. o. n.

9th.—No relief at present. Urine very high coloured.

Balneum tepid ter hebdomed.

16th.—Knees and wrists very painful. Gets no rest of a night.

Omit. Med. sumat Pulv. Cinchon. 3j. ter die.

23d.—No better than when he came into the hospital. Wrists very much swollen.

Omit. Med. et Baln. Cap. Extr. Cynaræ, gr. iij. ter die.

26th.—Rather less pain. Urine of a good colour, and clear. Has "slept better the last two nights than at any time since he was first taken ill."

Capt. Extr. Cynaræ, gr. iij. 3tiis horis.

27th.—Can walk without a stick, and says he is much better.

Cont.

29th.—Very little swelling of the wrists; knees still very stiff and painful.

Cont. Pil. Cynaræ.

30th.—Swelling of left wrist quite gone.

Cont. Med.

Nov. 4th.—More pain; bowels much relaxed.

Sumat Pil. 4tis horis.

9th.—Much better; no purging.

Cont. Med.

13th.—Complains of pain in the left side; action of the heart very irregular.

Fotus ad Latus. Haust. Purgans Sumat Pil. j. bis die.

14th.—No pain in the region of the heart.

Cont. Pil. j. ter die; applic. Lin. Sapon. ad Lumbos.

27th.—Very little pain in the joints; walks about pretty well, but feels weak.

Cont. Cynara, et sumat Quinæ S. gr. ij. Acid. Sulph. dil. gtts. xx. ex. Infus. Rosæ, 3iss. ter die.

Dec. 5th.—No pain, but remains weak, and does not digest his food very well.

Omit. Cynara. Cont. Mist. Quinæ.

6th.—Slight return of pain in the knees.

Rep. Cynara.

10th.—Convalescent. Shoulders rather stiff.

Baln. tepid. bis hebdomed.

22d.—Made an out-patient.

I have employed the cynara in many cases, and in all with something of success; but I shall not notice them more particularly here, for fear of encroaching too much upon your valuable pages. I shall be glad, however, if, from the cases I have sent you, practitioners may be induced to judge of the merits of the medicine by putting it to the test of their own experience.

I am, sir,
Your obedient servant,
EDWARD COPEMAN,

Apothecary to the Norfolk and Norwich Hospital.

March 13, 1833.

FATTY DISCHARGE FROM THE BOWELS.

To the Editor of the Medical Gazette.

Newbury, Berks, Feb. 26, 1833.

SIR,

HAVING seen in two late Numbers of the Gazette, abstracts of papers—1st, by Dr. Bright, read to the Medico-Chirurgical Society of London, and, 2dly, by Dr. Elliotson—relating to the discharge of fatty matters from the bowels, &c. and considering such cases rare, I send you the enclosed. I believe that much light may be thrown on pathology if a faithful relation of cases be made.

I am, sir,
Your obedient servant,
FRED. G. BROWN, M.D.

Miss E. A., æt. 23, has been ill for a period of eight years. Previous to her fifteenth year the catamenia were established, and she enjoyed good health, her habits being those natural to her age. About that period she became afflicted with dyspeptic symptoms, particularly acidity in the primæ viæ on taking food, and subsequently passed a quantity of blood per anum three or four times daily, sometimes with the natural dejections, oftener alone, and of a bright red colour, but without pain. She was now seized with intense headaches, lost flesh and strength rapidly, but did not take to her bed except occasionally. As

this state proceeded, the whole colouring part of the blood appeared discharged from the body; she assumed the appearance of an animated figure of white wax. Fits of an hysteric character ensued, lasting two or three hours, and the catamenia ceased entirely. Consciousness remained during these attacks to a considerable degree. Sometimes the limbs, placed in unnatural and uneasy positions, so remained; at other times the relaxation became complete, so that for hours her mother has thought life had passed away; at length some convulsive movement of the eye-lids, and two or three deep-drawn sighs, gave indications of returning animation; her voice diminished to a low whisper, and attended by a peculiar croupy cough. In this state the discharge of blood ceased, and fatty matter was discharged from the intestines, resembling oil, but concreting on its cooling, and in such state was collected In quantity it varied, but its greatest extent appeared about two drachms with each dejection. It resembled spermaceti, coloured with slight biliary secretion, except on eating lobster, which gave the colour of bright red. This discharge continued about a year, and ceased, blood being again poured forth. As before stated, eight years have now been passed, summer bringing an amelioration of symptoms, and a restoration of strength, so as to allow of exercise in the open air; but with November all her complaints return, with the difference that the blood is discharged sometimes dark and coagulated, but oftener florid, as formerly.

Every remedial measure seems to have been employed, particularly by the late Dr. Bourne, of Oxford, who took much interest in the case.

This winter has been passed better than the preceding ones; her appearance is much improved. The sanguineous discharge continues, occasionally varying, with a sense of sinking about the præcordia, together with a fixed pain in the right hypochondriac region. Colour has returned to the superficial textures, the catamenia are rightly established, and she has hitherto been enabled to take walking and carriage exercise.

I have found small doses of mercury, with iodine, and subsequently carbonate of iron, mostly beneficial.

NOTE ON TETANUS.

By Philalethes.

I have been much interested in reading the lecture on tetanus by Mr. Morgan, and the case of tetanus cured by division of the posterior tibial nerve (detailed in your journal, No. 271, for February 9,) and the account of a particular function of the nervous system by Dr. Marshall Hall, in your last number.

Mr. Morgan mentions (p. 31), that a ligature placed on the wounded limb controls the severity and duration of the *artificial* tetanus produced by the *chetik* poison. The case to which I have referred, shews that the division of the nerve may remove the symptoms of *traumatic* tetanus. It appears to me singular that Mr. Morgan should not have recommended *one* or *other*, or rather *both*, of these measures, in the treatment of the latter form of the disease.

In *every* case of traumatic tetanus, I would suggest that the limb should first be bound tight by a ligature, or that pressure be made over the course of the nerves, and the effects watched. If good accrued, I would divide the nerves. This might be so done as to admit of their reunion afterwards, if such a plan were thought expedient.

It is plain, from what I have here said, that I cannot agree with Mr. Morgan that the division of tetanus into traumatic and idiophathic, is of no practical utility.

The whole subject seems to admit of explanation, on the principle of those *cycles* of nervous function pointed out by Dr. Hall.

March 13, 1833.

SCOTTISH LICENTIATE APOTHECARIES.

To the Editor of the Medical Gazette.

Sir,

Your correspondent Justus appears to be any thing but just in his comments upon the proceedings of the Apothecaries' Society of London. According to him, graduates of the Universities of Edinburgh and Glasgow, who have served an apprenticeship of *three years*

only, ought to be placed on a much better footing than the pupils of English apothecaries, who have served *five years;* inasmuch as he thinks they ought to be permitted to place themselves in practice wheresoever they may think proper, without being subjected to that examination—and a very efficient examination it is—which the English pupils are obliged to undergo.

Justus is very indignant because, as he informs us, "a declaration is even now filed against a Glasgow licentiate practising at Kilham, in Yorkshire;" but why a man is to set the law of the land at defiance, because he is a Glasgow licentiate, Justus does not condescend to inform us.

If Edinburgh and Glasgow graduates choose to come to England and practise as *physicians*, the Apothecaries' Society can have nothing to do with them; but it would be a serious anomaly to allow these gentlemen to practise as apothecaries,—they not choosing to submit to such regulations as the Apothecaries' Act requires. The students at Edinburgh intending to practise as apothecaries have no right to complain that they were ignorant of the clauses of this act of Parliament, for it has now been in execution for a space of eighteen years, and care has been taken that every thing essential in the act should be *well known at all the schools of medicine* in the United Kingdom.

The Apothecaries' Act has already done great good, and is doing, and will continue to do, much more; not only by improving the scientific attainments and practical usefulness of the "general practitioner," but by setting such an example of improvement and reformation, as has made a great impression on the two Royal Colleges, and must eventually produce a beneficial change in their constitution; and it would indeed be lamentable, if the benefits of this act were to be done away, as they most unquestionably would, if the wishes of Justus were to be realized. If Scottish graduates were permitted to settle in England, as apothecaries, without undergoing the examination which the Apothecaries' Act requires, those who were of superior, or even standard abilities, would practise as physicians; the most raw and uninformed among them would set up as apothecaries, and thus the endeavours of the Court of Examiners to establish amongst general practitioners a high rate of intelligence and practical knowledge, would be to a great degree, if not entirely, frustrated.

CONSERVATOR.

March 11, 1833.

THEORY OF THE INVERSE RATIO WHICH SUBSISTS BETWEEN THE RESPIRATION AND IRRITABILITY, IN THE ANIMAL KINGDOM.

By MARSHALL HALL, M.D. F.R.S.L. and E. &c. &c.

[From the Philosophical Transactions.]

THE object of the investigation, of which the present paper details the principles, is to trace a peculiar law of the animal economy, through the various series, forms, and conditions of animated being. This law may be announced in the following terms:—

The quantity of the Respiration is inversely as the degree of the Irritability of the muscular fibre.

It will be necessary, in the very first place, to define the terms which I am about to employ. The expression inverse ratio is not used in its strict mathematical sense, but merely to designate the general fact, that, in cases in which the quantity of respiration is great, the degree of irritability is low; and that in cases in which the quantity of respiration is small, the degree of irritability is high. By the quantity of respiration, I mean the quantity of oxygen gas consumed, or exchanged for carbonic acid, in a given time, by the animal confined in atmospheric air. I have used the term irritability in the sense in which it is employed by Glisson and Haller—to designate that peculiar property of the muscular fibre by which it contracts on the application of an appropriate stimulus; and I consider that muscle the most irritable which, *cæteris paribus*, contracts most and longest upon the application of the least degree of such stimulus. Haller's definition of the term is very similar. It must be confessed that the word irritability only expresses one half of the property or function of the muscular fibre—its susceptibility to the influence of irritants or stimuli; the term contractility is equally defective—expressing only the other half of that

function, viz. the effect of that susceptibility under the actual influence of stimuli. The designation irrito-contractility would express the whole phenomena.

Organic life appears to result from the impression of stimuli upon parts endued with irritability. The principal stimuli in nature, are air, food, and heat; the principal and corresponding organs of irritability are the heart, the stomach, and the muscular system in general.

The animal series consists of beings variously modified by the varied degree of irritability, and by the varied quantity of stimulus. Throughout the whole these observe an inverse ratio. The bird tribes and the mammalia are characterized by great respiration, whilst the irritability of the muscular fibre is low; the reptiles, the batrachia, and the fish tribes, on the other hand, are endued with a high degree of irritability, and little respiration. The higher parts of the zoological series consist of animals chiefly characterized by the appropriation of a great quantity of stimulus; the lower, by the high degree of irritability of the muscular fibre. The former are animals of stimulus—of activity; the latter are animals of irritability.

The due actions of life, in any part of the zoological series, appear to depend upon the due ratio between the quantity of atmospheric change induced by the respiration, and the degree of irritability of the heart: if either be unduly augmented, a destructive state of the functions is induced; if either be unduly diminished, the vital functions languish and eventually cease. If the bird possessed the degree of irritability of the reptile tribes, or the latter the quantity of respiration of the former, the animal frame would soon wear out. If, on the contrary, the bird were reduced to the quantity of respiration appropriate to the reptile, or the latter to the degree of irritability which obtains in the former, the functions of life would speedily become extinct. Various deviations from the usual proportion between the respiration and the irritability, however, occur, but there is an immediate tendency to restore that proportion; increased stimulus exhausts or lowers the degree of irritability, whilst diminished stimulus allows of its augmentation. The alternations between activity and sleep afford illustrations of these facts.

Changes in anatomical form in the animal kingdom present other illustrations of the law of the inverse proportion of the respiration and irritability. The egg, the fœtus, the tadpole, the larva, &c. are respectively animals of lower respiration, and of higher irritability, than the same animals in their mature and perfect state. Changes in physiological condition also illustrate the same law. The conditions of lethargy, and of torpor, present examples of lower respiration, and of higher irritability, than the state of activity.

It may be remarked that whilst changes in anatomical form are always from lower to higher conditions of existence, changes in the physiological condition are invariably from higher to lower.

These views are further illustrated by a reference to the quantity of stimulus and the degree of irritability of each of the parts and organs of the animal system. But it is to the quantity of respiration, and the degree of irritability of the heart, that our attention is to be principally directed at this time. The oxygen of the atmospheric air is the more immediate and essential stimulus of this organ. Taken up in respiration, it is brought into contact with the heart, by means of the blood, which may be considered as the carrier of this stimulus, as it is of temperature and nutriment, to the various parts of the system. As oxygen is the principal stimulus, the heart is the principal organ of irritability, in all the vertebrated animals; if the contact of oxygen be interrupted, all perish in a greater or less period of time.

The extraordinary differences which exist in animals which occupy different stations in the zoological scale, have long excited the attention of naturalists. Nor have the differences which obtain in the various agents and states of its existence, in the same animal, escaped the attention of the physiologist. A similar remark applies to that singular state of existence and of the functions of life, designated hybernation. But it appears to me that a sufficiently comprehensive view has not been taken of the subject, and that many facts, with their multitudinous relations, still require to be determined.

I.—*Of the Pneumatometer.*

The principal of these facts is that of the quantity of respiration. This is greater in proportion as the animal occupies a higher station in the zoological

scale, being, among the vertebrated animals, greatest of all in birds, and lowest in fishes; the mammalia, the reptiles, and the amphibia, occupy intermediate stations. The quantity of respiration is also remarkably low in the very young of certain birds which are hatched without feathers, and of certain animals which are born blind; and in hybernation it is almost extinct.

To ascertain the quantity of respiration in any given animal, with extreme minuteness, was a task of great difficulty. It was still more difficult to determine this problem, so as to represent the quantities of respiration in the different kinds, ages, and states of animals, in an accurate series of numbers. The changes induced in a given volume of air made the subject of experiment, by changes in the temperature and pressure of the atmosphere, and by variations in the height of the fluid of a pneumatic trough, which it is so difficult to appreciate minutely; the similar changes induced by the humidity of expired air, and by the heat of the animal itself, were so many and complicated, that it appeared almost impossible to arrive at a precise result. These difficulties, in fine, were such as to lead one of the first chemists of the present day to give up some similar inquiries in despair.

Fortunately I have been enabled to devise an apparatus which reduces this complex problem to the utmost degree of simplicity. I now beg the indulgence of the Society whilst I give a detailed description of its construction and mode of operation.

This apparatus, which I shall designate the *Pneumatometer*, consists of a glass jar *a b* (Plate XI.) inverted in a mercurial trough *c d*, so grooved and excavated, as accurately to receive the lower rim of the jar and the lowest part of the tube *e f g*, and also to admit of the animal which is made the subject of experiment, being withdrawn through the mercury. This jar communicates, by means of the bent tube *e f g h*, with the gauge *i j*, which is inserted into a larger tube, *k l*, containing water. A free communication between the jar and the external air is effected and cut off, at any time, by introducing and withdrawing the little bent tube *m n*, placing the finger upon the extremity *m*, whilst the extremity *n* is passed through the mercury.

If the jar be of the capacity of one hundred cubic inches, the gauge is to contain ten, and to be graduated into cubic inches and tenths of a cubic inch; so that each smallest division shall be the thousandth part of the whole contents of the jar.

Attached to the same mercurial trough is placed a little apparatus, *o p*, termed an *Aërometer*, and consisting of a glass ball *o*, of the capacity of ten cubic inches, communicating with a tube *p q*, bent at its upper part, of the capacity of one cubic inch, divided into tenths and hundredths, and inserted into a wider tube containing water, precisely in the manner of the gauge *i j*. In order to secure the exact proportion between the capacity of the pneumatometer and that of the aërometer, it is only necessary to add more or less of mercury to the trough.

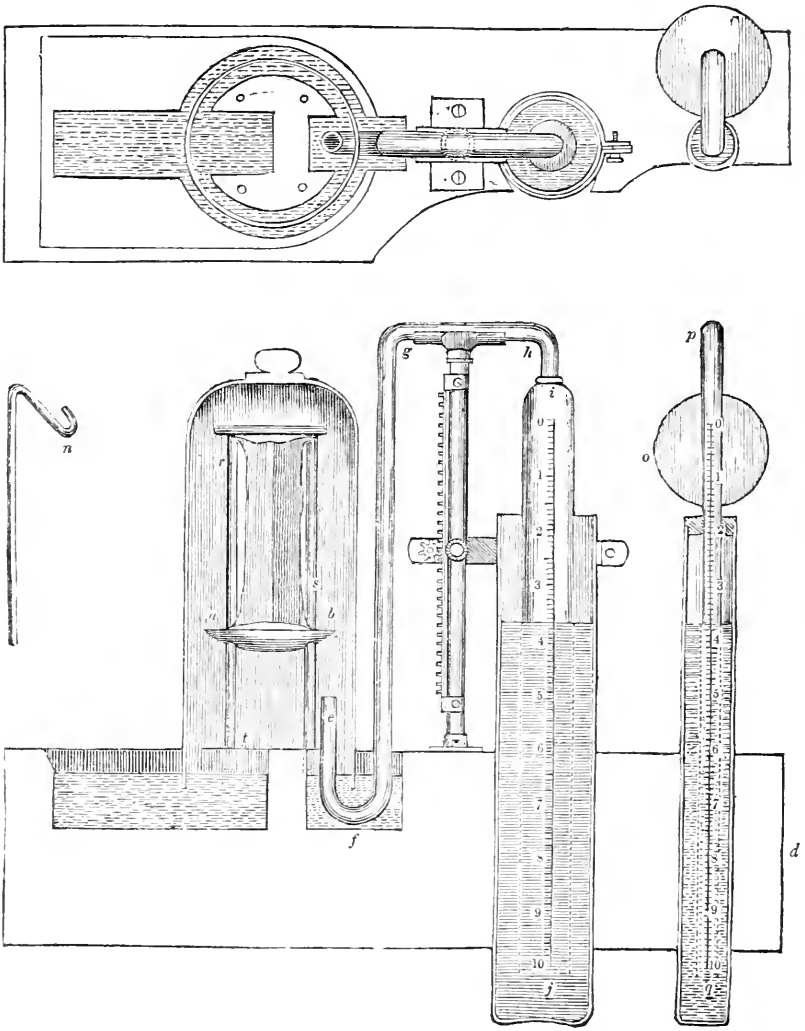
The whole apparatus is inclosed in a glazed frame, so as entirely to obviate the influence of partial currents of air. It is plain that changes in external temperature and pressure will affect both these parts of the apparatus equally; and that the fluids in the gauge *i j*, and in the tube *p q*, will move pari passu. It is therefore only necessary to compare them, and to take the difference, for the real alteration in the quantity of the gas in the jar.

Previously to noticing this difference, the fluids in the outer and inner tubes are to be brought accurately to the same level, by raising or depressing the outer tube *k l*, and the inner one *p q*.

In order that the air within the jar and that in the aerometer may be in the same state of humidity, a little water is introduced into the ball *o* of the latter.

When the animal is to be removed, the fluid in the inner and outer tubes of the gauge are to be brought to a precise level; the animal is then to be withdrawn through the mercury, by a cord attached to the little net or box in which it is secured; a quantity of fluid will immediately rise in the inner tube, *i j*, equal to the bulk of the animal. The bent tube, *m n*, is now to be passed through the mercury into the jar, so as to effect a communication with the atmospheric air. A portion of air equal to the bulk of the animal rushes into the jar, whilst the fluids in the gauge regain their level.

To avoid the error which would arise from the influence of the temperature of the animal upon the air within the jar



of the pneumatometer, the first observation of the degree upon the gauge must be made the instant the experiment is begun, and before the temperature of the animal can have been communicated to it; and the last, so long after the animal has been withdrawn as to allow of its restoration to the temperature of the atmosphere.

In this way all calculations for the varied temperature and pressure of the external air, for augmented humidity and temperature of the air of the pneumatometer, and for the changes in the height of the fluid of the trough, are at once disposed of in a manner the most accurate and simple.

It now remains to determine the quantity of change induced upon the air of the pneumatomer, by the respiration of the animal. Two views may be taken of this change; that of Messrs. Allen and Pepys, that the oxygen which disappears is replaced by a precisely equal bulk of carbonic acid; or that of M. Edwards, that there is generally an ex-

cess of the oxygen which disappears over that of the carbonic acid evolved. In either case the quantity of respiration is ascertained by the gauge of the pneumatometer in the following manner. A frame made of glass rods, *r s*, is placed within the jar *a b*, suspending portions of calico, imbued with a strong solution of pure potassa, and provided with a small dish of wood, so as to prevent the caustic liquid from dropping upon the animal beneath. By this means the carbonic acid is removed as it is evolved, or after the animal is withdrawn. The rise of the fluid in the gauge of the pneumatometer gives the quantity of oxygen which disappears—whether this be entirely exchanged for carbonic acid, or only partly exchanged for carbonic acid, and partly absorbed—and denotes the precise quantity of the respiration.

The question itself, of the entire or partial exchange of the oxygen gas which disappears, for carbonic acid gas evolved, is at once determined by employing the same apparatus without the solution of potassa. In the entire exchange, there is no alteration in the bulk of the air of the pneumatometer; in the case of a partial exchange, the alteration in the bulk of the air gives the precise excess of oxygen gas which disappears, over the quantity of carbonic acid evolved.

But this question, and that of the absorption and evolution of nitrogen, with the influence of night and day, of season, &c. are reserved for a future stage of this inquiry.

It is important that the animal should be left for a considerable time in the very situation in which it is to remain during the experiment, before that experiment is begun, and before the jar is placed over it. In this manner the effect of timidity or restlessness is allowed to subside, and prevented from mingling with that of the natural state of the respiration. A bit of cork must also be attached to the mercurial trough, so as to float upon the mercury at *t*, and prevent the disturbing effect of the contact of this fluid with the animal.

It is also well, after having placed the jar in the groove of the mercurial trough, to pour a little water over the mercury exterior to the jar. The apparatus is thus rendered perfectly air-tight, which is not always effected by the mercury alone.

By means of this apparatus we readily and accurately determine the quantity of the respiration of any given animal, in any given circumstances.

[To be concluded in our next.]

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Memoir of the Life and Medical Opinions of John Armstrong, M.D. &c.; to which is added, an Inquiry into the Facts connected with those Forms of Fever attributed to Malaria or Marsh Effluvium. By F. BOOTT, M.D. &c. Vol. I. pp. 616.

THE personal memoir of Dr. Armstrong is contained in about the sixth part of this volume; and if duly condensed, might probably be comprised in the sixteenth. What, then, is the remainder about, it will be asked; and have Dr. Armstrong's medical opinions already become so obsolete or obscure as to require a history or commentary of such an extraordinary length? The opinions of Dr. Armstrong do occupy a considerable portion of the volume before us, but above two-thirds of it are taken up with Dr. Boott's observations on the fevers of America; and a second volume, we perceive, is promised by this gentleman, (to complete the work) in which he intends to "examine the fevers of Europe from the time of Sydenham."

We fancy that to the generality of readers the little memoir with which the volume commences will be the part which shall afford most interest—not that the incidents are in any remarkable degree varied or curious, but a piece of biography especially having for its subject "a physician in a great city," (who has been said to be "the plaything of fortune,") must be always welcome to professional readers, however slender the materials of which it is composed.

Dr. Armstrong was born of humble parentage at Bishopwearmouth, in the year 1784, and received the principal part of his education in the same town, under the care of a dissenting clergyman who kept a school. About the age of 16, he was placed with a general practitioner on trial; but not liking that post, he quitted it, contrary to the wishes of his

parents, and spent two or three years at home in a "desultory mode of life."

At length it was determined that he should go to Edinburgh to study medicine, as offering to his parents the readiest prospect of establishing him in the world. He graduated in 1807, and returned immediately to Bishopwearmouth to practise. In a few years he was enabled to take a large house in that town; and, as Dr. Boott thinks, was in a situation highly favourable for the development of his powers. He had strong inducements to industry in the condition of his parents, and in his own wants. "His early education," says his biographer, "had been of the humblest kind, and conducted under every disadvantage, from the necessity of his practising the strictest economy. But however limited his opportunities of improvement had been, I cannot but consider that his education was eminently calculated to bring forth the original powers of his mind. It certainly had a very sensible influence in the development of his character, which was remarkable for a peculiar simplicity, and almost diffidence of manner in general society, even to the period of his full success and reputation in London."

His first publication was a paper in the Edinburgh Medical and Surgical Journal for 1813, and he continued to be an active contributor to that work for about two years. Meantime his volume on Puerperal Fever appeared; and in 1816, that on Typhus.

"The success," says Dr. Boott, "which his volume on Typhus met with from the public organs of criticism, soon prompted Dr. Armstrong to wish for a more extended field of practice, and he determined to remove to London. This hazardous step, however, was not taken hastily. He had met with success in his provincial practice, but the expenses attending a physician's life had not enabled him to save means sufficient for the support of his family in so expensive a place as London, before his name should have become known in that vast metropolis. Still the prophetic promises of hope urged him to make the trial; and notwithstanding the doubts and apprehensions of many of his friends, he finally determined to remove from Sunderland."

Early in 1818, having placed his wife and two children at Durham, he came to London, and presently after published his "Illustrations of Scarlet Fever," &c. He lived despondingly alone for a few months; but having in the course of the summer presented himself for examination at the College of Physicians—wishing to become a licentiate—he was rejected, and this seems to have roused him to much energy, and to have rallied a number of useful friends about him. He was shortly afterwards appointed physician to the St. Pancras Fever Hospital, through the interest of some members of the Society of Friends, who were of North of England connexions. His family now joined him from the country, and he removed to a house in Southampton-Row.

Of this rejection by the College, so advantageous by all accounts to Dr. Armstrong, there has been much talk from time to time in various quarters. Dr. Boott, indeed, does not say very much about it; but what he does say seems to go beyond what is justifiable by the real state of the case, or by the duty he owes the memory of his friend. Dr. Armstrong was never very explicit, at least publicly, as to the particular grounds of his rejection, and though he could have recourse to "much of that indignant tone which afterwards sounded in his lectures on scholastic institutions," and though he neither wanted ability nor will to attempt a paper war with a corporate establishment, yet we find him always anxious to avoid a public discussion of the reasons of his rejection. Dr. Boott would probably have acted more prudently if he had followed the injunction laid upon him by his friend, even on his death-bed, and on the very day of his dissolution. "In writing my life," says Dr. A. a few hours before he expired, "enter into no controversy about me, or my cause of offence against the College; and if you are censured, say it was my last request, that I might die in the consciousness of being at peace in the grave." Yet the biographer suffers himself to be carried away by what we take leave to call very unjustifiable warmth, and says nothing after all that is tangible on the point, if we except these words,—"he had, perhaps, undervalued the estimate which the Board of Examiners place on classical diction, and the alphabet of the profession." The meaning of the first part of this passage, one of our contemporaries (who seems to take to himself the merit of having been a special patron of Dr. Arm-

strong's) ventures to supply: he says that Dr. A. was deficient in Latinity. The other part is perhaps explained, by what is currently said by those who ought to know something about the facts—namely, that the Doctor was also deficient in Anatomy. As to the suspicion of private motives operating to his exclusion from the College, none but the silly and ignorant could entertain it for a moment. *Who* was Dr. Armstrong when he appeared before his examiners? They surely could not have been jealous of him.

"One of the first instances of his introduction to practice, soon after he settled in town, was in the family of the late Mr. T. C. Haden, a distinguished practitioner in Sloane-street."

"The wife of Mr. Haden had been seized with the symptoms of puerperal fever. Knowing the fatality of this disease, in the opinion of his friend Dr. John Clarke, who was then living, he from the first despaired of her recovery. In his distress he recollected having heard that Dr. Armstrong had settled in London, and though ignorant of his address, and unknown to any one to whom he could with certainty apply for it, he instantly determined to go in search of him. In a state of the most distressing anxiety, he hurried from home, inquiring at every druggist's shop that he passed in Piccadilly, and, fortunately, he at last met with a gentleman who had resided in the North of England, and who directed him to Great James-street. Mr. Haden found the object of his search, and returned with him to the scene of his affliction. Dr. Armstrong instantly ordered a large depletion, which was repeated a second and third time; and within eight or ten hours from the time of Mr. Haden's leaving home in a state of despair at the condition of his wife, he saw her in his own opinion out of danger; and her rapid recovery impressed him with feelings of profound gratitude towards the stranger whose assistance he had so urgently sought."

"A case of the same kind as that which I have just mentioned, occurred soon afterwards in the family of the late Mr. Hornidge, surgeon, of Great Ormond-street. The patient was, I believe, a sister-in-law of Mr. Hornidge, and this gentleman was so much impressed with the decision and success of Dr. Armstrong's practice, that he drew up an account of the case for publication. I could mention other instances of the same powerful impression made upon the minds of several members of the profession, who had occasion to consult Dr. Armstrong at this early period of his residence in town."

In the year 1821 he commenced his career as a lecturer in the Webb-street school. We shall extract a passage or two from the memoir descriptive of his talents in this department, merely taking occasion to premise that we wish the writer had confined himself to biography rather than broad panegyric.

"As a lecturer, Dr. Armstrong was pre-eminently successful; he always spoke from the fulness of a mind rich in a store of facts which he had collected from his sagacious observation of disease. He was not so deeply read in the learning of his profession as many teachers have been, and seldom quoted the opinions of others. He had attentively perused the modern medical literature of his country, but did not often allude to it, except in the case of the illustrious Sydenham, whom he considered the first of physicians, equal to Hippocrates in powers of observation, and superior to him in practical skill. His mind had originally imbibed its impressions of disease from others, and traces of these engrafted opinions are visible in his earlier publications. But when he entered on the practice of his profession, he soon saw the discrepancy between scholastic axioms and the phenomena of nature; and, endowed with admirable powers of discernment, he soon abandoned the beaten track, and with that instinctive confidence which genius bestows upon its possessors, he opened to himself a new path to usefulness and distinction, which he triumphantly followed to the close of his short and brilliant career."

"The effect his lectures produced was electric. The energy of his manner, the fine intonations of his voice, the facility and correctness of his diction, the strain of impassioned eloquence which often burst from him, and made even those who could not entirely adopt or appreciate his opinions, sensible that he was uttering the deep convictions of his mind; and there was so much of chaste and often of pathetic feeling, so much of the refined sensibilities of his nature, blended with his discourse, that those

who were compelled to admire his talents felt full confidence in his virtues, and while they revered the professor, they loved the man."

After perusing this passage, it is impossible not to be angry with Dr. Boott, for prefixing to the volume a sooty silhouette—it cannot be a portrait of Armstrong; the figure and features which it displays would seem to us to be capable of any thing rather than eloquence or electrical effect. Can it be a likeness?

In the early part of his career as a practitioner in London, Dr. Armstrong had many difficulties to struggle with; and even in 1820 he entertained serious thoughts of removing from town. He was relieved, however, from this embarrassment by the timely and delicate interference of a friend—Mrs. Oliphant, of Gask—who advised him to set up his carriage, and insisted that he should draw upon her banker for any sums he might require. Dr. Armstrong availed himself of the liberal offer, and Mrs. Oliphant lived to see the good effects of her benevolence.

"He owed his success in London to two causes, for no one had ever fewer adventitious aids to success; and the one reflected as much honour upon his talents as the other did upon his disposition. Those members of the *general profession* who had once experienced the benefit of his counsel and assistance, could seldom be induced to recommend any other physician, so strongly impressed were they with the simplicity, the originality, and success of his views and practice: and those families who had once had an opportunity of feeling the effects of the gentleness and delicacy of his manner, could think of no other adviser."

The narrative which Dr. Boott gives us of the last illness of the subject of his memoir we shall not follow; it is affectionately minute and mournful. Dr. Armstrong's health was declining for a considerable time before he gave way, or would pay it needful attention. Symptoms of chest affection shewed themselves unequivocally in the winter of 1828-1829, and gradually made progress, attended in the latter stages with much suffering, until the 12th of December, 1829, when they terminated fatally. A large tubercular excavation was found in the upper third of the left lung, and pulmonary tubercle in all its variety in both sides of the chest.

The memoir ends with some specimens of Dr. Armstrong's verses; but neither these, nor several parts of the letters which are interspersed through the narrative, are calculated to add any thing to his fame.

MEDICAL GAZETTE.

Saturday, March 23, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

PROPOSED IMPROVEMENTS IN THE COLLEGE OF SURGEONS.

So long ago as August, we took the liberty of pointing out to the governing body of Lincoln's-Inn Fields some of those changes in their present system which would be acceptable, and which, indeed, were expected—almost, if not altogether, as a matter of right—by the members at large. One of these, on which we particularly dwelt, was "the annual publication of an authenticated statement of their accounts;" another, that they should "expend their surplus funds in rendering their library and museum the first in the world;" and a third, that they should subject the candidates to "such an examination as shall prove, incontestibly, they have received an education in keeping with the improvements which have recently taken place in all departments of science." The first of these proposals, we hear, is to be carried into effect to the very letter; the second as far as the figurative nature of the expression permits; and the last is contemplated, under a modification which we shall presently explain.

At the time we penned the remarks alluded to, we were aware that a Committee had been appointed to report upon certain matters touching the general economy of the College, and we were not without hopes that the reflection of

the wishes and expectations of the respectable and intelligent among the members of their body, which we held out to them in our pages, would be of some little use in strengthening the good intentions of those favourable to some reform, and in leading those gentlemen who are pertinaciously opposed to all change, to reconsider their opinions. If we were disposed to arrogate to ourselves any thing more than a coincidence of sentiment with the members of the Committee, regarding the points on which we happen to agree, our vanity would receive a sufficient check from the consideration, that, amid various arrangements which we think will add greatly to the general usefulness, and the moral influence of the College, that change in their constitution on which we dwelt with the greatest earnestness, we fear has either been positively negatived, or, at best, been passed over *sub silentio*—we mean such change in the construction of the charter as should place the privilege of electing the Council in the hands of the general body. It was, and is our opinion on this head, that under the present system the feelings which subsist between the parties will never be those of perfect cordiality; that there will always be jealousy where there is self-election; and that were the vacancies, as they successively occur, to be filled up with the most absolute impartiality, still would the Council be viewed as monopolists, because they owe not their election to the suffrages of their fellow members.

But having thus once again expressed what is our settled opinion on this point, we pass on to the more grateful task of laying before our readers, so far as we have been able to learn them, the changes which are contemplated. These have been partially hinted at in the pages of another journal*, else had we delayed our statement till the College had formally announced their plans; but as our version differs in several essential particulars from that alluded to, and as, besides, the public has become wearied out with waiting for tidings of that "something" which has so long been talked of, we shall give what we believe will be found nearly the substance of the projected alterations.

But we shall begin with what it is intended not to do. Nothing, we believe, is contemplated which would require any modification of the charter; and, consequently, no increase will be effected in the legal power of the College over unlicensed practitioners; neither, as already hinted, can any change take place in the mode of electing the various officers. On both of these subjects we have the misfortune to be at issue with the Council; but we are perfectly ready to admit that the arguments against applying to the legislature to make the possession of a surgical diploma compulsory, are strong, particularly the fact which we mentioned a fortnight ago of such application having been already twice refused; and to this may be added the consideration, that the influence the College possesses at present, by the mere force of opinion, is so great, that the number of applicants for the diploma has progressively increased, receiving no check either from the systematic efforts of slander, or the proffer of gratuitous parchments, under the name of diplomas, by certain retail dealers in educational testimonials.

Neither, we believe, will any change be made either in the curriculum which surgical students are required to observe, nor any alteration take place in the mode of conducting the ordinary examination. But it is rumoured that the period during which strictly professional subjects shall have been pursued, will be reduced, especially as regards those who have previously devoted themselves to the general objects of scientific education. We sin-

* Medical and Surgical.

cerely hope that we have been correctly informed on this point: too early a devotion to medical studies is, in several ways, objectionable, and is rendered still more so when it leads to the removal of lads of fifteen or sixteen from the guardianship of their paternal roof, and places them in the corrupting atmosphere of a large town. This part of the position is too obvious to require illustration; and as to the rest, a youth previously disciplined by study, and imbued with the elements of science, will turn his opportunities to infinitely better account than one accustomed, perhaps, to exercise the memory, but untrained to reflection, and who is freed from the dread and control of his master ere he has put off the habits of the school-boy.

But while the general demand, both as to lectures, hospital practice, &c., and to the proofs he exhibits of having profited by these, will remain the same as heretofore, for the ordinary candidate, we have reason to believe that a higher order of examination and testimonial is to be instituted for those who, having previously attained the lower, are ambitious, and found worthy, of the superior grade. It is highly probable, and we think would be quite proper, that the possession of this diploma should be rendered imperative on all who undertake to teach in the departments of anatomy and surgery; but it is quite obvious that it cannot be limited to them, because, while it must be open to all to claim the higher degree, it cannot be compulsory upon them actually to teach. We anticipate that the majority of highly educated surgeons will aspire to the higher testimonial, as the more honourable distinction; and as by this means a necessity for farther study and acquirement will exist, after having become a mere "member," so must the general standard of learning and acquirement be raised, and the whole profession of surgery be proportionably elevated.

Another contemplated change refers to obstetrics. It has long been a desideratum to procure the certificate of some of our corporate bodies as to qualification in this branch of practice. The physicians declined interfering with midwifery, we believe, because it was partly surgical; the surgeons, because it was partly medical; the apothecaries, because they were not authorized by their charter to add it to the list of studies which they require their licentiates to have pursued. The surgeons, however, we understand, have thought better of it, and propose to institute examinations, and grant certificates accordingly; but inasmuch as the Court of Examiners, and the whole Council, are prohibited from practising this branch of the profession, so must the task of sitting in judgment on the aspirants be delegated to others—a somewhat awkward proceeding, by the way, and one which will necessarily require the admission of members within the walls of the College as examiners, who are not eligible to the Council. Those who take out the common diploma will be admitted to examination in midwifery, and, if found qualified, will receive the certificate accordingly; but others, not members of the College, may also receive their obstetric testimonial on certain conditions.

Such are some of the chief measures which are under immediate consideration, if not actually adopted; and our professional brethren will, we think, allow that they are neither few nor unimportant. Nor is this all. A considerable sum of money is said to have been accumulated, and faithfully set apart by the Council, for the accomplishment of some great public object, of advantage to the community at large, and to their own department of the profession in particular. One of the most pressing wants, is that for more extensive accommodation—for rooms

suited to their library and museum. Nearly 20,000 volumes have already been accumulated; and each year adds to their anatomical collection. To give to the public all the benefit which these are capable of affording, and to admit of their appropriate display, would require a space vastly exceeding that into which they are at present heaped and crowded; and assuredly to no better or more appropriate use can their surplus fund be converted, than to render the library and museum truly national repositories of medical literature, and of all that is interesting in anatomy, physiology, and pathology. These ends, however, cannot be accomplished without great extension of the present limited accommodations—without a liberal expenditure of money—and without a vigorous organization of the Board of Curators.

But no completeness of local arrangement can ever place the treasures which are accumulated, within the reach of those at a distance. To effect this, so far as art is capable of doing — to open their stores to all the world—and to give permanency to the evidence of specimens which are in themselves more or less perishable, it is proposed to publish regular and systematic fasciculi of engravings, executed in a manner worthy of the present state of the arts in this country, and accompanied by such descriptions as shall constitute a history of the museum. Nay, it is whispered that an Association, or Academy of Surgery, is to be instituted, for the production and reception of papers to constitute Transactions, at once promoting and recording the progress of surgery.

But we must stop short, postponing till another time some remarks we have to offer on these interesting subjects. We have given our readers some important topics to digest, and we think they will agree with us, that there have been some bold and enterprizing spirits at work. Publication of accounts—augmentation of building—increase of collection—transactions — engravings — certificates in midwifery—higher diploma: these be improvements with a witness. In verity, the other Colleges must bestir themselves, or be distanced in the race.

IRISH GRAND JURY BILL.

Either some Whitefoot intimidation has been operating upon, or some stupor has seized, the members of the London College of Surgeons practising in Ireland. Here has been this bill, with its obnoxious medical clause, pending ever since our last remarks upon it—some fourteen months ago—and not a stir, not a move has been made by the parties most concerned. It will soon come under the consideration of the legislature again, and finally; and if some steps be not taken to erase that clause so cunningly introduced by the Irish College, a large body of practitioners in the sister country, we foresee, will find themselves dupes and sufferers.

The clause to which we refer is the one (75) which restricts the appointment of surgeons of County Infirmaries in Ireland to members of the Dublin College of Surgeons, and that to the exclusion of all the members of the London and Edinburgh Colleges residing in Ireland. The latter are almost exclusively natives of Ireland, and have been educated in that country, but obliged to present themselves in London or Edinburgh for diplomas, on account of the exclusive character of their College at home, which grants an examination to no student who has not been apprenticed to one of their members, or educated in a system still more objectionable than that of apprenticeship.

The Irish College, among their avowed reasons for defending this clause, state that they do so because the Dublin members are not privileged to practise in England,—which is not the

fact. Every member of the Dublin College is entitled to practise in any part of England, and is eligible to appointments to any hospital, jail, or infirmary in any county in England. Such an excuse, therefore, will not serve to bear them out.

But the truth is, that the Irish College cannot in this matter save themselves from the imputation of sordid and mercenary motives. So direct a bounty being held out for apprenticeships, and, of course, for the large fees that hang thereby, the injustice which is done to the members of other Colleges is enhanced by the more than suspicion that it is inflicted on them from grossly selfish and pecuniary considerations.

Once more, then, we call upon all those who have an immediate concern in the removal of the clause, to bestir themselves: a little more delay, and it is too late.

FACTORIES' LABOUR BILL.

Lord Ashley, the noble mover of this excellent measure, having favoured us with one of the earliest copies of the Bill, we doubt not we shall gratify many readers who took an interest in our recent remarks on the subject, by presenting them with a brief abstract.

The preamble states that it has become necessary to regulate the hours of labour in mills and factories, "inasmuch as it is the practice in such places to employ a great number of children, and young persons of both sexes, an unreasonable length of time, and late at night, and in many instances all night, to the great and manifest injury of the health and morals of such children and young persons."

The first clause protects persons under 21 from night work, or from labouring between seven in the evening and six in the morning.

Persons under 18 shall not be employed in labour more than ten hours a day, or than eight on a Saturday. Those hours to be twelve and ten respectively, meal time included.

The hours of meals to be one and the same for all children and young persons engaged in the same factory.

The hours of labour may be varied under certain circumstances, as to their commencement and termination, but not as to their length.

Time alledged to be lost in consequence of impediments in the machinery, not to be made up by the young operatives.

No children under nine years of age to be employed.

None of the young persons to be detained on Sundays in cleaning the machinery.

The walls and ceilings of the working rooms to be white-washed at least once a year, unless where they have been painted.

In the future erection of factories it shall be provided that none of the working rooms shall be less than ten feet in height.

In enforcing the penalties and provisions of these clauses, no justices of peace interested in factory property, are to act.

The regulations of this act to be hung up in the mills, and time-books to be kept, with heavy penalties for false entries.

The time of labour to be regulated—not by the "speed-clocks" which are usually attached to the machinery, but by regular time-pieces set by the nearest public clock.

The machinery to be fenced or boxed off, so as to prevent accidents. Fatal accidents occurring through neglect of this clause to be imputed as "manslaughter" to the owners of the factory; and where the accident may not amount to loss of life, but to grievous injury of body or limb, the owners to deposit pecuniary compensation for the sufferer.

The remainder of the Bill relates principally to penalties for working engines at improper hours—the mode of recovering penalties, and some other minor details. Towards the conclusion there is one clause, the only one we find fault with, sanctioning a certain protraction of the time of labour for the first six months after the passing of the act, for the express purpose of not bearing hard on the master manufacturers by the sudden limitation of the daily labour. We would not allow them any such courtesy.

The new enactment, it is proposed, shall come into force from and after the first of July next.

SCOTTISH LICENTIATES *v.* SOCIETY OF APOTHECARIES.

In a preceding page will be found a letter signed Conservator, in reply to one from Justus, published in our last No. but one. We thought it but fair, as we admitted the charge, to give insertion also to the defence; but here the matter must rest in its present form: we shall not publish any more anonymous letters on the subject. We perceive that there has been a meeting of students at Edinburgh, convened to forward a petition to Parliament against the Society of Apothecaries. The principal ground of complaint is, the hardship imposed on Scottish licentiates, of being obliged to serve a five years' apprenticeship to an English apothecary, before they can enter upon the business of general practitioners in South Britain. They complain also of the undue indulgence afforded to chemists and druggists, who are specially exempted from the operation of the Apothecaries' Act. The petition, we understand, bears the signature of between 400 and 500 students, and is to be presented to both Lords and Commons.

PROFESSIONAL APPOINTMENTS IN EDINBURGH.

Dr. Borthwick has been appointed Physician to the Royal Infirmary, in the room of the late Dr. Gregory. An active part had been taken by his pupils in favour of Dr. Mackintosh.

Mr. Sims has been appointed to the chair of Clinical Surgery, vacated by the resignation of Mr. Russell, who held it for a great many years.

GUY'S HOSPITAL.

POPLITEAL ANEURISM, WITH FRACTURE OF THE FEMUR, SUCCESSFULLY TREATED.

To the Editor of the Medical Gazette.

Sir,

I am induced, through the medium of your journal, to lay before the professional public an account of the following case, trusting that it may both interest and instruct, it being one of the many which I have seen treated by Mr. Bransby Cooper with equal skill and decision. By inserting it in your impartial columns you will greatly oblige, sir,

Your obedient servant,
R. S. Nunn.

Richard Weaver, æt. 41, a stout and apparently healthy man, was admitted into Guy's Hospital, Tuesday, February 5th, 1833, with compound fracture of the lower third of the femur, occasioned by the kick of a horse. When admitted, an oblique fracture was discovered in the lower part of the inferior third of the thigh, and a small opening caused by the protrusion of the bone upon the anterior part, a little above the patella. There was then no swelling of the limb. The extremities of the bone being brought into apposition, the limb was put up in the usual manner. On the following morning there was some degree of tumefaction, and the splints were therefore loosened. Until the 9th the swelling and tenderness gradually increased, and on that day there was ecchymosis in the ham, accompanied by considerable pain. The splints were entirely removed; and Mr. Cooper on seeing him, and examining the tumor in the ham, was immediately convinced of the existence of a diffused aneurism of the popliteal artery. It being an established maxim in surgery, that in cases of this aggravated nature, viz. a compound fracture at no great distance from a joint, and in its immediate neighbourhood a diffused aneurism of a large artery, there is no alternative but immediate amputation, a nice point presented itself for the surgeon's decision — whether that maxim might be broken through, and the minor operation of securing the femoral artery resorted to with safety to the patient, there still existing doubts, whether the after-supply of blood would be sufficient for the reparation of the injured parts, and fears lest it might be merely subjecting the patient to the severe shock of two operations. Mr. Cooper, however, after consulting with his colleagues, decided on taking up the artery, conceiving that from the age, constitution, and habits of the patient, there was not only a possibility, but a great probability, of saving the leg. He accordingly, without removing the patient from his bed, cut down upon and secured the femoral artery in its upper third, which operation, including the dressing of the wound, was performed in three minutes. The size of the tumor was instantly diminished; the limb was covered with flannel, and ordered to be kept quite still. In the evening the limb was of the temperature of the body, pulse 102, and the patient expressed himself more free from pain.

Ordered Calomel gr. iij.; Opii gr. j. st.

10th.—Has passed a tolerable night; pulse 108; had during this day three slight attacks of shivering. In the evening the temperature of the limb was rather above that of the rest of the body; bowels have been freely opened.

Ordered Dover's Powder gr. vj.; Calomel gr. ij. statim; and saline medicine, ter die.

11th.—Is better; tumor less, slightly livid; some pain.

12th. — Temperature of the limb again become natural; tumor much smaller; slight erysipelatous blush on the upper part of the thigh, to which the lotio liq. plumbi was applied.

15th.—Erysipelas quite gone; wound through which the bone had protruded perfectly healed; that through which the artery was tied only kept open by the ligature. Tumor diminished more than one-half; appetite tolerably good; allowed a little bottled porter with decided benefit.

From this time the man rapidly improved; the ligature came away on the 25th; and on the 2d of March the tumor, with all pain, swelling, and lividity, had entirely disappeared, and union of the bone had evidently taken place to a certain extent, as he was able to raise his limb; thus most satisfactorily proving the correctness of the surgical opinion which gave a preference to this method of treatment.

FRENCH HOSPITAL REPORTS.

By J. P. Litchfield, Esq.

HÔTEL DIEU.

Artificial Anus—Operation.

Jacques Schaller, a Swiss peasant, ætat. 32, was admitted under the care of M. Dupuytren, with an artificial anus of many years standing, situated immediately beneath the right abdominal ring. The patient had been afflicted with strangulated hernia, in which a portion of the bowel had sphacelated, and occasioned the disease in question. The parts corresponding to the orifice through which the fæces passed were red, and extremely painful to the touch. The funnel-shaped cavity formed by the remains of the hernial sac, and accurately described by Scarpa in his "Memorie sull 'Ernie," was easily traced with the finger, as also were the two ends of the bowel, which presented an acute angle, with the usual projecting septum. Previous to commencing the operation, M. Dupuytren exhibited the instrument which he has invented for the cure of the disease; he also stated, that he had recently succeeded in four cases by its use. The *enteretome* is about six inches in length, and resembles a pair of straight forceps; each blade is serrated and unequal, and one called the male is received into a groove which runs through the centre of the other, called the female. The teeth are thick, and grasp the membrane when applied to it, tightly, but without cutting; a screw passes through the handle of the instrument, by which the blades are kept in their situation, or tightened if requisite.

March 5th.—M. Dupuytren introduced the blades of the *enteretome* separately through the external opening, into the two portions of intestine, and fastened them with the screw; scarcely any pain was given by this part of the operation. The instrument was left in the opening, and the patient placed upon low diet.

6th, 7th.—The patient is free from the colicky pains which usually accompany the application of the instrument; the fæces still pass by the artificial opening.

8th, 9th, 10th.—The instrument remains in the opening, but its grasp is considerably loosened; M. Dupuytren thinks it will come away in a day or two, after which he expects the fæces will pass by the anus. A little uneasiness was felt about the umbilicus for two or three hours, which gave way to fomentations. No pain whatever is now felt, nor is the abdomen at all tender upon pressure.

Prolapsus Ani.

M. Dupuytren removed four of the projecting folds which are found converging from the circumference to the margin of the anus, in a child three years of age, labouring under prolapsus ani. The folds were removed with a pair of curved scissars flattened on one side. No bandage was applied. In four days the parts had contracted, and no further descent of the intestine occurred.

Anthrax.

A case of anthrax was exhibited. The tumor was situated in the right dorsal region, was deeply seated, and about ten inches in circumference. It was cured by a crucial incision and emollient poultices. M. Dupuytren thought that crucial incisions would seldom fail in carbuncle, if they were sufficiently deep, and carried to the outermost part of the circle.

HÔPITAL DES VENERIENS.

Prolapsus and Inversion of the Rectum—Operation—Death.

Foy, a female, ætat. 49, naturally of a good constitution, but somewhat enfeebled by her sufferings, was admitted under the care of M. Ricord.

Early in life (at 21 years) she had been attacked by the venereal disease, accompanied with chancres upon the labia, and excrescences round the anus. She was treated with mercury externally and internally, and dismissed cured. At the age of twenty-six she was again admitted, with ulceration and excrescences about the anus; the labia were not affected. The

excrescences were freely cut, and the ulceration combatted with caustic applications, and afterwards by cauterization. In spite of this active treatment a fistula established itself behind the anus, from which fæces and gas were discharged; this lesion was subsequently destroyed by the spread of the ulceration. The cure was not completed when the patient insisted upon leaving the hospital.

At this period (ætat. 27) the digestion was good, the fæces were retained without difficulty, and she was enabled to resume her ordinary labour as a washerwoman. During eighteen years she continued free from any local inconvenience, excepting a slight pain on passing the fæces; but what is remarkable, she suffered at intervals a real hæmorrhage from the anus. At 41 years of age the menses ceased, and the pain and hæmorrhage increased. At 47 she was attacked, without any assignable cause, by paralysis of the tongue and pharynx, for which she entered one of the other hospitals of Paris, and of which she was entirely relieved excepting a slight deafness and difficulty of articulation. During her stay in this hospital she was also attacked with violent ophthalmia, which deprived her of the sight of the left eye. Finally she was sent to the Venereal Hospital, on account of the ulcerations about the anus, which at this period bore a very serious character.

Upon the last eruption of cholera in 1832, she came under the influence of that epidemic, and suffered a very abundant diarrhœa, which occasioned prolapsus of the rectum.

The patient at present is somewhat restless and enfeebled; the thoracic organs appear healthy, the tongue is clean, and appetite good. Pressure upon the abdomen occasions slight colicky pains. The stools are liquid, frequent, and involuntary. The tumor, which occupies the region of the coccyx, is three inches long and two in diameter, apparently composed of fibrous tissue and cartilage, extremely painful when touched, bleeding readily, and covered with sanious and fæcal matter. The excrements pass by an opening at its summit; no vestige of the sphincter ani can be discovered. M. Ricord considered the ligatures recommended by Mr. Howship, and the actual cautery, inapplicable in the present instance, and proceeded to remove the tumor as he had done in two previous cases.

Operation.—The patient was placed on her left side, with the right leg semi-flexed. The tumor was fixed by passing through it at four opposite points, curved needles with silk. The section was commenced on the left side of the tumor, with a convex bistoury. One finger was introduced into the vagina, which proved that it was not displaced, and another into the interior of the inverted rectum, to ascertain that the peritoneum did not descend so low. The section was then continued circularly, and the whole of the tumor removed; the different arteries were taken up as soon as divided, lest the retraction of the part should render it difficult to come at them. About four ounces of blood were lost during the operation. The wound was dressed with simple ointment and lint, and the parts supported by a square compress and T bandage. No traces of scirrhus were found in the tumor.

The patient went on favourably until the evening of the third day after the operation, when symptoms of peritonitis exhibited themselves, from the effects of which she died, five days after the performance of the operation.

EMPLOYMENT OF ERGOT IN HÆMORRHAGES.

Several Italian and French physicians have recently employed the secale cornutum in various cases of internal hæmorrhage; among others, M. Recamier, of the Hotel Dieu, Paris, has adopted it. In menorrhagia he has used it not only in pregnant and lying-in women, but also where the bleeding was dependent upon carcinoma of the uterus. The proportion of instances in which this practice has proved successful is so considerable, that M. Recamier thinks they may be reckoned as sixteen to two. This, however, is only advanced as conjectural, and to be corrected by further experience. The dose in which he gives the drug is from twelve to eighteen grains three or four times in twenty-four hours, in the form of powder—a mode which he prefers to the infusion or decoction.—*Gazette Médicale.*

CROTON OIL AS A RUBEFACIENT.

M. Andral, who first called the attention of practitioners to the external use of this agent, continues to employ it as an "energetic revulsive" in numerous nervous affections. The following is given as one of these cases:—A workman, aged 30, was admitted at La Pitie, having laboured for a month previously under symptoms of inflammation of the mucous membrane of the bronchia. During a fortnight his voice continued hoarse, at the end of which time he had complete aphonia. This loss of voice had been present fifteen days, when the patient was admitted. Six drops of croton oil were rubbed on the anterior part of the throat, which process was followed by a confluent pustular eruption, and a slight erysipelas of the left cheek. Twenty-four hours after this application

the voice returned. The inflammation was subdued by emollient cataplasms; in a few days it disappeared, and the voice regained its natural tone.—*Ibid.*

ANOMALOUS MENSTRUATION.

The following case is recorded in the *Transactions Médicales* for October last, and was communicated to M. Bonfils by M. Begin. A young lady suffered suppression of her menses immediately after their first appearance in 1807, which was followed by swelling and suppuration of the glands of the neck. In 1815 she became affected with fluor albus, which was succeeded by an improvement in her health. In 1817 the leucorrhœa disappeared, and regularly afterwards, every month, the index finger of the left hand became tumefied, and covered with a violent tetter, from the surface of which, for three or four days, there oozed some drops of blood. This continued for three years, when the uterus resumed its menstrual functions, and the health of the patient was restored.—*American Journal of the Medical Sciences.*

ROYAL INSTITUTION.

Friday, March 15.

Drainage and Sewerage of the Metropolis.

Mr. Donaldson, in his discourse on this subject, so fraught with interest in its relations to medical police, commenced by taking a view of the importance of adequate sewerage in great cities. He noticed the pains taken by the Romans in this respect, and traced the earliest regulations relative to sewers which are to be found in the annals of this country. The first enactment took place in the reign of Henry VIII., and it is from this sanction that the present commissioners of sewers derive their authority. Mr. D. then described the old arrangements for draining and cleansing London, and pointed out the course of the Fleet ditch; but he more particularly dwelt upon the course of the King's Scholar's Pond-sewer, from its origin in the neighbourhood of Highgate to its embouchure near the Milbank Penitentiary. He afterwards explained the nature of Mr. Martin's project for building a sewer along each bank of the Thames, with a view to preserving the purity of the Thames water as it passes through the metropolis; and at the same time narrowing the width of the river in some of its wider parts, and thus securing a valuable quantity of land along the banks, which might be converted into spacious quays. The expense would be very great—at least 60,000*l.* a mile; but Mr. Martin thinks that it would be economical after all, not only from the value of the new quays, but from the positive riches which the manure collected by the proposed sewerage would preserve. The manure at present is almost wholly wasted, being emptied into the Thames, while it is greatly wanted by the agriculturists, who are obliged to pay for what they can procure at an enormous price. Mr. Martin's plan, we believe, has been published: it is a curious subject to occupy the attention of the illustrator of Milton and the painter of Belshazzar's feast.

SIR ASTLEY COOPER.

In addition to the honours bestowed upon him by the King of the French, which we noticed last week, Sir Astley has been nominated by the Academy of Sciences a Corresponding Member, in the room of the late M. Delpech.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *March* 19, 1833.

Abscess	1	Gout	1
Age and Debility	39	Hooping-Cough	32
Apoplexy	8	Inflammation	29
Asthma	23	Bowels & Stomach	4
Cancer	2	Brain	2
Childbirth	7	Lungs and Pleura	11
Consumption	60	Insanity	4
Convulsions	43	Measles	4
Croup	4	Mortification	2
Dentition or Teething	9	Paralysis	7
Dropsy	16	Small-Pox	15
Dropsy on the Brain	15	Sore Throat and Quinsey	2
Dropsy on the Chest	3	Thrush	4
Epilepsy	2	Unknown Causes	45
Erysipelas	1		
Fever	7		
Fever, Scarlet	3	Stillborn	16

Decrease of Burials, as compared with the preceding week . . . 58

METEOROLOGICAL JOURNAL.

March 1833.	Thermometer.	Barometer.
Thursday . 7	from 30 to 45	30·09 to 30·19
Friday. . . 8	26 38	30·20 Stat.
Saturday . 9	26 39	30·17 30·06
Sunday . . 10	30 39	29·91 29·87
Monday . . 11	29 43	29·91 29·95
Tuesday . 12	28 41	29·94 29·87
Wednesday 13	23 39	29·78 29·48

Prevailing Wind, N.E,

Except the 13th, cloudy; snow, in small quantities, fell frequently.

Thursday . 14	from 18 to 39	29·54 to 29·68
Friday. . . 15	26 40	29·60 29·52
Saturday . 16	27 49	29·46 29·50
Sunday . . 17	29 43	29·54 29·46
Monday . . 18	32 42	29·56 29·73
Tuesday . 19	31 42	29·81 29·93
Wednesday20	26 43	30·06 30·00

Prevailing wind, N.E.

Except the 14th, generally cloudy; with frequent rain on the 17th, 18th, and 19th.

Rain fallen, ·2 of an inch.

Charles Henry Adams.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 30, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEAD AND NERVOUS SYSTEM.

INSANITY.

Moral Causes. — Among the frequent causes of the disease, are what are termed *moral causes*, that is to say, violent excitement of the feelings, but these for the most part are innocuous unless there be hereditary predisposition. A person will bear the most violent excitement from external circumstances in general, unless there be a predisposition to the disease. We every day see persons suffer the greatest reverses, suffer the most dreadful privations, suffer the severest bereavements of those who are dearest to them, so that they are overwhelmed for a time, but they are not ruined in mind for ever. There must be a certain weakness of mind, or a bad constitution of mind, or an ill-regulated state of mind, or a disposition to insanity in general, for these causes to take effect; at any rate, the mind may be so strong, the faculties may be so well formed, and they may all be so well balanced, that the strongest moral causes will not upset the man.

With regard to moral causes, it is said that joy has excited insanity more frequently even than grief. Human nature seems doomed to suffer; most of us every day of our lives suffer something or other, little or much, and human nature seems more capable of enduring grief and sorrow than it is to bear joy.

Excessive partial development of the brain a predisposing cause.—There can be no doubt, I think, that one predisposing cause to insanity is an excessive partial development of the brain. In many persons who are deranged through the feelings (and the greater part are deranged through the violence of their feelings), certain parts of the brain are more developed than others, so as to be more than a match for the rest of the head, and they have suffered such a strong excitement as to have overbalanced the powers of the mind. This you will see in a great number of cases. I believe where there is mental delusion, in most cases it arises from some strong passion. When a man fancies himself an emperor, it is on account of the excessive development of self-esteem; when a person fancies himself God Almighty, it is generally from the same circumstance: the delusion generally springs from the excess of pride. When a person is convinced that a conspiracy is formed against him, that attempts are made against his life every day, or that attempts are meditated, believing things which have no reality whatever, seeing demons coming to destroy or injure him—it is generally from an over-excitement of the depressing passions; that is to say, his fear has got the better of his pride, and, being under the influence of fear, he afterwards becomes the subject of delusion.

Exciting Causes.—There can be no doubt that long application to one particular point is occasionally the cause of insanity. If a person dwell upon one idea, one point, intensely, so as not to employ the faculties of his mind at large, and employ all the feelings (it was evidently intended by Providence that we should employ all the faculties with which we are blessed—not merely that we should use one arm, but both; not merely one leg, but both; not one faculty of the mind, but all in their turn, so as to strengthen the whole and enjoy every feeling of the mind, as well as

every intellectual faculty,) if one only be engaged to the exclusion of the rest, and if ideas of one kind are not counterbalanced by ideas of another, the person may at last persuade himself of any thing, and become mad. You cannot have a better illustration of this than in Johnson's Rasselas, where, from a philosopher studying astronomy; not hearing discourses on other subjects; not having his mind drawn to other topics; not enjoying one of the greatest delights in life, conversation with his fellow-men; but shutting himself up, being abstracted on one point, viz. the motion of the heavenly bodies—he at last became deranged, and fancied that he had the command of them. He was cured, you will recollect, by being taken into society again. That is a very good illustration of the fact.

Insanity has frequently been excited by fever and common inflammation of the brain. It has been excited by heat applied to the body at large, but particularly to the head. What is called *insolatio* has frequently made men mad. Mechanical injury, as you may readily imagine, has produced the same thing. An instance is mentioned of a foreign surgeon having trephined a man for a large wound of the temporal bone, and when the wound was healed, he could not refrain from stealing. He was an honest man before, but after the wound he had an irresistible desire to steal. The surgeon was satisfied that it was the result of disease, and got the man liberated from prison. He was more than an ordinary surgeon; he was something of a philosopher, and the people could not imagine how stealing was a disease, yet the gentleman who had performed the operation, was convinced it was, and by representing the case scientifically to others, he procured his liberation.

The puerperal state is no doubt one cause of insanity. You know that during labour women are subject to such an irritation of the head, and of the spinal marrow I presume, but at any rate of the head, as to fall into insensibility and convulsions, and so puerperal women frequently become insane, and they become insane in general from the third or fourth day after delivery up to the fourteenth or fifteenth day; and now and then they will become insane during suckling. Dr. Gall says, that he knew four women who, in pregnancy only, had a desire to steal. They had a local or partial insanity, and not as we usually see it in the puerperal tate—a general insanity.

I think old age has a tendency to produce insanity, and there it is in general insanity of feeling. The intellectual faculties decline when we grow old, and the feelings frequently fall into a state of excitement. I have frequently seen old men whose intellectual faculties have become much decayed, become exceedingly passionate, suspicious, and at last delirious, totally unlike any thing they were before, and in such a state that I consider it madness.

Excess of all kinds will of course induce this disease. Sexual indulgence is always enumerated among the causes of insanity; but very frequently, I have no doubt, that excessive sexual indulgence, as well as improper indulgence, is the result of a morbid state of the brain itself. I have no doubt that a great many who indulge in sexual pleasures, beyond what is intended, think of nothing else, run riot every day, do so through a morbid excitement of the head—a diseased state. They live in indolence, and not having any thing else to do, they select this as a good occupation. I have no doubt that many persons indulge in this way till they go mad, but I am quite satisfied that that is not always the case, but that the state which ends in insanity has originally produced a violent excitement in that particular direction.

The cessation of discharges will have the same effect. Persons have gone mad from the drying up of an ulcer or an issue, and the disease has sometimes arisen in the way of metastasis. When a disease has disappeared, to which a person has been long accustomed, insanity will occur. I have seen it come on after gastrodynia, and it is said to have occurred sometimes after itch and other diseases. It is merely a disease of the brain, and therefore persons are subject to all other affections. Disease of other parts, on the other hand, will sometimes impede this disease. Diseases of the liver and intestines will sometimes produce a sympathetic excitement of the head, which occasions insanity.

Not dependent on Demoniacal Influence.—I need not say that the devil has nothing to do with this disease any more than any other; but you will find some physicians say, that the devil, or demons which are not devils, (the devil is a particular individual, but demons are supposed to be the spirits of departed persons,) are the cause of the disease. You will find in sound writers an account of the disease being produced by the devil. Sauvages, the first writer on nosology, says that he really cannot agree with those German physicians who, one and all, say that persons possessed by the devil do wonders. Hoffman and Sauvages state that signs are produced by demoniacal agency. He says, in the first place, that when a person is mad through demons, he has a demoniacal manner; he has not only heard them vociferate unusually loud, and make most unusual ges-

tures, but perform wonderful and unusual motions of the body. In the second place, these motions of the body—convulsions, came on suddenly, without any preceding disease. Thirdly, that such patients are very blasphemous, and look very much like the devil. Fourthly, that they have a knowledge of men, and reveal secret and particular objects faithfully. Fifthly, that they have a knowledge of unknown tongues—not foreign tongues. This is much more clever than knowing foreign tongues; we should all be desirous to know the latter in this way, because it would save us the trouble of learning them. Sixthly, that they have unusual strength. And seventhly, that they vomit singular things, such as hairs, pieces of flint, and pins and needles, and things of that description; and not only discharge them from the stomach, but even sometimes from the eyes. When you see this, you may be quite sure a person is possessed of the devil. I believe I mentioned before, that physicians now have driven demons from the nosology, and Voltaire says, that the devil is always much mistaken when he addresses himself to doctors—that we are the men who drive him out.

Diagnosis.—As to the general diagnosis of insanity, we have to distinguish it from phrenitis, from fever, and from delirium tremens.

From Inflammation.—There can be no doubt that in insanity there frequently are signs of inflammation, that there is pain and heat of the head, that there is quickness of pulse, thirst, a dry and foul tongue, high-coloured urine, and a throbbing of the temples, just as in delirium—the delirium of inflammation. But, in the first place, insanity is a chronic disease, whereas phrenitis and fever are not; and, in the next place, although there are these symptoms of inflammation of the brain in insanity, when it first begins, so that you may be in doubt as to whether it is phrenitis, common inflammation, or not, yet you have this criterion—that the insanity is out of all proportion to the signs of inflammation. I know of no other mode of discerning the true nature of the case, when signs of inflammation are present, than this. In insanity you may have no signs of inflammation at all, so that you can have no doubt as to its not being a case of inflammation of the brain; but in insanity you frequently have signs of inflammation; but then, if the disease be what we call "insanity," the aberration of the mind, and the violence of the feelings, are out of all proportion to the inflammatory symptoms. The state of the brain may be much the same, and there may be something of quibbling in it, but the distinction is important; because, if there be decided inflammation of the brain, you may set to work according to the strength of the patient, and, by antiphlogistic measures do great good; whereas, if the signs of insanity be out of all proportion to the signs of inflammation, and you think that it is a mere case of phrenitis, you will in general do great harm. Antiphlogistic measures are generally very useful in the beginning of insanity; they are very useful when there are more or less signs of inflammation; but if the signs of an aberration of mind be out of proportion to the signs of inflammation, I believe you will do serious harm; indeed, if you go boldly to work, and think that it is a case of inflammation, then frequently antiphlogistic measures will cause the patient to sink, or they will perpetuate the disease—make it permanent. It is of importance to consider whether the signs of inflammation and the signs of insanity are in proportion to each other. If the latter be only in proportion to the former, the case may be treated as inflammation.

Your diagnosis also will be assisted by knowing whether the individual has ever been insane before, and whether there is insanity in his family, because, if these circumstances do exist, and if you think it is more than inflammation of the brain—if you think that disturbance and inflammation are co-existent, and not one dependent upon the other—then you must not have recourse to antiphlogistic measures.

From Fever and Delirium Tremens.—As to the delirium of fever, it is generally easily known from the peculiar hollowness of the eyes, from the vomiting, the extreme loss of appetite, the pain of the loins, and so on. One cannot easily mistake a case of this description, and when delirium afterwards comes on, if it be violent, it is in proportion to the signs of inflammation; and if it be not violent, if it be muttering delirium, then it is in proportion to the sinking of the patient, the fluttering state of the pulse, and the typhoid symptoms.

From feigned Insanity.—If it is of importance to know whether the disease is real or feigned. Now, if it be feigned madness, people go to sleep, they cannot keep themselves awake, as madmen frequently do. Madmen frequently sleep regularly, but frequently they can do for a long time without sleep; but where the disease is feigned, persons cannot hold out, neither can they desist from eating and drinking, as madmen frequently can; and the pulse is frequently not affected, at least if you can confine them, so that they cannot gain access to stimuli. Madmen will rave for days and weeks without stopping; whereas a person who is feigning madness, generally thinks it necessary to rave violently,

because he considers it an important feature of insanity, and the consequence is, he cannot continue it. Supposing, however, that the patient does not affect mania, that is to say, general insanity, derangement on all points, but affects monomania, attempts to be mad only on one point, he generally, I believe, overdoes it. It is impossible to convey by words an accurate idea of what we mean, but generally there is some overt act, or some sort of inconsistency; they do not support the character well: they are not aware of all which they ought to do, and they do more than they should.

Difficulty in proving Insanity.—There is, therefore, I think, no difficulty in establishing the diagnosis, as to whether it is phrenitis, or fever, or insanity, or whether it is a case of feigned insanity or not. The difficulty is to ascertain whether a patient is really mad when he pretends not to be so: the difficulty is not to prove cases of *morbi simulati*, but cases of *morbi dissimulati*, where the disease is not pretended, but the patient pretends not to have it. I alluded to some cases formerly, shewing how cunning madmen were; how necessary it is not to let them be aware when you are coming near the point—to take them by surprise—to ask them questions that will not make them suppose that you are leading to the point; but to ask questions in a circuitous manner, so that they may be led to the main question without being aware of it.

Prognosis.—In regard to the prognosis, if there be hereditary tendency to the disease; if there have been an injury of the head; if there be a peculiar organization of the head; or if there have been previous attacks of the disease, recovery is not the less probable, but relapse is the more probable. Such persons do not less easily recover than others, but when they have recovered, they may easily fall into the disease again. I believe that the prognosis is rendered more favourable by the individual in whom the disease occurs, being neither very young, nor in an advanced life, but in the middle period of life. The more violent the exciting cause, the more favourable will be your prognosis, because, if the exciting cause be very slight, if a small spark have excited a great flame, you may suppose that the person is strongly disposed to insanity; whereas, if the exciting cause be very violent, you may suppose that there was but little disposition to the disease; but the violence of the cause was every thing.

Mania, general excitement of the brain, general delirium, general violence of feeling, affords a more favourable prognosis than a monomania. Mania is a general disturbance of the whole head, and it is more corrective than a fixed disturbance on one point. It appears to be more of the nature of an inflammatory state of the brain, and inflammation is more easily recovered from than any thing locally fixed, where the patient dwells upon some one particular point. Dementia, or that weakness of intellect which follows insanity, affords the least favourable prognosis; for the brain is generally in such a state of inexcitability that it seldom recovers its power, and of course the prognosis is less favourable. If a person have epilepsy, or other diseases of the nervous system, recovery is rare. The longer the disease has existed, the less chance is there of recovery; the more acute, the more transient, is sometimes the disease.

In regard to those cases which occur in a puerperal state, recovery is more frequent than not. The prognosis may generally be given favourably, when the patient has fallen into the disease, either after delivery, or during suckling.

Treatment.—The treatment of insanity is generally divided into two kinds, like the causes, moral and physical; and the physical again is divided into two kinds,—first, antiphlogistic measures; and then, in the next place, soothing measures.

Physical Antiphlogistic.—When the case is recent, and there are phrenitic symptoms, the remedies for inflammation within the head are to be adopted with more or less vigour; or when the case is not recent, but we have similar symptoms during any period of the disease, the same measures are to be more or less adopted: generally speaking, however, antiphlogistic measures not very admissible. It is found, in the greater number of cases, when blood is taken away it is neither buffy nor cupped, and the majority of cases treated actively, as phrenitis, do not turn out so well as those in which such treatment is not adopted, or in which such treatment is adopted with very great moderation.

I have before mentioned, that in insanity there may be no signs of phrenitis at all, or that if there be, still the mental aberration and the mental excitement are out of all proportion to the signs of inflammation which exist. I stated that the disease is not inflammation of the brain; that it may be more or less inflammatory; that there may be more or less of an inflammatory state; but that does not explain the disease. It is a morbid state, not necessarily of an inflammatory nature, and that morbid state, although frequently connected with inflammation, is unquestionably not bottomed, not founded upon it. In the beginning, however, of the disease, very frequently a certain extent of blood-letting is proper, together with a certain degree of purging and ptyalism.

The exhibition of tartar emetic, for example, in large doses, so as to produce a state of nausea and depression of the system, may be serviceable. But you must be guided in the employment of these measures by the state of the patient; by the recency of the occurrence; by the state of the constitution at large; the strength and character of the pulse. You must remember, that, whatever signs of inflammation there may be, the disease is not necessarily of an inflammatory character, and that it is much the best to adopt moderate antiphlogistic measures, and such measures as will not greatly depress afterwards. Among these, the application of cold to the head is one of the best. The application of ice is often much more effective than bleeding, and it is not attended by such subsequent depressive effects as bleeding. I can lay down no rule for the adoption of antiphlogistic measures, excepting this—that you must be very much on your guard, indeed not trust to bleeding too much; and of course, when the disease has existed any time, if a fit of violence come on, it is very rarely to be treated by bloodletting, but you must apply cold, and remove as much as possible, all stimuli.

Soothing measures. — However, we have sometimes a very different state from that of inflammation: frequently there is great excitement of mind, great aberration; but while the mind is in a state of high excitement, the pulse is of a weak character, perhaps very rapid, and it is clear, from the whole state of the patient, that you must not adopt depressing measures, but, on the other hand, stimulants and narcotics are the most useful. You will frequently see, in this disease, where there is great irritation, a weakness of pulse, which easily proves, to an experienced person, that the case is not of an inflammatory nature, perhaps not the least so, but a case of irritation, and it is to be treated by cold, in the form of ice, or cold water, or a shower-bath, and frequently by good nourishment and narcotics. Cold lessens the morbid irritability of every part of the body.

Now and then both plans, of course, may be very moderately conjoined, just as in the treatment of inflammation; but you frequently see patients in so great a state of excitement, in mania, that they will not bear more than the application of ice to the head, and moderate purging, and you may find benefit by the administration of a certain portion of wine, or, what answers in general still better, a certain portion of porter and good strong malt liquor, together with nutritious food. As to narcotics, the morphia has been found of late to answer much better, in a great number of cases, than opium. I have seen persons soon sent to sleep in this state by a large dose of camphor—a scruple of camphor given every three or four hours.

It is necessary, not only at the beginning of the disease, but at its crisis, to prevent the patient from falling into an inflammatory state of the head, and, on the other hand, it is necessary to keep up the strength, not to allow him to sink into a state of debility and irritation, and you will find moderate antiphlogistic measures the only ones, on the former side of the question, and nutritious food, the moderate administration even of stimuli, together with narcotics, very serviceable, on the latter.

I need not say it is necessary, in all cases, to remedy any other disease that may be present. If you find costiveness, remedy it; if you find vomiting, remedy it; if you find chronic hepatitis, or disease of any other part of the body, get rid of it, if you can; for in most instances it will only exhaust the patient so much the sooner, and, in fact, irritation in one organ frequently keeps up irritation in another. Now and then cases occur of mania being suspended by the production of another disease; but these instances are comparatively rare. If the new disease were but slight, it might be well to let it run its course—supposing, for example, it were only the itch,—but if there were any serious disease, I should consider it our duty to cure it, at any rate to lessen it as much as possible, because the insanity could not do more mischief than it.

It is of course necessary not only to remedy any diseased state that may exist, unless it be clearly beneficial to the mind, and at the same time clearly not injurious to the body, but it is necessary to support the health as much as possible—to give the patient good air, to have him as much as possible in the fresh air, to observe the most perfect cleanliness, and to take care that all the food he has shall be of the best quality. Warm and cold baths are found very useful, but it is in melancholia that warm baths answer best. The cold bath, in most cases of insanity, when patients glow after it, is an exceedingly useful measure, and in violent paroxysms a cold shower-bath, continued till the patient is pretty nearly overpowered, has often a beneficial influence: as a means of remedy in chronic cases, also, the shower-bath is one of the best things that can be employed.

Speaking of the remedies for the purpose of subduing great violence, I may mention that the most violent fits of insanity, the greatest paroxysms of rage, will cease in general for a time spontaneously. It was the custom of Pinel, the celebrated French physician, to let patients spend

themselves, to let them rave away, being certain that after a time they would be quiet again. Nature is exhausted after great excitement; it cannot be carried on for a long time.

But for the purpose of suppressing the violence, when it is too long continued, some practitioners have recommended a rotary machine, in which you set the patient upright, and spin him round as fast as possible, till he is sick and giddy, and be reduced to repose. In that way, a maniac, like any body else, will be rendered pretty quiet. It has been recommended to lay the patient horizontally, with his head at the centre, and spin him round in that position, so that the blood might reach from the head to the centre by the centripetal force. I have seen it put in practice in lunatic asylums abroad, and the patients spun round as fast as a tetotum, and it is said with the effect of quieting them.

The hot bath and the cold have been had recourse to sometimes together. If the patient be placed in the hot bath, and after a short time a stream of water be allowed to play on the head, descending for about three feet, till the head be thoroughly cold, it is said to be very beneficial. These are all various modes of effecting the same purpose.

Moral Treatment.—In regard to moral management, very great good may be effected. The medical treatment is for the most part adopted for the purpose of lessening any urgent symptoms at the time, and for the purpose of preventing mischief; but in regard to curing the disease, I believe physical treatment in the greater number of cases is not very efficacious. We may do great good by means of it;—we may prevent an inflammatory state of the head; we may support the constitution; we may do great good by cooling the patient, procuring him sleep, maintaining his general health, removing diseases in other parts of the body, re-exciting a suppressed discharge, preventing additional mischief, and lessening urgent symptoms. The moral treatment, however, is of the very highest importance.

In the first place, it is right to cultivate any faculties that are still sound. If patients be not universally insane, but have any mental faculties left in a state fit for occupation, it is exceedingly serviceable to employ them. If a patient have a taste for drawing, for music, for mechanical contrivances, or whatever else, that faculty should be cultivated: he should be allowed to make the best exertion he can with his intellect. A pleasurable occupation of this description is exceedingly advantageous, not only as contributing to the happiness and the comfort of the patient, but in withdrawing him from insane ideas. By this means persons have frequently had their insanity very easily subdued.

But it is also found, almost universally, that it is of great service to enjoin moderate exercise. A large number of maniacs who have no intellect left for any pleasurable mental occupation, and many, who in their senses knew not what intellectual delight was, may still derive great pleasure, as well as great improvement of health, from bodily exercise. Nothing is found more useful in the treatment of lunatics than to give them things to do, and more especially to make them work in gardens, and occupy themselves continually in the open air with bodily exercise.

It has also been found of great use, not only to maintain activity of body, and cultivate those faculties of the mind which are still entire—to make the most of what is left, but also to interest the feelings. This has been found particularly the case with females. You should give them animals to take care of: the tender feelings are excited, and a constant interest is kept up by having animals under their care. This has been found in many instances of very great use. Whatever their station in life may be, by giving them bodily exercise, you maintain the general health, you withdraw their attention from madness to reason, and in some degree create a pleasant state of mind. This may be done by mental occupation, as well as by bodily exercise. One great point is, to produce a pleasurable state of excitement, and in conformity with this, it is necessary to make them as happy in all respects as possible—to treat them with the utmost kindness, never to have recourse to severity, except in severe cases, and never to have recourse to cruel punishment, or to any thing which can border on cruelty. Nothing should be done which is calculated to irritate their mental feelings, or their body, to inflict corporeal pain, or produce vexation of mind, unless the latter is absolutely necessary. No stripes nor corporeal punishment ought ever to be adopted. Formerly, straps and bars were had recourse to, as a proper mode of treatment. Till modern times, the chief treatment of insanity consisted in cruelty. You find Celsus giving direction for the employment of the greatest severity towards lunatics. You will find that Meibomius, after whom the tarsal glands are named, says, that Rhazes, an Arabian physician, orders that when persons labouring under insanity, love madness, (that is the only case in which it might be adopted, if it be adopted at all,) and when nothing else will do, he must be tied, and when tied he must be soundly thrashed, and beat well with the fists, and this again and again; and if no good follow,

because one snow does not make a summer, therefore, if one thrashing does not do, give him another. Another writer agrees with him, and says, "If the patient be a young man, let his posteriors be well flogged, and if he be not quiet then, put him into the bottom of a tower with some bread and water, till he begs pardon for being mad, and becomes sane!" Such were the ideas entertained formerly of the treatment of insanity.

Now there should be the mildest restraint possible. Of course restraint is sometimes very necessary, because some patients are mischievous, and they will not only tear to pieces every thing they can, and do whatever mischief they can, but they will commit murder—will murder themselves or others, and therefore restraint is necessary, but it should always be effected in the gentlest manner. I believe, at a lunatic asylum, where the greatest attention is employed, there the greatest gentleness is found admissible; for the more cruelly you behave to lunatics, the worse they are. It is in mismanaged lunatic asylums that you have shouting and howling, and every kind of trouble is experienced. Where the keepers of lunatic asylums are benevolent, use no more restraint than is necessary, and especially using restraint in the least offensive manner—taking every opportunity of being kind to the patients, where kindness is admissible—there you find the patients nearly all quiet, and a very small number indeed require corporeal restraint. If punishment be necessary for having done amiss, patients ought not to be flogged on the posteriors, but confined for a day, as a child would be, and told that that is the punishment for their having done amiss; and it is certainly right to be firm in all this; never to threaten punishment, and then not put it in execution. A maniac would soon find out this mistaken lenity, and take advantage of it. Whatever is threatened should be put into execution, provided a man threatens nothing but what he ought, so that maniacs may depend upon punishment as a certain consequence of misconduct. But the utmost that is required, is to deprive them of any pleasure which they are accustomed to have, for a little time, as a punishment, or to employ a little more restraint than usual.

There should be nothing about the individual, of course, to remind him of the circumstances connected with his insanity. Hence it is found useful in most cases, as a general rule, that the patient should be removed from his friends; for the circumstances connected with his insanity will of course present themselves, if the patient see his friends frequently, or remain in his own house. It is for the most part advantageous to take the patient away from his friends and his own premises, that all associations connected with his insanity may be removed. In the next place, it is very necessary that there should be nothing dangerous allowed to be in the patient's reach; no knives, nor any instrument of which the patient might make a bad use. There are various degrees of insanity, and many patients may be trusted with things that might do harm; but, as a general rule, every thing should be removed from a patient's reach with which he could do mischief. The windows should be well secured, and the patient should have no opportunity whatever of doing mischief, because lunatics are so sly. Bars, however, should be so placed before the window as to look ornamental, rather than otherwise, and not give the idea of a prison-house.

Still, although it is necessary to remove patients from their friends, yet when reason has been returning, it has sometimes been found useful to gratify them with a sight of those they love the most. I know that the exceptions to the rule of not allowing them to see their friends, are rare, but now and then that rule may be broken through, and great advantage be derived from it. You will find a paper, by Dr. Gooch, published in the Transactions of the College of Physicians, and likewise in one of his posthumous volumes, giving an account of a lady with puerperal insanity, in whom the gratification of seeing her husband was productive of apparently good effects. It was an experiment; but Dr. Gooch satisfied himself that it was likely to be productive of benefit. It is a good general rule, not to be broken through without care; but the result in Dr. Gooch's case was very beneficial. A similar case occurred to me three or four years ago, in a gentleman who had been deranged from moral causes. From great anxiety of mind he was perfectly deranged, but his insanity subsided, and he told me that he should like to see his wife; that it was very hard to be kept from seeing his wife or family. I found him still deranged; but I stopped with him two hours, and satisfied myself that it would do him good. He wished to leave his bed-room, and see different parts of the house. I took off his jacket, and led him down stairs, and gratified him by letting him see first one part of the house, and then another. I watched the effects, and found it did not disturb him in the least, did not throw him off his balance, but he seemed to gain intellect, and power over himself, as we proceeded. There were many little gratifications which he wished for, and which I let him have. One curious thing was to kill a *baton*

cock, which he saw from a window, and which appeared to him as a spectre, or some fiend. The colours, he said, had been terrific to him, and he should not be happy till it was killed. I gratified him with it, and he was exceedingly thankful. He killed it himself. I watched him carefully for some time after this, and at last I satisfied myself that the sight of his wife would not be dangerous. I might have been wrong, but it turned out that I was right. I brought her from a neighbour's house, and the interview was most affecting. From that moment he was perfectly in his senses, excepting for a few days when he was violently excited, and then he was found to ramble; but from that moment to this he has been in his perfect senses. Therefore this rule of separating a patient from his friends, although a very proper one, may be now and then transgressed; but it should not be broken without extreme caution. For the most part, when patients are insane, if their friends be about them, it increases the general excitement, and there is no chance of doing any good till they are withdrawn.

The absence of all corporeal punishment, of all cruelty, of all severity, of every thing which is calculated to irritate the patient, and the adoption of every thing that is mild, and gentle, and soothing, calculated to excite their best feelings, and all their feelings in a pleasurable and satisfactory manner, will lead very frequently to the removal of the disease. But beyond this gradual, imperceptible good operation on the disease, moral treatment cannot be expected to go. You cannot expect by moral treatment to cure a madman at once.

You will, however, see a story of a person being cured in France all at once by moral means. A madman maintained the possibility of the miracle of St. Denny. The miracle was, that the saint kissed his own head; and this would have been impossible, I suppose, except by a miracle. A madman was maintaining that this was a fact, and said it was possible, because he had done so himself. Another madman inquired how he did it? Whether he kissed it with his heel? and then he laughed at him. From that moment the man never spoke of it again. It is said that here was a madman convinced, by ridicule, of the folly of the notion that St. Denny could have kissed himself, because if he did, he must have kissed himself with his heel. Now it is quite clear that the man must have been almost in his senses to have seen the validity of any such reasoning. Another is said to have believed himself the Holy Ghost, and he had a neighbour in the madhouse, who also believed that he was the Holy Ghost, and as they were not distant, they were brought to each other. The one inquired—"Can there be two Holy Ghosts? You say you are the Holy Ghost, and I am the Holy Ghost—can there be two Holy Ghosts?" The man got up and said—"There cannot be two Holy Ghosts—I must be wrong," and he never called himself the Holy Ghost from that day. But you must see, that when such an effect as this is produced, the person must be almost well. There was another man who fancied himself dead, and implored to be buried. He assured his attendants that he was quite dead, and he abstained from food, as a dead man ought to do, and was laid out as dead men are. He was conveyed towards the church, not inclosed in a coffin, but carried in a bed. His friends took care that some merry fellows should meet the funeral at a certain part of the road. They asked who it was that was going to be buried, and the men who carried him replied that it was a very bad fellow—that the world had happily got rid of him. This so provoked the man, that he sat upright, and became so savage that he jumped down to thrash them all. He was then taken home, sat down, ate a good dinner, and recovered from that moment. This is another instance of a man who was all but well at the moment. It is not for such purposes as these that moral treatment is to be adopted; it is possible that you may do good in such cases as these, but in general such a result is not to be expected.

However, it is very necessary to have recourse to stratagem in many cases. There is an instance of one man who fancied himself dead, and would not eat, and there was a fear that he would die of starvation. The difficulty was how to get him to eat, and the following stratagem was adopted. Some people dressed themselves in shrouds, like corpses, and went into his room, which had been previously darkened. These people carried food with them, and ate of it freely, saying that they were dead, and the dead always ate well; and, as he wished to do every thing that became a gentleman who was dead, he thought he would eat too. It is said that he then fell asleep, and when he awoke his fancy was gone. Another person would eat, but he would not be seen eating, and this is very common. Some madmen will not eat in the presence of any body, nor will they eat if they think any one will discover that they have been eating. The madman who had such a whim had food given him, with a request that he would feed the cat with it. He was extremely hungry, and eat it very readily, and afterwards declared that he had given it to the cat, who swallowed it

all up at once. It is frequently necessary to use a little stratagem in cases of this kind.

However, one point is very necessary indeed; that is, if you make insane people do what you wish, if you make them do every thing with regularity, you have far less trouble with them in the way of eating and drinking, sitting up, and going to stool. A certain hour should be fixed for all these purposes. Nothing is found more useful, in the treatment of insane persons, than to establish habits for every thing which you wish them to do. If a certain hour be established for going to the water closet, they will go as a matter of course, without ever thinking of staying away, and retaining the contents of their bowels; whereas, if there be no fixed time for it, you may have the greatest difficulty. So with respect to their food, and every thing else. You can with the greatest facility get them into the way of these things, provided all you wish them to do is done at certain hours.

This is all that I think it necessary to say on the treatment of insanity; and having finished now the contents of the cranium, I shall proceed downwards to the throat, beginning with the exterior, or nearly so, and proceeding to the interior, going first down the air-passages into the lungs, and then speaking of their neighbour, the heart. I shall afterwards descend down the œsophagus, and then go to diseases of the alimentary canal.

The first disease of which I purpose speaking is Bronchocele, but as that is a new subject, I will not enter upon its consideration until the next lecture.

OBSERVATIONS

ON

THE DRY BELLY-ACHE OF THE WEST INDIES; IN REPLY TO DR. TURNER.

By Anthony Musgrave, M.D.

Formerly President of the Royal Medical Society of Edinburgh.

[Concluded from page 799.]

The foregoing experiments are abundantly conclusive for my present purpose. They establish beyond dispute that our cistern-water is free from deleterious impregnation; and more than this, that it must necessarily be so, inasmuch as the lead, over which it occasionally passes, is already in the state of carbonate, upon which no kind of water can act; and they render the ingestion of this poison, through the medium of liquors in common use, highly improbable, if not altogether out of the question, among the better classes of inhabitants. If it be argued, on the authority of Dr. Thomson, that the carbonate, although incapable of solution, may be held suspended, and thus be imbibed into the system, I reply that, in every respectable family, cistern-water, before it is used, undergoes the nicest filtration by passing through the dripstone, as it is called, although that which was the subject of the preceding experiments was purposely not submitted to this purifying process.

Before I pass on from this partial inquiry into the possible ingestion and effect of lead, under different forms of combination, I cannot help observing that the subject remains involved in considerable perplexity, and still open to accurate experimental investigation. Dr. A. T. Thomson, and others, contend that the acetate is free from poisonous properties. My own experiments corroborate this opinion, and the highly interesting experiments of Mr. Laidlaw* almost place it beyond a doubt. Some months ago I was called to a case of alarming uterine hæmorrhage in the country, and met in consultation (as the lady was a relation of his own) a physician, now retired from practice, but who formerly very largely enjoyed the confidence of this community. In addition to the other means resorted to for arresting a frightful loss of blood, the acetate of lead was suggested, when he immediately proposed to administer half a drachm for a dose. I naturally hesitated; but he assured me that both before and since his retirement he had frequently given such quantities with the best possible effects, and our difference of opinion was compromised by the prescription of ten grains, to be repeated at intervals of two hours until the hæmorrhage should be controlled, taking care, however, to dissolve each powder in a wine glassful of vinegar and water. Several such doses were taken, and the patient ultimately did well, without the least perceptible inconvenience from this practice. This was the largest quantity I had, up to that time, seen intentionally given within so short a period, having

* Medical Gazette, vol. iii. page 721.

never ventured myself (although using it extensively for many years) to exceed five grains for a dose; but I have to mention what is still more extraordinary.

When released from our attendance on the occasion alluded to, I proceeded to dine with the gentleman who had assisted me with his advice, and whose estate was in the immediate neighbourhood, where, adverting to my recent reluctance to adopt his suggestion, he produced a female servant, who appeared to be about forty years of age, and in excellent health for that period of life. He asked me whether she presented any traces of having been poisoned with lead, and on my replying in the negative, he assured me on his honour that that very woman had some time before consumed *upwards of a pound* of the acetate within the period of a few months, (in consequence of repeated and obstinate attacks of menorrhagia, from which she was then entirely relieved) administered in doses even larger than that he had proposed to me, and he left me (he said) to judge from this startling fact whether I had not been unnecessarily timid.

In the year 1816, while I was acting in charge of the detachment of a black regiment stationed in St. John's, I had occasion to prescribe a solution of 3ij. of the acetate of lead to lbiss. of water, as a local application, at the same time with a purgative mixture. At my visit on the following day, I found that, through the stupidity of both orderly and patient, the saturnine solution had been all taken internally, and the purgative externally applied. I was a good deal alarmed, but no ill consequence whatever resulted.

Now it must be admitted that such facts as these scarcely consist with the inferences so confidently drawn from Dr. A. T. Thomson's experiments. Dr. Thomson, of Glasgow, when treating of the acetate, remarks, (what, indeed, is partially familiar to every druggist's apprentice) "its constituents are easily separated. When it is dissolved in water, a small quantity of white powder usually falls. It is carbonate of lead formed by the carbonic acid which usually exists in water. When we blow through a solution of acetate, the same white powder precipitates*." Is it then, I would submit, to be conceived, that abounding, as carbonic acid does, through the whole alimentary canal, the acetate can be so freely and frequently administered (for the most part unprotected by an excess of acid) without the invariable formation of a certain proportion of carbonate? Or can we resist the doubt, thus engendered, that the latter is so absolutely and actively pernicious as Dr. A. T. Thomson imagines? Orfila gave dogs large doses of the red oxyde and carbonate, without observing any signs of irritation*, and Dr. Thomson's own experiment (the 5th) had a similar result. To say truth, it is not easy to discover why dogs should be rejected by the latter as "bad subjects for experiment" merely because they fail to confirm his preconceived opinions; and I should be almost disposed to quote that gentleman's reasoning, as well as his experiment, in confirmation of the doubt I have expressed†. It will scarcely be contended, I presume, that sulphuretted hydrogen is not also largely evolved in the intestines of man; and as Dr. Thomson admits that the quantity present must always be regulated by the nature of the aliment employed, I would suggest, for his consideration, whether the results afforded by dogs are not more to be relied upon than where rabbits are the subjects of experiment, inasmuch as the food of the former approaches so nearly to what we ourselves consume.

It must not be inferred from any of my preceding remarks that I have the slightest intention to deny that cases of genuine colica pictonum may sporadically occur in these islands from the effects of lead, whether imbibed during the occupation of painting—by means of rum, drunk fresh from the stills—or even of inferior wines, imported from France and other parts of the Continent; but I have elsewhere contended, and still maintain, that these cases can generally be distinguished by their history and progress, and that the observant practitioner will rarely find much difficulty in tracing them to their proper source‡.

* Chemistry of Inorganic Bodies, vol. ii. page 641.

* Christison, page 412.

† Medical Gazette, vol. x. page 693.

‡ It has, indeed, been maintained that the affections called bilious, and lead colic, are essentially the same; but although the former often bears a very close resemblance in its course and phenomena to the latter, the more decided manifestations of biliary derangement in the former, and the great aptitude of the latter to pass into a chronic state, and to become complicated with various affections of a most distressing character, among other destructive circumstances, seem to indicate a radical difference between them."—*Eberle's Practice of Medicine*, 2d edit. vol. ii. page 332.

On the other hand, the endemic disease, with which it was the object of my former observations to render the profession more familiar, not only presents features which may be regarded as nearly characteristic, but occurs and prevails under circumstances which at once preclude all suspicion of metallic agency, and fix its origin on causes which can be assigned to locality alone. Since the date of those observations, I have had occasion in numerous instances to note a full confirmation of my views in this respect. One remarkable case has been already mentioned in which a succession of harassing attacks was permanently arrested by removal to a distant part of the island; but I have now to add, that the effect has been equally conspicuous when the change of residence has been merely from one part of the town to another.

A respectable young man, of unexceptionable habits, who has been for many years attached to my establishment as clerk, suffered repeatedly from this disease while living in a house which is large, comfortable, and airy, but situated, as I conceive, on a malarious spot. His marriage caused a change of abode, and from that time (now several years ago) his health has been particularly good. A near relation of my own was subsequently induced to occupy apartments in the same house from which I have just stated my clerk to have removed. Not very long afterwards he also was seized, for the first time in his life, with symptoms of dry belly-ache. I insisted upon an immediate change, and although it was effected only to a neighbouring street, he has experienced no second attack*.

It would be a fruitless occupation of time to multiply examples of this kind. They are sufficiently numerous to be unquestionable, and admit, as I apprehend, of but one explanation. The individuals thus relieved from a distressing complaint change nothing but their residence, their habits, their diet; even their liquors, in all probability, continue the same. To what, then, can we attribute the immunity thus secured to them but to the absence of some pernicious agent inseparable from the place or situation which it had become so necessary to abandon?

Even where the decided proof is wanting, which this marked result from a change of residence must be conceded to afford, it is often quite impossible to account for the occurrence of this form of ileus without reference to some local cause. The case of a respected friend already referred to furnishes an example of this kind. The ingestion of lead in this instance would seem (as I have stated before) beyond the range of possibility. The abuse of spirituous liquors (supposing them to act as poisons *per se*) is altogether out of the question; but the system was manifestly predisposed to this disease by long-continued derangement of the biliary functions.

Whence, then, (the question naturally arises) this hepatic disorder? I have no hesitation in ascribing it to the insidious operation of malarious influence; and in doing so, while I must not omit to acknowledge that the situation where this gentleman resides has generally been regarded as one of the healthiest in Antigua, I am called upon to declare that an attentive examination of the building and its locality has by no means tended to confirm that character in my own estimation. The site is admirably chosen, so far as beauty is concerned; and to a superficial observer, the elevation of the hill, its rocky composition, and dry marly surface, are calculated to convey the idea of its being absolutely faultless; but the adjoining valley and plain are undeniably malarious, and we are not now to learn how prone that subtle agent is to creep to the nearest height, and there to produce effects even more deadly than at the very margin of the swamp from which it is originally exhaled. Besides, not many hundred yards to the southward, and somewhat easterly of the dwelling, there exist two ponds, (one of considerable size) the half-dried and drying margins of which must, in this land of drought, be more or less injuriously active during the greater part of the year; and the construction of the building, which has no second story, (the sitting and sleeping rooms being all on one common floor, which is but slightly raised from the ground) would materially facilitate the action of malaria, supposing it to be generated and present from the sources I have described. This construction prevails too

* I have been reminded that this gentleman's servant, while residing on the premises in question, in attendance upon his master, was under the care of my assistant for the same disease occurring under precisely similar circumstances. He had not been previously subject to it, nor has he had any subsequent attack.

generally throughout the island, and is, I am persuaded, a fertile source of ill health, which is not sufficiently appreciated. Indeed, as it would be difficult, over a level and marshy country such as Antigua for the most part presents, to point out a single spot which could be pronounced with confidence to be altogether free from the influence of malaria; and as we have good reason to believe that this poison but seldom rises far from the surface in a concentrated form, the various degrees of salubrity remarked in different dwellings may perhaps (with some obvious exceptions) be attributable chiefly to varieties in their plan and elevation. My own observation and experience are by no means materially at variance with such an opinion. But to return to the point more immediately under discussion. I have detailed those circumstances which rendered it *probable* to my judgment that malaria might exercise considerable influence over this residence. That such was *really* the case, appeared to me established on tolerable proof when I learnt that there supervened on the first attack of dry belly-ache, from which the gentleman in question was convalescing, a painful affection of the leg, which, although at first considered to be gout, I had little hesitation in pronouncing to be neuralgia, from the absence of the usual gouty characteristics of heat, redness, and swelling; and I was still more satisfied of the correctness of my opinion, during a subsequent attendance, on ascertaining that another member of the family was at the same time labouring under well marked and obstinate neuralgia of the face, which only yielded at length to the united effect of sulphate of quinine and change of air. Our talented patient himself, although exceedingly reluctant to acknowledge that any thing seriously objectionable can attach to a favourite residence, is constrained to admit that he has fancied the bleakness of the air might be unfavourable to particular constitutions. The principle being admitted that a disease is the result of causes connected with certain localities, I shall not be disposed to cavil at immaterial distinctions respecting the nature of those causes while our knowledge in matters of this kind is so lamentably defective. That the simultaneous action of a broiling sun and chilling wind on our elevated sites, or the transition to cold damp nights from sultry days, so often experienced in our plains, may, by their conflicting effects, prove productive of biliary derangements, will scarcely be disputed. I shall afterwards have occasion to mention that Baron Larrey ascribes the colic of Madrid to the effect of sudden variations of atmospheric temperature, and I might even go so far as to ask whether we are altogether borne out in dogmatically asserting that Brocchi and others must be wrong? They maintain that malaria has no real existence; that the effects attributed to an imaginary poison proceed merely from a combination of physical causes; and until this ethereal agent shall become known by something more substantial than its effects, (although of an opposite opinion myself) I think much that is plausible may be advanced in support of their views*.

I may appear to have been tediously minute in dwelling upon the circumstances of an individual case, but I have done so because the remarks it has elicited are generally applicable. I have been anxious to shew how easy it is to be misled by the beauty and agreeable temperature of tropical situations, which nevertheless cannot bear the test of a scrutinizing survey.

Having thus satisfactorily traced particular cases of dry belly-ache to causes which are inseparable from the localities in which they have occurred, I shall now still further confirm the near relationship of this affection to others of the malarious family, by stating that it not only prevails as a local, but sometimes also as a general epidemic. Such was remarkably the case in the year 1828, when numerous instances presented themselves about the same period, not only in St. John's, but in different parts of the island; and, as commonly happens with particular epidemics, (which must be ascribed to some temporary augmentation of intensity in the ordinary exciting causes) the mortality was in greater proportion than usual, and the cases presented some peculiar features. The principal of these, which very soon arrested our attention—which I had never before, and have but rarely since observed to a similar extent—was the supervention of an inflammatory state of the mucous membrane of the larger intestines, as proved by dissection, giving

* The Last Days of a Philosopher, by Sir H. Davy, page 107.

rise to the comparatively early occurrence of profuse evacuations, which very rapidly exhausted the strength of the patient*. The symptoms, both premonitory and of the earlier stages, were the same as I have myself described to characterize this form of ileus; but so unmanageable were the evacuations, when they had once commenced, that it became necessary to exercise the utmost caution in prescribing the customary addition of purgatives to the mercurials and opiates, upon which (with early aid from the lancet when indicated) our experience speedily taught us almost exclusively to rely. The last stage of fatal examples during that epidemic bore undoubtedly no distant resemblance to the cholera which has of late so extensively prevailed; and I must take the opportunity of remarking, that from June to October of the year just past, when we were busily preparing for, and in daily apprehension of an eruption of that awful pestilence in its decided character, almost the only complaints we had occasion to treat were derangements of the bowels, chiefly under the form of diarrhœa, but in particular constitutions approaching more or less nearly to cholera, dysentery, or dry belly-ache; so that it appeared to me by no means difficult for an attentive observer to trace connecting links between these several diseases, a fact which goes far to establish their common origin from one widely spreading source.

Let me remark, in passing, that scarcely one of these cases proved fatal; and that, mild as they were, they have entirely disappeared. May we not then indulge a hope that we have already passed through our ordeal, and are to be mercifully spared a more familiar acquaintance with that dreadful scourge which has been elsewhere depopulating nations†?

* * * *

In taking leave of this part of my subject, it may be as well to remark that, as my present observations are to be regarded as merely supplementary to those formerly published, I have dwelt less upon the influence of intemperance than I should otherwise have done. The abuse of spirituous liquors I still consider to be not only a predisposing, but in numerous instances the sole cause of this disease, producing, like marsh poison, a specific effect upon the liver: so that on the possible occurrence of cases independently of malarious influence, Dr. Eberle and myself are entirely agreed. My opinion, however, is so far modified by enlarged experience, that whereas I formerly felt inclined to deem the agency of ardent spirits nearly essential in predisposing to this particular affection, I am now fully persuaded that the most abstemious among us can claim no absolute exemption on that account. In a word, I believe that malaria and alcohol are each of them independently competent to produce a disease which practically is in every respect the same.

* In the 2d and 3d volumes of the Gazette, Dr. Seymour has ably discussed "the Specific Effects of Atmospheric Poison" on various structures of the body, as connected with the production of disease.

† The author here quotes various authorities, which want of room compels us to omit.

THEORY OF THE INVERSE RATIO

WHICH SUBSISTS BETWEEN

THE RESPIRATION AND IRRITABILITY, IN THE ANIMAL KINGDOM.

By Marshall Hall, M.D. F.R.S.L. and E. &c. &c.

[From the Philosophical Transactions.]

[Concluded from our last.]

II. *Of the Measure of the Irritability.*

The problem to be next determined is that of the degree of irritability of the muscular fibre, and especially of the heart. This question is beset with scarcely fewer or less difficulties than that of the quantity of respiration, whilst it involves far greater errors and more discrepancy of opinion on the part of physiologists.

Even Baron Cuvier has fallen into these errors. It will be shortly demonstrated that the degree of irritability is, in every instance, inversely as the quantity of respiration. Yet M. Cuvier, in a remarkable paragraph, states the very contrary, and even speaks of that which is the exhauster, as the repairer, of the irritability; whilst, on the other hand, he makes statements which appear to me at variance with this very opinion. In the Anatomie Comparée (tome i. p. 49), this celebrated writer observes, "Les expériences modernes ont montré qu'un des principaux usages de la respiration est de ranimer la force musculaire, en

rendant à la fibre son irritabilité epuisée." See also tome iv. p. 301. Similar observations are also made in M. Cuvier's more recent work, the Règne Animal: "C'est de la respiration que les fibres musculaires tirent l'énergie de leur irritabilité," tome i. p. 57, 2d edit. "C'est la respiration qui donne au sang sa chaleur, et à la fibre la susceptibilité pour l'irritation nerveuse." tome ii. p. i. On the other hand, speaking of the mollusca, (tome iii. p. 3,) M. Cuvier observes of those animals of low respiration, "L'irritabilité est extrême dans la plûpart." The same term is, in fact, used in two distinct senses, in these paragraphs.

No further proof can be necessary of the extreme vagueness and incorrectness of the prevailing notions and expressions of physiologists in regard to this subject. All this will appear still more extraordinary when the law, that the quantity of respiration and the degree of the irritability are, in fact, inverse throughout all the series, stages, and states of animated being, is clearly established.

It is well known that the irritability of the heart and of the muscular fibre in general, is greater in the mammalia than in birds, and in reptiles and the amphibia than in the mammalia, whether we judge of it by the force and duration of the beat of the heart, exposed to the stimulus of the atmospheric air, or by the contractions of the other parts of the muscular system. Now this is precisely the order of the quantity of respiration in these animals, as ascertained by the pneumatometer, inverted. It is essential, in accurately determining the question of the irritability of the muscular fibre, to compare animals of the same class *inter se;* birds and the mammalia, reptiles and the amphibia, fishes, the mollusca, &c. must be compared with each other, both generically and specifically. It is especially necessary to compare the warm-blooded, the cold-blooded, the air-breathers, and the water-breathers, in this manner. However the different classes may differ from each other, there are differences in some of the species of the same class, and especially that of fishes, scarcely less remarkable.

Great differences in the duration of the beat of the heart, are observed in the fœtal, early, and adult states of the higher animals; this duration being greatest in the first, and least in the last of these conditions. The order of the quantity of respiration is inverse.

The law of the irritability being inversely as the respiration, obtains even in the two sides of the heart itself, in the higher classes of animals. The beat of the heart removed from the body, does not cease at the same time in the walls of all its cavities, or of its two sides: but, as Harvey observes, "primus desinit pulsare sinister ventriculus; deinde ejus auricula; demum dexter ventriculus; ultimo (quod etiam notavit Galenus) reliquis omnibus cessantibus et mortuis, pulsat usque dextra auricula."

Even in this case the irritability is greatest in the part in which the respiration is least.

It was shewn by Hook, in the early days of the Royal Society, that if, the respiration being suspended, an animal appeared to be dying, the beat of the heart and the signs of life were speedily restored, on performing artificial respiration, or even by forcing air through the trachea, bronchia, and pulmonary air-cells, and allowing it to escape through incisions made through the pleura.

It was, in the next place, clearly shewn by Goodwyn, in one of the most beautiful specimens of physiological inquiry in any language, that, in suspended respiration, it is the left side of the heart which first ceases to contract, the right side still continuing its function for several minutes, until the supply of blood may be supposed to fail.

The facts detailed by Harvey had shewn that the left side of the heart was endued with less irritability than the right; the experiment of Hook, that respiration restored the action of the heart, if it had previously ceased; that of Goodwyn, that this cessation and restoration of functions were observed in the left side of the heart. It was obvious, on the other hand, that the respiration belongs, as it were, to the left side of the heart.

It appears plainly deducible from these facts, that in circumstances and structures the most similar, the respiration is accurately inversely as the irritability.

For the sake of a comparison with the hybernating animal, the object of which will be explained hereafter, I thought it right to repeat this experiment.

Before I proceed to detail the result,

I may just describe an easy method of performing that part of it which consists of artificial respiration. A quill is firmly fixed in the divided trachea; a small hole is then cut into that part of the quill which is external; Read's syringe is then adapted to the other end of the quill. At each motion of the piston downwards, the lungs are distended; whilst the piston is raised, the air escapes through the opening in the quill, producing expiration. The experiment, therefore, only requires the common action of the syringe.

The experiment itself answered my expectation. During the cessation of respiration, the left ventricle ceased to beat, the right ventricle retaining its function; on renewing the respiration, the left ventricle resumed its beat. It appears from this experiment, that from want of a degree of irritability equal to that of the right ventricle, and its own proper stimulus of arterial blood, the left ventricle ceased its contractions. The function of the right ventricle must soon cease in consequence, from want of a supply of blood.

These facts prove that arterial blood is the necessary stimulus of the left side of the heart) its irritability being low; but that venous blood is a sufficient stimulus of the right, from its higher irritability: the phenomena plainly flow from the law, that the quantity of respiration and the degree of irritability observe an inverse ratio to each other, and from the facts on which that law is founded. In this double sense, besides that of distinct cavities, the mammalia have, therefore, two hearts; and as the highly aerated blood of the left is the peculiar property of birds and the mammalia, so the highly irritable fibre of the right may be compared to that of the heart of reptiles and the fishes.

Except for the objection to new terms, the left side of the heart might be termed arterio-contractile, and the right veno-contractile; the first being stimulated by arterial, and the second by venous blood.

It is quite obvious that the heart will bear a suspended respiration better, the more nearly its irritability approaches to that which may be designated veno-contractile. *The power of bearing a suspended respiration thus becomes a measure of the irritability.* It is expressed, numerically indeed, by the length of time during which the animal can support a suspended respiration; a conclusion of the highest degree of importance in the present inquiry.

Birds die almost instantly on being submerged in water; the mammalia survive about three minutes, the reptiles and the batrachia a much greater length of time.

The unborn fœtus, the young animal born with the foramen ovale open, the reptile, the mollusca, having all a state of the heart approaching to the veno-contractile, bear a long-continued suspension of the respiration, compared with the mature animal of the higher classes.

But the most remarkable fact deducible from this reasoning is the following: if such a case existed as that of the left side of the heart being nearly or absolutely veno-contractile, such an animal would bear the indefinite suspension of respiration; such an animal would not drown though immersed in water. Now there is precisely such a case. It is that of the hybernating animal. It will be shown in a subsequent paper, that in the state of perfect hybernation the respiration is nearly suspended; the blood must, therefore, be venous. Yet the heart continues to contract, although with a reptile slowness. The left ventricle is, therefore, veno-contractile, and in this sense, in fact, sub-reptile. The case forms a sole exception to the law pointed out by Harvey, that the left ventricle ceases to contract sooner than the right. If in the hybernating animal the left ventricle does cease to beat sooner than the right, it is only in so slight a degree as to be referred to the greater thickness of its parietes, and the slight degree in which respiration still remains. It is obvious that the foregoing statement must be taken with its due limitations. Venous blood is unfit for the other animal purposes, even though it should stimulate the heart to contraction.

Another mode of determining the degree of irritability is the application of stimuli, as galvanism. A muscular fibre endued with high irritability, as that of the frog, and the galvanic agency, are mutually tests of each other.

A third criterion and measure of the irritability is afforded by the influence of water at temperatures more or less elevated, in inducing permanent contraction of the muscular fibre.

There are two other properties of animals which depend upon the varied

forms of the inverse ratio which exists between the respiration and the irritability. The first is *activity*, the second *tenacity of life*.

The activity which, I believe, M. Cuvier has confounded with the irritability, is generally directly proportionate to the respiration, and intimately depends upon the condition of the nervous system resulting from the impression of a highly arterial blood upon its masses, and not upon the degree of irritability of the muscular fibre. It is the pure effect of high stimulus.

To show that M. Cuvier has blended the idea of the irritability of the muscular fibre with that of the activity of the animal, it is not only necessary to recur to the passages already quoted from that author, and to adduce the observations with which they are connected:—"On vient de voir à quel point les animaux vertèbrés se ressemblent entre eux; ils offrent cependant quatre grandes subdivisions ou classes, caractérisées par l'espèce ou la force de leurs mouvements, qui dépendent elles-mêmes de la quantité de leur respiration, attendu que c'est de la respiration que les fibres musculaires tirent l'énergie de leur irritabilité." —"Comme c'est la respiration qui donne au sang sa chaleur, et à la fibre la susceptibilité pour l'irritation nerveuse, les reptiles ont le sang froid, et les forces musculaires moindres en totalité que les quadrupèdes, et a plus forte raison que les oiseaux; aussi n'exercent-ils guère que les mouvements du ramper et du nager; et, quoique plusieurs sautent et courent fort vite en certains moments, leurs habitudes sont généralement paresseuses, leur digestion excessivement lente, leurs sensations obtuses, et dans les pays froids ou tempérés, ils passent presque tous l'hiver en léthargie."

It is extraordinary that M. Cuvier should have associated the elevated temperature of the blood with a high irritability of the muscular fibre, when they are uniformly separated in nature, and are, indeed, absolutely incompatible in themselves. The muscular fibre of the frog is so irritable, that it would instantly pass into a state of rigid and permanent contraction, if bathed with a fluid of the temperature of the blood of birds.

The same confusion of ideas on the subject of the activity of the animal and the irritability of the muscular fibre prevails, I believe, amongst our own physiologists; at least, in conversation with two, who may rank amongst the first, I found that they had uniformly considered the respiration and the irritability to be directly, instead of inversely, proportionate to each other.

That singular and interesting property of the lower orders of animals termed tenacity of life, is, on the other hand, distinctly associated with a high degree of irritability of the muscular fibre. This property may be defined as consisting of the power of sustaining the privation of respiration, the privation of food, various mutilations, divisions, &c. It is greater as we descend in the zoological scale. As activity depends upon the presence and condition of the spino-cerebral masses acted upon by arterial blood, tenacity of life depends upon the diminution or absence of these masses and of this highly arterialized blood, being greatest of all in those animals which approach a mere muscular structure. Almost the sole vital property then remaining is the irritability; and this property does not immediately suffer from division.

It is possible to reduce some of the reptile tribes to a state approaching that of animals still lower in the scale, by removing, by very slow degrees, successive portions of the nervous masses. This is most readily done in animals in which the respiration is already low, and the irritability high, as in the fœtus, in the very young animal, in the reptile, &c. as in the experiments of Legallois, M. Serres, myself, &c.

There is, even in animals most tenacious of life, one kind of mutilation—one kind of injury not well borne. As the blood is in its lowest condition of stimulus, it cannot be withdrawn with impunity; frogs even soon perish if their blood be allowed to flow. As the irritability, on the other hand, is high, certain stimuli, as galvanism, slightly elevated temperatures, &c. are speedily fatal. The batrachia are promptly destroyed by immersion in water of a temperature of 108° of Fahr. and some fish and crustacea perish in great numbers under the influence of a thunder-storm. It is a singular fact, that the fish alone, whose food is found amongst animals of a high irritability, should possess an electrical organ for the destruction of its prey.

OBSERVATIONS AND EXPERIMENTS ON THE BLOOD.

To the Editor of the Medical Gazette.

Sir,

If the subjoined observations, and notes of experiments on the blood, appear sufficiently important, I shall feel obliged by your inserting them in the Gazette. The subject presents many salient points for further investigation, but I regret that want of sufficient leisure prevents my making this paper more complete.

The experiments detailed were undertaken to satisfy myself on some disputed points. They have been conducted with the greatest care, and repeated under the observation of persons fully competent to judge of their strictness.—I am, sir,

Your most obedient servant,
G. H. Hoffman.

It seems desirable that a concise account of some of the theories by which the phenomena of respiration, the causes of animal heat, and the difference of colour between arterial and venous blood are most commonly explained, should precede a detail of experiments made in the attempt to ascertain which of them approaches nearest the truth.

Lavoisier, and others, with some modification, held that surplus carbon is the cause of the black colour of venous blood; that it is lost in its passage to the lungs by combining with the oxygen of the air, to form carbonic acid gas, which is expired; that the calorie, liberated in the process, is circulated by the arterial blood, and thus communicates heat to the whole system. Some part of the oxygen of the air, he believes, remains combined in the arterial blood, and converts the iron it contains into a red oxyde, giving colour to the fluid.

Mr. Ellis supposed that carbon is the cause of the black colour of venous blood; that it is secreted in the form of a vapour by the exhalants of the lungs into the air-cells, and there combines with the oxygen of the air, to form carbonic acid gas. He denies the existence of any gas in the blood, and requires proof that air could pass through the membrane of the air-cells, and the parietes of the vessels.

Mr. Brande asserts that carbonic acid gas exists, both in venous and arterial blood, to the extent of two cubic inches in an ounce.

Dr. Scudamore obtained less than half a cubic inch of carbonic acid gas from six ounces of venous blood.

Dr. John Davy and others deny the existence of carbonic acid gas in the blood.

Sir Humphry Davy's experiments appear to shew that some of the oxygen and nitrogen inspired is retained; but Allen and Pepys, on repeating the experiments, arrived at an opposite conclusion.

Still later, Dr. Edwards, by causing animals to expire in pure hydrogen, proved incontrovertibly that carbonic acid gas may be given out in the lungs without the access of oxygen to combine with the carbon of the blood in its passage through them. He considers the carbonic acid gas a secretion, and adduces a mass of evidence to prove that animal heat bears a direct ratio to respiration.

Sir Humphry Davy supposed that the carbon of the blood struck a bright red dye with the other component parts, and that the colour became dark in the veins by the calorific rays of light abstracting the oxygen from the carbon, and thus reducing it to a dark pigment.

Dr. Crawfurd's experiments go to prove that arterial possesses a greater capacity for caloric than venous blood, and common air than carbonic acid gas. From this he inferred that when carbonic acid gas is generated in the lungs, carbonic acid gas, having a less capacity for heat than air, heat is evolved; but as arterial has a greater capacity for heat than venous blood, the heat combines with arterial blood in a latent state, and becomes sensible heat when the arterial blood changes to venous in the capillary system. Dr. Crawfurd's data are denied by Dr. Davy and others.

Mr. Brodie appeared to prove that animal heat depends, not on the circulating, but the nervous system; for on removing the brain of an animal, and practising artificial respiration, its heart continued acting, and the usual chemical changes took place in the lungs; but the temperature decreased more rapidly than in an animal killed in the same way in which respiration was not maintained.

But Dr. Le Gallois and Dr. W. Philip,

by modifying the experiment, arrived at an opposite conclusion.

Dr. Stevens' theory is, that the colouring matter of the blood is a peculiar animal substance, which has the property of striking a bright red dye with salt; and as salt exists in the serum, that it is the cause of the red colour of arterial blood; that arterial blood also contains oxygen gas in a free state, but contributing nothing to its colour; that in the capillary system this free oxygen combines with the waste carbon of the solids, forming carbonic acid gas; the carbonic acid gas thus formed colours the venous blood black, notwithstanding the salt it contains; on the arrival of this gas at the lungs, it is attracted to the oxygen of the inspired air, through the parietes of the air-cells and vessels, with amazing force; the venous blood immediately regains its arterial tint, and carbonic acid gas being expired, the inspired air is attracted into the arterial blood, to perform the same round; that it is in the capillary system, where the oxygen combines with carbon, to form carbonic acid gas, that heat is evolved. In support of this theory he adduces the facts, that excess of salt immediately reddens venous blood; that on immersing red coagulum in water, the salt is dissolved in the water, the clot becomes black, and that without salt oxygen will not redden it; that carbonic acid gas will blacken arterial blood; that the blackened blood will again become red on exposure to atmospheric air, which attracts the carbonic acid gas from it; and lastly, he proves that carbonic acid gas is attracted with amazing force by the air, even through a dense animal membrane, citing an experiment in which carbonic acid gas being inclosed in a vessel by means of moist bladder, it passed through the bladder so much faster than the air could enter that the bladder was burst in by the pressure of the atmosphere.

It seems that the priority of the discovery of the power with which gases pass through animal membranes, is due to Dr. Stevens: but, at least, we are indebted to Dr. Mitchell, of Philadelphia, for investigating the laws of the penetration of gases for membranes, and each other. Dr. Mitchell's theory of respiration is, in his own words, "that oxygen penetrates slowly the membranous tissue, to infiltrate and brighten the blood; carbonic acid is immediately formed, and being a gas different from the remainder of the air, yet in the air-cells, its tendency is to return to penetrate that air, and thus to escape through the trachea. The oxygen gas enters, because there is enough oxygen behind to permit that, and it is also an observed fact. The carbonic acid formed makes its escape, because invited by the molecular tissue of the atmosphere. Keeping up any reference to known facts, we can scarcely doubt the truth of our explanation, or venture to adopt any other. The investigation of John Davy, and our careful repetition of his experiments, with others fully as conclusive, leave no doubt of the entire absence of carbonic acid from the blood. Our theory does not account for the production of animal heat, but it is presumed no well-informed physiologist now seeks for it in the action of the lungs, or the process of decarbonization. The simple fact, that cold-blooded animals breathe without any increase of temperature, proves that mere breathing to any amount will not produce heat."

Lastly, a writer in the Lancet, in reviewing Dr. Stevens' work, denies that carbonic acid will blacken red blood, or that water will extract salt from the coagulum of venous blood. He asserts that several clots, of 1000 grains each, after maceration in water for four hours, were found on analysis to contain the same portion of salt as coagulum which had not been so treated. That he extracted some carbonic acid gas from a clot of venous blood by means of the air-pump, and the arterial tint was not restored, which he infers it should be, by Dr. Stevens' theory, on abstracting the carbonic acid, and leaving the normal proportion of salt. He considers it incumbent on Dr. Stevens to prove the existence of oxygen gas in arterial blood, which has not yet been done. A writer in the Dublin Journal exposed a clot of venous blood in an exhausted receiver; it remained dark, and on admission of atmospheric air it became red. These objections to Dr. Stevens' theory the reviewer of his book in the Lancet thinks fatal.

Such are the discordant inferences and opinions on the phenomena of the circulation, many of them put forth by the highest authorities and the most practised analysts. While the following ob-

servations, if confirmed, will shew clearly that some of them are wholly unfounded, it is hoped that they may, at the same time, tend to elucidate the physiology of that most important function.

It was proposed to ascertain, by the experiments now to be related, 1st, whether carbonic acid gas will blacken red blood; 2dly, whether any, and what gases do exist in venous and arterial blood; 3dly, whether salt without air, or air without salt, will redden black blood; 4thly, whether the air-pump is competent to extract from the blood the whole of any gas with which it may be impregnated; and lastly, the effect of some gases upon the colouring matter of blood, in combination with its normal proportion of salt, and also with excess of salt.

Among the facts from which Dr. Stevens argues in support of his theories, are these; that all acids blacken red blood, and that the presence of carbonic acid is the cause of the black colour of venous blood; whereas the reviewer of his work in the Lancet says that carbonic acid will not darken dilute solutions of colouring matter. As the question is, whether carbonic acid gas is the cause of the black colour of venous blood, and not if it will blacken hæmatoscine diluted, or apart from the other component parts of the blood, it was examined as nearly in its natural state as was compatible with its permanent fluidity.

Experiment I.—Some venous blood in a fluid state was agitated with angular pebbles in a glass vessel. When the fibrine had coagulated, the fluid part, consisting of colouring matter suspended in its own serum, was decanted. This, when well shaken, in contact with atmospheric air, became of a beautiful red colour. Two test-tubes were half filled with this red fluid. Meanwhile, a vessel, in which carbonic acid gas was generated from marble and nitric acid, was attached to a Wolfe bottle containing a solution of carbonate of soda. The gas was passed through this, and then allowed to issue in a jet from the *capillary orifice* of a glass tube. One of the test-tubes containing the florid colouring matter was now held under the jet of carbonic acid gas, so that the gas bubbled through it. In a few seconds it became darker, and finally quite as black as venous blood. This tube was removed, and the black fluid agitated with atmospheric air, while the other tube was placed under the jet; like the first, it became dark, while that had regained its beautiful arterial tint. This was repeated several times with the same blood, without affecting its capability of change by repetition. The colour could be turned black by the gas, or red by agitation with air, alternately, with the greatest ease.

Experiment II.—Some of the opaque florid solution was diluted with an equal bulk of water; it very quickly became transparent, and of a dark colour, but was rendered still darker by the stream of carbonic acid gas, and the tint it possessed previous to the acid impregnation was restored, as in the foregoing experiment, by agitation with air.

It now became a question whether carbonic acid gas is absorbed by the blood in its change from red to black, and in regaining its arterial colour, if carbonic acid gas is merely abstracted, or if air or oxygen is also added.

Experiment III.—A test-tube, filled with the solution, impregnated with carbonic acid gas, after being exposed to the air to allow the escape of any uncombined gas, was inverted in a capsule, and placed under the receiver of a good common air-pump: on exhausting the receiver, a bubble of gas, the size of a pin's head, was given out.

Experiment IV.—A test-tube, filled with the fluid which had become red by agitation with air, placed under the same circumstances, gave out a very minute bubble of air.

It cannot be doubted that carbonic acid gas and air are contained in the solutions in much larger volumes than we should be led to suppose by the result of the two last experiments; but no one will be surprised at the inadequacy of the air-pump to afford the evidence we require who has perused Dutrochet's "Nouvelles Recherches sur l'Endosmose," &c., and Dr. Mitchell's beautiful set of experiments on the "Penetrativeness of Fluids," in the Journal of the Royal Institution for August 1831; or who reflects on the immense power with which fresh burnt charcoal absorbs some gases. Dutrochet proves (page 52) that liquids of different densities, having no mutual *chemical* action, are attracted towards each other with a force equal to four atmospheres and a half. Dr. Mitchell proves that gases "penetrate each

others' molecular cavities with a force certainly equal to two, and possibly equal to forty atmospheres;" and though neither has measured the degree of force in the attraction between gases and liquids, the probability is, that as liquids attract each other with a force equal to four and a half, and as the power of *mutual* penetration of gases equals more than two atmospheres, gases and liquids attract each other with a force more than equal to *one*; and, consequently, only such portion of gas as might be mechanically suspended in the liquid, or with which it was impregnated beyond the point of equilibrium or equivalent diffusion of the "*new power*," could be extracted by the air-pump. Dr. Mitchell says that his "experiments on the mutual action of gases and liquids shew, that although a gas may, when presented to a liquid for which it has no chemical affinity, penetrate its molecular cavities, yet it will again leave it to join any gas whatever which is brought into connexion with the liquid.

We must not then infer that no *free* gas is contained in a liquid because we are unable with the force of one atmosphere, exerted by an imperfect machine, to separate from it a gas with which we suspect it to be impregnated, but should avail ourselves of the immense power of attraction which gases have for each other to extricate any gas which may be combined. It is, indeed, rather surprising that Dr. Mitchell, who has no doubt of the entire absence of carbonic acid gas from the blood, should not have applied his own law, as stated above, to the analysis of the blood for gases, instead of contenting himself with the air-pump.

Experiment V.—A test-tube, filled with the solution impregnated with carbonic acid gas, after having been five minutes under the receiver of the air-pump, fully exhausted, was inverted, and as much atmospheric air as occupied two-thirds of the tube passed in. The air and blood were then agitated together; a diminution of volume took place, which was shewn by the ascent of the mercury in the tube. The unabsorbed gas rendered lime-water turbid, giving evidence that the blood contained more carbonic acid gas than was extracted by the air-pump.

Experiment VI.—A test-tube was filled with the solution which had been agitated with air, and exposed in vacuo. Carbonic acid gas was passed in, as in the former experiment, and agitated with the red fluid; it became black, and a most remarkable absorption of the gas took place, and what remained uncombined was found to contain oxygen gas.

In experiment 5, the oxygen of the air brought into close and extensive contact with the blood by endosmosis has, it is possible, a greater chemical attraction for the carbon of the blood than the elements with which the carbon may be in combination, and the carbonic acid gas may be thus formed, giving rise to a fallacious notion that free carbonic acid gas was contained in this blood even after having been subjected to the action of the air-pump. To avoid this source of error, the same experiment was repeated with hydrogen gas, instead of atmospheric air, with the same result.

Experiment VII.—Blood taken from a vein of the arm was received in a phial of pure hydrogen gas, great care being taken to prevent access of atmospheric air. After agitating this blood in contact with hydrogen gas, the gas was found to render lime-water turbid, and not to be inflammable, shewing the presence of a considerable quantity of carbonic acid gas, which the hydrogen had attracted from the venous blood.

Experiment VIII.—A pint-bottle, filled with florid solution, which had been under the air-pump, was inverted, and pure hydrogen gas passed in till one-half was displaced. The whole was well agitated, and the solution became dark; and on analysis, the hydrogen was found to have attracted nearly one cubic inch of oxygen gas.

It was now desirable to know if oxygen possesses the property of rendering the blood red, positively or negatively, by displacing the cause of its blackness, carbonic acid, thus allowing the saline matter in the serum to arterialize it.

Experiment IX.—Pure arterial blood was suffered to coagulate. On cutting it as soon as it became solid, before the serum had separated from it, it was found to be of a beautiful red colour throughout. After it had remained till the erassamentum had fully contracted, it was still red where in contact with the serum; but on again cutting it, it was dark internally. This is merely a verification of part of Dr. Stevens' experiments, although he omits to say that it

was arterial blood which he was examining. Now manifestly the clot is in contact with very much less salt than when it was equally diffused throughout the saline serum, but in contracting, it would squeeze out the air it might contain, as well as the serum; therefore we have to shew to which the red colour is due.

Experiment X.—Some coagulum of venous blood, having the serum carefully wiped from it, was exposed to the air: it remained black.

Experiment XI.—Some coagulum of venous blood was allowed to become red on its surface by being moistened with serum, and exposed to the air; on being immersed in distilled water, it very quickly became dark.

Experiment XII.—This black clot, after maceration in water, was exposed to the air, and did not become red.

Experiment XIII.—The same clot, immersed in pure oxygen gas, remained black.

Experiment XIV.—It was placed in a strong solution of salt, deprived of its air by boiling, and immediately became beautifully red.

Experiment XV.—A solution of salt was well boiled to expel the air; cooled in vacuo, that no air might be absorbed in cooling, and a portion taken up by means of a glass-tube, closed at one end by the finger. On immersing this tube in the black solution just removed from the jet of carbonic acid gas, and then taking away the finger, the salt ran from the tube to the bottom of the vessel containing the dark solution, which became red. Here no air could have been present. This would appear satisfactory; but the reviewer of Stevens on the Blood, Lancet, page 662, vol. ii. 1832, states that maceration in water for four hours will not deprive the crassamentum of its mean proportion of salt, and infers that it cannot be the abstraction of salt which causes the black colour, if it still preserve its normal quantity. Now it was shewn above that the clot of arterial blood is black internally after it has fully contracted; consequently, as it was red throughout, at its first coagulation, it must, in contracting, have separated something which gave it a red colour, and this something was still contained in the serum, because where in contact with the serum it was still red. This cause must either be the air, or the salt which the serum contained, or both; at least we will presume so, as no other substances are at present supposed to have the property of reddening blood. Experiments 10, 12, and 13, shew that air alone will not redden colouring matter; and experiments 14 and 15 shew that salt alone will. Again, as it is only the surface of the venous clot that turns red on exposure to air under serum, or black under water, it is not a fair experiment to macerate one large clot of 1000 grains, as the reviewer in the Lancet did, to the great bulk of which the water has no access, and then to analyse the whole, to ascertain how much salt the water has extracted. The depth to which water uninvited will penetrate the coagulum must be slight, especially if not stirred; and the quantity of salt displaced consequently so small as to be inappreciable compared to that in the clot. It will also be observed that the reviewer does not give a comparative analysis of the different portions of the same clot before and after maceration in water, but refers to the mean standard, although it is possible that the difference between what had not, and what had been macerated in one large clot, would have been so slight as to have eluded so accomplished a chemist as the reviewer. The fairer way to ascertain the fact is to extend the surface of the clot to be macerated.

Experiment XVI.—A portion of firm crassamentum of venous blood was cut into slices, about two lines in thickness; these slices were allowed to macerate in distilled water for twelve hours; they were then slightly dried by being placed a few seconds on a napkin. 500 grains, dried and ignited in a platinum capsule, afforded ·75 of a grain of matter, entirely soluble in water, having the usual properties of the salts of the blood.

Experiment XVII.—Another portion of the same crassamentum, dried on a napkin in a similar manner, without being macerated in water, weighing also 500 grains, was dried and ignited in the same vessel; it gave 1·85 grains, possessing the same properties as the ·75 of a grain of the last experiment.

Experiment XVIII.—Some black clot was exposed to the air under serum for an hour and a half; it became red on its surface; the depth to which the red colour penetrated was noted by

means of a sharp cataract knife. With much care, and some exertion of patience, 1000 grains were sliced in small pieces, as near the thickness of the florid stratum as possible. 500 grains of this were slightly dried as before on a towel; and to shew how much salt would be expressed or lost by slicing, were analysed as before. The 500 grains contained 1·15 of salt. The other 500 grains of sliced coagulum were immersed in water, and occasionally stirred for an hour and a half; it became quickly black, and the salt it contained on maceration after that period, by means of Black's delicate balance, was found to be ·085 grains, or almost none. In experiment 14, we saw that excess of salt would make the blood highly florid; but, as before remarked, we are called on to examine it in the proportion in which it exists in the blood.

It seemed now desirable to note the action of some other gases on the colouring matter of the blood, and to observe if an excess of salt would redden the blood in spite of the blackening effects of carbonic acid and hydrogen gases.

Experiment XIX.—A solution of colouring matter in serum, after being well agitated with air, was florid; but on passing a stream of pure oxygen gas through it, from a minute capillary orifice, the tint became decidedly brighter.

Experiment XX.—Nitrogen gas, passed through the florid solution in a similar manner, darkened it in a very perceptible degree, but did not blacken it like carbonic acid gas; and the solution impregnated with atmospheric air held a middle tint between this and that impregnated with pure oxygen gas.

Experiment XXI.—Nitrogen gas, passed through the dark solution impregnated with carbonic acid gas, brightened its tint almost to the colour of experiment 20.

Experiment XXII.—Hydrogen, passed through the florid solution, blackened it.

Experiment XXIII.—Hydrogen gas was passed through the dark solution; it remained dark.

Experiment XXIV.—A solution of salt, impregnated with hydrogen gas, was mixed with the solution of colouring matter in serum, also impregnated with hydrogen gas, so that no atmospheric air could be present, unless in pouring from one vessel to the other: it instantly became red. This was again darkened by a farther dose of hydrogen gas.

Experiment XXV.—Muriate of soda, in powder, added to the dark solution of colouring matter, turned it red.

Experiment XXVI.—Carbonic acid gas, passed through this red solution with excess of salt, turned it literally black, and it was not possible, either by continued agitation with air, or by farther addition of salt, to make it red.

Experiment XXVII.—A solution of salt, impregnated with carbonic acid gas, was mixed with the dark colouring matter: it became darker, and could not be made red by agitation with the air.

The last four experiments were repeated with carbonate of soda and with chlorate, in the place of muriate of soda, with a similar result.

General Observations and Deductions.

Experiment 1 confirms the known fact, that carbonic acid gas will blacken red colouring matter; verifies Dr. Stevens' assertion that the action of the atmospheric air will again redden it; and further shews that this property is not affected by repetition.

Experiments 5 to 8 shew that carbonic acid and oxygen gases have an attraction for blood of more force than one atmosphere; at least, that the whole, or even the greater part, of the gases cannot be extracted by the air-pump. Consequently, when the reviewer of Dr. Stevens in the Lancet, page 723, placed a black clot under the air-pump, and it gave out enough carbonic acid gas to precipitate lime-water, he ought not to have expected it to turn red, because enough carbonic acid gas would have been left behind to blacken the clot even if it contained enough salt to redden it, which was not the case, as in experiment 9 the *fully* contracted arterial clot was shewn to be black; and in a subsequent one, that it was the want of salt, and not of air, that caused its black colour. The experiment detailed in the Dublin Journal, copied on the same page, will receive an explanation by the same facts. The surface of the clot must have been moistened with serum, as well as impregnated with carbonic acid gas; for if it had been washed in water, or even wiped clear of the serum, (experiments 10, 12, 13) it could never have become

red. To extract the carbonic acid gas, it was subjected by the experimenter to the force of one atmosphere; (supposing the air-pump perfect) it remained black, and on admission of atmospheric air, acting with more than the force of two atmospheres, the carbonic acid gas was removed, some air added, and it became red. Professor Grahame shews (Med. Gaz. pres. vol. p. 173) that the law holds with regard to gases which Dutrochet had before developed for fluids; that when there is an endosmose, there is also an exosmose, till the point of equilibrium is gained; and that the equilibrium between carbonic acid gas and air is 0·812 volumes of the former, and 1·00 volumes of the latter. Then according to the laws developed by Dr. Mitchell, that gases attract each other more strongly than they do liquids; that they attract each other with equal force, but that their rates of penetration are unequal; that a given quantity of carbonic acid gas penetrates a membrane in 5½ minutes, which in the case of oxygen gas would require one hour and 53 minutes, or in that of nitrogen gas three hours and a quarter; it follows, then, as a clear consequence of these laws, that if venous blood, impregnated with carbonic acid gas, arrive on one side of the membrane of the air cells of the lungs, while atmospheric air is on the other, an interchange must take place; and supposing for an instant the trachea to be tied, the three gases would mix according to Professor Grahame's law of "Equivalent Diffusion." And as the blood has an attraction also for these gases, it would be impregnated with them in the same proportion. But carbonic acid gas has the greatest *rate* of penetration of the three, and would be the first to pass from the blood into the air-cells to join the other gases; the oxygen being next in its *rate*, would then penetrate the blood, but more slowly; and, lastly, the nitrogen. But as in respiration the aërial contents of the chest are constantly changed, and there is always a fresh supply of air, its molecular cavities would be instantly penetrated by the carbonic acid gas from the venous blood, which would instantly become arterial, and have its colour heightened by the oxygen which would be attracted into it, to supply the place of the carbonic acid gas which it had lost, and possibly a small portion of nitrogen gas would also enter. But the last-mentioned gas has an exceedingly slow rate of penetration, so that none would pass till all the oxygen of the air in the air-cells was attracted in; and respiration being constant, this would only take place when respiration was infrequent, or where the membrane of the lungs presented a very large surface. Even allowing that no nitrogen enters the blood, it still performs an important duty. The power of attraction of gases is equal. Nitrogen, therefore, attracts the carbonic acid gas from the venous blood; and as their rates of penetration differ, and nitrogen is the slowest, it would allow the oxygen to replace the carbonic acid gas in about the same volume, while the carbonic acid gas escaped with the nitrogen through the trachea. This is the theory Dr. Mitchell must have adopted, but that he did not admit the presence of carbonic acid gas in the blood.

In experiments 7 and 8, it is supposed that the application of Dr. Mitchell's law, above described, announces a new method of analysis for the gaseous contents of liquids, which will render it by no means difficult to detect oxygen in arterial blood, should it exist there. To exclude all possible access of air, a tube must be inserted in an artery of some large living animal, and the blood received from the other end, over mercury, or in a vessel of hydrogen gas, and the method of experiment 7 proceeded in. That arterial blood does contain oxygen gas is highly probable, but I regret that I have not had an opportunity of proving the fact by experiment.

Experiments 15, 16, 17, shew that water will extract salt from that part of a firm clot of blood which alters in colour by exposure to air under serum; namely, from its surface; and as in experiments 10 to 15, exposure to air or oxygen gas, after maceration in water, would not redden the clot, and salt with air would, the chain of evidence proving that the salts of the serum are the cause of the red colour of arterial blood, seems complete.

Experiments 18 and 24 shew, that although salt alone, in excess, will render the colouring matter highly florid, yet that oxygen has a positive power to increase the redness of blood in which there is the normal proportion of salt.

From this fact an important practical

inference may be drawn, bearing on the treatment of cholera. It seems allowed, among the many differences of opinion on the physiological points which this disease involves, that red blood is the natural stimulant to the left side of the heart; that in cholera all the blood is black, and that it is desirable to get it red. With this view, several gentlemen have advocated the inhalation of oxygen gas; but it has been proved that oxygen gas without salt will not redden blood, and in cholera attended with purging, the salt quickly leaves the blood. Here, then, the oxygen gas alone could be of no use; but as it will increase the redness of colouring matter when the natural proportion of salt is present, the inference is obvious, that inhalation of oxygen gas would be a useful adjuvant to saline venous injections, or any other mode of introducing salt into the system.

Experiments from 19 to 26 shew, that while nitrogen gas will darken red blood, it will also redden black blood; probably possessing no action on the colouring matter of the blood itself, it acts by attracting oxygen from red, and the carbonic acid from venous blood, and allowing the colouring matter to assume the tint it would have in serum without any gaseous impregnation; but this requires to be determined by further experiments.

Though at present I can offer no explanation of it, yet the fact that carbonic acid gas, with excess of salt, renders the blood permanently black, annulling the power of atmospheric air to revive the red colour, is deserving of attention on two grounds. First, inasmuch as it is clearly proved that carbonic acid gas does exist in venous blood, care must be taken not to inject a saline solution into the veins in cholera, either too strong or too suddenly, lest the blood, or a portion of it, should be rendered irretrievably black. Secondly, because it seems to throw light on the pathology of sea-scurvy. In this instance the blood is black: it occurs after living on salt meat, and its cure is a supply of fresh provisions. In the absence of any opportunity of procuring evidence of the fact by analysis, it may be thought highly probable that the proximate cause of this disease is the presence of too much salt in the blood, salt being assimilated above the nominal proportion, in greater quantity than can be thrown out of the blood by the secreting organs. This over-salted blood, in contact with carbonic acid gas in the veins, would turn black, and would not become red in the lungs. By living on fresh provisions, the secreting organs would throw out the excess of salt, and the disease disappear.

To sum up, if these experiments be found on repetition to have been correctly performed and observed,

First, it must be considered *proved*—

1. That carbonic acid gas will blacken red colouring matter of blood suspended in its own serum.

2. That atmospheric air and oxygen gas will restore its red colour.

3. That carbonic acid gas does exist in venous blood.

4. That the air-pump is not competent to extract the whole of the gases with which the blood is impregnated.

5. That air or oxygen, without salt, will not redden black blood.

6. That salt, without air, will.

7. That blood, without salt, is black.

8. That blood, with excess of salt, and impregnated with carbonic acid gas, is also black, and that its red colour cannot be restored by air, oxygen, or a farther addition of salt.

9. That pure oxygen gas will heighten the red colour of hæmatoscine suspended in serum and impregnated with atmospheric air.

10. That nitrogen gas does not possess a positive power to blacken red blood.

11. That carbonic acid and hydrogen gases do.

12 That on macerating it in water for an hour and a half, salt is extracted from a stratum of coagulum equal in thickness to that which may, while moistened with serum, be reddened for the same length of time by exposure to the air.

Secondly, it is rendered highly *probable*—

1. That free oxygen gas does exist in arterial blood.

2. That inhalation, under certain circumstances, may be useful in cholera.

3. That excess of salt in the blood is the proximate cause of sea-scurvy.

Finally, these results go, in the main, to support Dr. Stevens' theory of respiration; and although some links in the chain of evidence, necessary to establish it, are wanting, yet it is far from being disproved, and the subject is still open to further investigation.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Researches on the Pathology and Treatment of some of the most important Diseases of Women. By ROBERT LEE, M.D. F.R.S. &c. &c.

Part II.—*On Uterine Hæmorrhage.*

IN compliance with the promise at the conclusion of our former article, and in order that the present volume may contain some notice of all that is contained in the valuable work of Dr. Lee, we sit down to analyse the Second Part—that relating to uterine hæmorrhage.

The views of our author regarding the structure of the placenta, and its connexion with the uterus, have been fully explained in former Numbers of this Journal; and it is, therefore, unnecessary for us to enter upon the subject again. That his opinions are not original has been endeavoured to be demonstrated by an ingenious rival; who, by the juxtaposition of detached sentences, has contrived to shew, that two men engaged in investigating the same points of anatomy, and both appealing to nature, have exhibited a certain degree of correspondence in their description of what they saw! But here the similitude ends. The reasoning, the inferences, and the practical deductions, have so little in common, as to satisfy every unprejudiced man who peruses the entire essays, instead of the picked and chosen sentences forced into unnatural approximation, that each author, the English and the French, may claim his own, without the reproach of either having borrowed from the other; and as to the mere anatomy, the only point at which a resemblance exists belongs to neither, the absence of direct communication by blood-vessels between the mother and fœtus having been demonstrated by Wrisburg long ago, as may be seen in his notes and illustrations of Haller's Physiology, published in 1786. No man, certainly, ought to be better qualified than Dr. Granville to unfold all the doublings and disguises of plagiary, for none has ever exhibited to the world a more perfect specimen of the confidence with which it is possible to wear the garb of another; at the same time, as a matter of taste, it is rather amusing that the first public appearance made by the author of the Catechism of Health, after the celebrated article in the Quarterly, should be to prefer a charge of plagiary against another.

The chief point of interest in the second part of Dr. Lee's work relates to the existence of numerous openings, leading obliquely through the inner membrane of the uterus, over which the placenta is placed, covered by the deciduous membrane—thus preventing the exit of the maternal blood by its presence, and, *per contra*, suffering it to escape when removed. Now to this description, taken with the important pathological inferences which constitute the most valuable part of Dr. Lee's paper, there is nothing the least analogous in the essay of Dr. Lauth:

"It follows, from these views of the nature of the relation which exists between the placenta and uterus, that a flooding cannot take place during pregnancy whilst this connexion is preserved entire. It follows, likewise, from the facts now stated, that when hæmorrhage occurs either in the gravid state of the uterus, or subsequent to delivery, the blood does not flow from lacerated arteries and veins passing between the uterus and placenta, but that it escapes from natural openings in the lining membrane of the uterus, which had previously been closed by the placenta.

"After the separation of the placenta in natural labour, the contractions of the uterus, and the formation of clots within its cavity, and in the orifices of the uterine sinuses, are the principal means employed by nature for arresting the flow of blood. The semilunar or valvular-like edges of the vessels, at their termination in the inner surface of the uterus, are admirably adapted to ensure the effect of arresting the current of blood through these passages by the contraction of the fibres with which they are every where surrounded. However excited the circulation in the uterine vessels may be, the structure of the parts is such, that flooding cannot take place from a contracted uterus after the expulsion of its contents. All the different means which have been hitherto recommended for checking the effusion of blood in uterine hæmorrhage, produce their effect either by exciting contraction of the uterus, and the subsequent closure of the bleeding orifices, or by promoting the coagulation of the blood itself within them."

The first form of uterine hæmorrhage referred to, is that wherein the placenta has been situated over the *os uteri*. In

most cases of this kind, the flooding takes place spontaneously in the seventh and eight months of pregnancy, independent of bodily exertion, or external violence. It comes on suddenly, and continues till faintness or syncope supervene. After an interval of uncertain duration it returns, and sooner or later death takes place unless delivery be accomplished. Much care is required in conducting the examination, so as to determine satisfactorily whether the placenta be over the os uteri or not. The entire hand often requires to be introduced into the vagina, and the finger is then to be carried through the os uteri. Coagulated blood is the only material which can here be confounded with the placenta; and is distinguished by the firmer, fibrous, and vascular structure of the latter, and by its being adherent to the uterus at one part, and detached at another.

"The most convenient time for determining whether or not the placenta be over the os uteri, is unquestionably while the blood is actually flowing, and not after the discharge has been suspended by the formation of coagula in the vagina and cervix uteri. I am fully convinced, however, that it is justifiable and proper, as soon as the patient has recovered from the shock of the first attack, even though the hæmorrhage should be renewed by the displacement of the coagula, to make the requisite examination, that we may ascertain the precise situation of the patient, and determine the proper plan of treatment."

"Without waiting for the pains of labour, or the dilatation of the os uteri, the hand should be passed into the vagina, as in the ordinary operation of turning, and carried forward steadily through the os uteri, in a conical form, between the uterus and placenta, at the part where their separation has previously taken place. The membranes should then be ruptured, and an inferior extremity of the child brought down into the vagina, and the infant and placenta be slowly extracted."

Dr. Lee refers, in terms of high commendation, to the dissertation of Levret on Uterine Hæmorrhage, published in 1753; and the eagerness which throughout he displays to do justice to the claims of others, affords an additional motive for receiving with scepticism charges of plagiary against himself.

Uterine hæmorrhage, where the placenta has adhered to the upper part of the uterus, comes next in order. A preternatural determination of blood to the uterus is assigned as the principal cause of this affection; and when the flooding is in small quantity, unattended with labour pains, and without any disposition in the uterus to dilate, an attempt should be made to arrest the bleeding by the same means as we employ in other cases of hæmorrhage—viz. by venesection, if the pulse be full and frequent—by the horizontal posture—by cold—sugar of lead and opium, &c. Cold injections into the rectum may be of service; but as regards the uterus they are unavailing, as they cannot reach the bleeding vessels. Dr. Lee regards it as unsafe to fill the vagina with sponge or other plugs, having seen several fatal cases where but a small quantity only of the blood escaped externally. When, however, the bleeding is not sufficiently under control, the uterus must be emptied of its contents

Uterine hæmorrhage, as is well known, also occurs after the expulsion of the placenta. Under such circumstances, strong pressure should be immediately made over the hypogastrium, in order to excite contractions of the uterus. A firm binder, with folded napkins beneath it, will give permanency to the compression. The hand is next to be introduced, for the purpose of removing the placenta, "but it ought not to be withdrawn while the uterus is in an uncontracted state, however tranquil the circulation may be." When, however, it has contracted, and the placenta been withdrawn, acidulated drinks and wet cloths to the external parts, with absolute rest, are generally sufficient.

When the uterus, on the other hand, does not contract, Dr. Lee places his chief reliance on firm pressure and external cold. He has seldom found it necessary to employ the plug, and ergot of rye when used has failed. Of passing the hand into the uterus, with a view of stimulating it to contraction, Dr. Lee entertains opinions somewhat at variance with those of various popular writers.

"I am convinced, from repeated observation, that the practice so often employed of passing the hand into the uterus, and pressing its inner surface with the closed fist round and round to excite it to contract, is not only often ineffectual for this purpose in the worst cases of flooding, but that it often gives rise to subsequent fatal inflammation of the deep-seated structures of the uterus.

I have repeatedly passed the hand into the uterus to produce contraction, but it has refused to obey the stimulus of the hand; it has remained like a soft, flaccid bag—more like a piece of intestine than uterus, and the blood has continued to pour down the arm, until the hand has been withdrawn and more efficient remedies employed. Leroux has stated the same fact in the following passage: 'Where the os uteri is contracted, the means indicated by Levret are very efficacious, and remove the hæmorrhage as if by a charm. But it is not so in a state of complete inertia of the uterus: often it is widely dilated, and offers no resistance to the introduction of the hand. The introduction even of the whole hand will excite little sensation; and the woman will promptly perish from the hæmorrhage if other means more active and certain are not employed to repress it.' The tampon, or plug, is the remedy Leroux recommends in cases of flooding after delivery, and he affirms that it will often succeed in stopping the flow of blood when all other means fail. Dr. Dewees observes that he 'can with most perfect truth declare, that he has not found it necessary to introduce the hand for the purpose of stopping an hæmorrhage after the expulsion of the placenta, for more than the last five-and-thirty years, and that he regards the practice as always frightful, and oftentimes unnecessary and pernicious.'

"Whoever it was who first recommended the introduction of the hand into the uterus to compress the aorta, he must have been alike ignorant of the structure of the gravid uterus, and of the process employed by nature to suppress uterine hæmorrhage. The hand, if applied to compress the aorta through the uterus, would be placed over it, below the origin of the spermatic arteries, which supply that part of the uterus where the placenta usually adheres. Pressure over the lower part of the aorta might prevent the flow of blood into the iliac arteries, but it could not fail to increase the hæmorrhage, by forcing the blood still more strongly into the vessels from which it was flowing in the upper part of the uterus."

On the whole, we can confidently recommend Dr. Lee's work to our readers, as containing much that is new in theory and valuable in practice.

Observations on Impediments of Speech, with some Remarks on their successful Treatment: in a Letter to Mr. Pettigrew. By RICHARD CULL.

A CLEVER and well-written pamphlet. The author takes a masterly view of his subject; and his practical remarks are evidently the result of no very limited experience.

MEDICAL GAZETTE.

Saturday, March 30, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

FRENCH MODE OF MEDICAL ELECTION.

NEVER was conjuror more perplexed with a ghost of his own raising, than are the good medical people of Paris whenever latterly they have to deal with the Concours. They were not at rest until they had it restored; and now that they have it, when it comes into operation, it seems little better than a plague to them. M. de Broglie, like a wise minister, foresaw this. In the report which he drew up after "the three glorious days," by command of the King of the French, and on which the ordonnance for the re-establishment of the Concours was founded, he distinctly intimated that he did not approve of the measure, and that this mode of filling the professorial chairs of the faculty, though it might have a shew of argument in its favour, was by no means without its *inconveniences*. A stronger word might serve his turn just now, if he had to report upon it once again, after the experience of the last year or two. Surely this "child of the revolution," as it has been called, is a very obstinate child, and deserves to be dealt with accordingly; but being in some measure a spoilt child, perhaps the pa-

rents deserve as much blame as their offspring.

The Concours is peculiarly a French contrivance; yet did we not recollect how peculiarly the Paris school of medicine is situated—placed under the immediate patronage or surveillance of the government—and constituting, it may be truly said, a monopoly in the business of teaching medicine in the French capital—we should hardly be reconciled to its existence even there. But when we call to mind the narrow, if not illiberal, principle on which the school in question is founded, and the facility with which public opinion may be, as in several instances it has been, set at defiance, by offensive government nominations to the chairs, we own we are inclined to admit the propriety of having the Concours established, or any other mode by which such interferences may be obviated. We think it was even fitting, that where the superior powers possessed such control, capable also of being so much abused, the inferior should endeavour to stipulate for a method by which teachers deserving of public confidence should be secured for the school: and probably the test of public examination was the one that seemed least objectionable—the only one that government could not refuse with any good grace. In this point of view, looking upon it as an expedient adopted in order to get rid of a grievance, we cannot find fault with it. But it has been so miserably mismanaged—if not so wilfully perverted—since its re-establishment, that perhaps it were as well now that it were abolished altogether. It is truly pitiable—we were going to say amusing—to observe that there has not been a single appointment by Concours in the French faculty, within the last two years, on which the question of partiality and unfair dealing has not been raised. In almost every instance the successful candidate has been known beforehand, and the form of examination held as a mere mockery. In the very Concours which is now pending, the same game seems about to be played. A medical clinical professorship is at present vacant, and nothing can exceed the manœuvring (if we may believe the reports of the very advocates of the system) which has been for months going on between M. le Ministre, the Academie de Medicine, and the actual professors, in order to pack a jury for the return of a certain candidate. Though fifteen "*concurrens*" started, and thirteen are resolved to go through the ceremony of the trial, yet one alone is certain of success, and his *politics* ensure him the victory.

We take from the *Gazette des Hôpitaux* a condensed account of some of the circumstances. In the first place, in the appointment of the judge or president of the jury, much time has been spent, and no inconsiderable share of tact, it is said, displayed. M. Broussais, it seems, by right (of rotation) ought to be the judge: but his son, C. Broussais, being one of the candidates, he had to decline the office. M. Moreau was next appointed, but he excused himself by reason of some other engagement; and eventually the nomination has fallen upon M. Ch mel. Then for the jury. The academy has a right to appoint three members; and the minister steps in, and desires that they may be chosen by lot. M. Recamier is accordingly thus chosen, but he declines to serve; pleading illness. M. Landré-Beauvais is then, after a most extraordinary and disturbed discussion, appointed; and with him MM. Ferrus and Jadioux. M. Adelon is the secretary; the names of the rest of the jury chosen by the faculty, are MM. Dumeril, Desgenettes, Bouillaud, Berard, Fouquier, and Andral. The *suppleans*, or supernumeraries, who are to take the place of any of the jury in case of an emergency, are MM. Marjolin and Alibert.

Forming an opinion from the names and known abilities of the parties constituting this medical tribunal, we should have thought it unexceptionable; but those more immediately on the spot do not think so. The political sentiments of the individuals whose names we have given, would escape the notice of us on this side the *pas de Calais;* but not so with observers in the French capital. The whole party are there distinguished for their Carlist leanings and biasses; and, behold, the court is no sooner formed than the candidates in a body, with the exception of two, protest against their judge and jury. The protest is accepted, and gravely discussed for an hour by the judicial party in their chamber: at the end of which time they return into court and overrule the objections of the candidates. And so ends the first act of this medico-judicial comedy.

It would be tedious to give the comments of the journal from which we borrow these particulars, regarding the *conflits bizarres*, the *incidens singuliers* which have attended the performance from its commencement. We only allude to them merely to shew the actual working of this much-lauded machinery of the French school: the inference is unavoidable, that the value of the said machinery is most egregiously overrated.

The truth is, that the thinking part of the community, even in France, are already heartily sick of the Concours; at least as a mode of appointment to the higher medical situations. The mass of the nation, perhaps, fancy that they possess in it a precious right which they ought never to compromise: but, sooth to say, our neighbours are an odd people—jealous of the name of liberty and free choice in every thing, while in few things do they really enjoy it; for ever assuming to maintain their privileges, nay, purchasing them at a dreadful expense; yet ever overreached by superior manœuvring, and left scarcely the shadow of the objects they most desire. But they make themselves happy amid their endeavours—the ideal generally serves them for the reality.

The Concours has something of dazzle in it to the eyes of a Frenchman: he sees in it the mode by which some of his eminent countrymen have attained distinction. The name of Dupuytren, for example, occurs to him; and he never stops to consider whether Dupuytren owes more to the Concours or the Concours to Dupuytren. He does not give himself time to think whether, under any circumstances, M. Dupuytren would not have reached the highest place in the profession in France, or that, even though he were not surgeon in chief to the Hôtel Dieu, he might not shine out with even more lustre in an humbler sphere than he does in his present exalted situation. We know how it would be elsewhere; and if it might not be so in the latitude of Paris, then is the Concours grievously wanted there.

It is amusing to notice the conduct of some worthy wiseacres who affect to call out for the Concours among ourselves: one or two of them *ad captandum*,—and the rest, as if the introduction of the French fashion would afford *them* the least opportunity of bettering their humble condition—or as if the very fact of such a possibility would not supply the strongest argument against its introduction. There are doubtless some minor medical appointments about our hospitals and schools, in the adjustment of which there may be certain points in the Concours worthy of imitation, as it is conducted for filling the offices of *internes* and *externes* in the French establishments: and here it is acknowledged that the machinery is as perfect as it can be expected to be: but as long as we can boast in this country of the most open system of conducting medical education—while public opinion exer-

cises so powerful an influence in checking the presumption of the incompetent, and in holding out encouragement to these who give proofs of their capability—and while so wide a choice is offered to those who are entering the profession, as to where and by whom they shall be educated, it requires some ingenuity to shew why we should so anxiously covet the foreign fashions of our neighbours. When, by some unforeseen calamity, we shall be deprived of our free institutions—when our various schools of medicine, which at present have to stand or fall by their own merits, shall be swallowed up into one *école*, in the management of which the minister shall interfere, and in the appointments to which he may be suspected of attempting to exercise an undue influence, then, but not till then, shall we as strenuously as any cry out for the Concours as our only resource against tyranny and corruption.

STATISTICS OF INSANITY.

From some observations by M. Briere de Boismont, which we have lately perused, it appears that the Italians are much behind the French and English with respect to their lunatic asylums. Indeed, so lately as 1822, stripes and chains were the chief curative measures which they adopted. Since that period, however, a considerable amelioration has taken place, and at present about twenty establishments are allotted to the cure of the insane: of these, the two which deserve to be spoken of with the highest commendation are the Opedale di Vazzarelli, at Turin, the San-Lazzaro, near Reggio. There are also three asylums at Milan, which are well regulated, and others at Florence, Naples, &c.

According to the published records, there exist in the different provinces of Italy, out of 16,789,000, only 3441 insane persons, or about 1 to 4879. This is probably less than the actual number; but supposing it increased by one-third, the proportion to the population will still be much less than in France or England. France gives 22,000,000 inhabitants and 22,000 madmen; or about 1 in 1000. England 12,700,000, and 16,222; or about 1 to 783: with regard to which last it is remarkable, as connected with the hereditary nature of insanity, that it corresponds nearly to the proportion in the state of New York, which, in a population of 1,617,458, gives 2240, or 1 to 721. But the subject is farther interesting when the investigation is carried into other countries, by which it will be found that madness increases with civil and religious liberty. That, in these respects, England and America hold the first rank, probably will not be denied. Viewed in this light, the comparative immunity of Italy from excitement of the brain is readily explained; and is corroborated by the fact that the small number of insane persons is still more remarkable in Egypt, Turkey, and Russia, where their worthy rulers save the people the trouble of thinking. With regard to Italy, again, the proportion of insane is not alike in the different provinces, but is greater or less in a direct ratio with the enlightenment of the inhabitants. Among their insane, few have become deranged from political causes, though an increase was observed during the late troubles. The elegant idleness of witnessing spectacles and admiring the works of art, gives rise, in a remarkable degree, to the *besoin d'aimer*; and this is the great source of Italian romance and Italian madness. In France, again, political causes of insanity have of late been by far the most common. Thus, according to M. Briere de Boismont, an epidemic of madness followed the events of 1815, the famous revolution of July, and even the days of the 5th and 6th of June.

ANNUAL METEOROLOGICAL REPORT FOR THE YEAR 1832,

Kept at EDMONTON, HIGH WYCOMBE *(Bucks), and* CHELTENHAM.

EDMONTON.

Month.	THERMOMETER. Highest	Lowest	Mean.	Range.	BAROMETER. Highest	Lowest	Mean.	Range.	RAIN. Inches.	WINDS. N.	S.	E.	W.	N.E.	S.E.	N.W.	S.W.
January...	49	16	35·09	33	30·38	29·31	29·9067	1·05	1·3	2	..	1½	½	3½	2½	3	18
February .	53	19	37·99	34	30·45	29·18	30·0175	1·27	·225	3	1	1	..	10½	4	5½	5
March	57	20	40·90	37	30·36	29·29	29·8411	1·05	1·225	2	3	..	1	4	5	5½	10½
April	67	28	46·63	39	30·50	29·30	29·9500	1·20	·750	6	1	..	..	9	1	5	7
May	77	29	53·15	48	30·33	29·29	29·9416	1·04	2·15	2½	1	..	..	5½	4½	6	11½
June	77	35	60·01	42	30·35	29·16	29·5034	·89	3·075	1½	1	..	..	3	7	5	11½
July	82	38	6·37	44	30·35	29·07	30·0703	·68	1·00	4	..	..	7½	2½	1½	6	9½
August....	81	39	5·84	42	30·39	29·18	29·8292	1·01	3·025	½	2	..	..	2	2½	1½	22½
September.	73	30	55·89	43	30·46	29·52	30·0767	·91	1·35	1½	.	..	..	1½	1½	5½	10½
October...	68	28	4·14	40	30·33	29·16	29·9175	1·17	2·925	2½	5	1½	..	1	1	2½	11½
November.	54	28	41·98	26	30·31	29·42	29·7185	·89	1·05	1	1	½	..	4	7½	..	10½
December.	57	25	41·20	32	30·35	28·39	29·8953	·96	1·98	1	..	..	..	1	1	6	22
Year	82	16	48·59	66	30·50	29·16	29·8922	1·34	20·975	27½	15	5½	9½	51½	38	57	159

HIGH WYCOMBE. *BUCKS.*

January ..	47	21·25	31 55 341	25·75	30·16	29·08	29·60975	1·08	1·275	2	6	5	1	5	..	7	5
February..	55	22·50	35 59 267	32·50	30·26	28·71	29·7921	1·55	0·475	5	5	6	1	5	2	3	4
March	54·75	22·25	38 18 115	32·50	30·03	29·06	29·64193	1·02	3·0066	3	4	3	7	5	2	4	3
April.....	68·50	27·50	44·5625	41	30·28	29·06	29·74066	1·22	1·4381	7	1	6	3	3	3	4	3
May	77·50	31·25	49·1834	46·25	30·18	29·02	29·70537	1·16	2·7301	6	5	2	1	1	..	11	3
June	75·50	35	56·4166	40·50	30·15	29·24	29·69048	0·91	3·25	2	2	4	5	1	..	9	7
July	78	39·50	58·4016	38·50	30·13	29·45	29·81	0·68	1·1568	5	..	2	6	2	..	7	9
August....	78·75	37	57·2656	41·75	30·04	28·92	29·63311	1·12	1·7769	..	2	1	11	2	2	1	12
September.	75·50	32·50	52·84583	43	30·27	29·36	29·84231	0·91	0·15	4	3	4	5	..	1	5	3
October...	65	29·75	47·66935	35·25	30·16	28·91	29·58196	1·25	4·4	..	7	4	12	1	1	1	5
November.	56·50	28	40·94958	28·50	30·15	29·18	29·59325	0·97	1·15	1	1	1	7	1	1	3	2
December.	53·25	25·50	38·91556	27·75	30·20	29·11	29·70183	1·06	2·081	..	5	2	8	2	3	5	6
Year	78·75	21·25	46·21975	57·50	30·27	28·71	29·72333	1·56	29·938	58	39	50	70	28	14	63	62

CHELTENHAM.

January ..	49·5	31·5	40·2	18·0	30·18	29·18	29·74	1·0	....	2	6	2	2½	2	11	2½	3
February ..	55·0	26·5	39·9	26·5	30·26	29·04	29·80	1·22	....	½	4½	5	..	7½	6	1½	1
March	56·0	31·0	44·6	25·0	30·12	29·13	29·69	0·99	....	2½	6½	2	3	2½	2	5	7½
April.....	69·5	38·5	49·77	31·0	30·19	29·25	29·76	0·94	....	1½	6½	1½	1	7½	5½	2½	4
May	70·0	38·5	54·242	31·5	30·14	29·14	29·70	1·01	....	6	3½	..	5½	3½	3½	2½	6½
June	73·5	48·5	60·3	25·0	30·05	29·24	29·67	0·81	....	4	5½	..	2½	1½	5	3	10½
July	76·5	49·0	62·5	27·5	30·03	29·17	29·79	0·56	....	5	1	3½	2½	2	5	1	8
August	76·0	49·0	61·105	27·0	29·96	29·02	29·615	0·94	....	2½	4	..	2½	..	2½	1½	18
September.	72·0	45·0	58·51	27·0	30·19	29·41	29·814	0·78	....	1½	4½	2½	5	..	5	3½	8
October....	65·0	40·0	53·33	25·0	30·12	29·01	29·776	1·11	....	½	7½	2	1	4	1	1	7
November.	54·0	29·5	45·741	29·5	30·21	29·20	29·605	1·01	....	6½	4	..	3½	1	8½	..	6½
December.	56·5	34·0	44·27	22·5	30·15	29·24	29·724	0·91	....	½	3	1	12	..	2	5	7½
Year.....	76·5	26·5	51·296	18·0	30·26	29·01	29·725	1·25	....	33	51½	22½	16	31½	57	32	90½

GENERAL OBSERVATIONS.

THE mode of keeping these registers is as follows:—

At *Edmonton*, the warmth of the day is observed by means of a thermometer exposed to the north in the shade, standing about four feet above the surface of the ground; the extreme cold of the night is ascertained by a horizontal self-registering thermometer, in a similar situation. The daily range of the barometer is known from observations made at intervals of four hours each, from eight in the morning till the same time in the evening. The weather and direction of the wind are the result of the most frequent observations. The rain is measured every morning at eight o'clock.

At *Wycombe*, the thermometer and barometer are registered at eight A.M., at three, and ten P.M.; the extreme cold is ascertained by a self-registering thermometer. The wind is the result of the most frequent observations.

At *Cheltenham*, the temperature is ascertained by a self-registering thermometer, suspended about five feet from the ground, in a north-east aspect, and the observation made daily at eight o'clock A.M. The winds and barometer are registered at eight o'clock A.M., and eight o'clock P.M.

CHARLES HENRY ADAMS.

COLLEGE OF SURGEONS.

The changes in this body, to which we adverted last week, have excited the most lively interest and general approbation throughout the profession. We have to apologise to our readers for being compelled to postpone our promised observations upon the subject till another opportunity.

CHOLERA MEDALS.

The French government has had a cholera medal struck, and instituted what one of the journals facetiously calls the "Order of Cholera Morbus." The insignia) which are worth about eight and sixpence) are to be distributed to those who exerted themselves most actively during the late epidemic. Much discontent has been caused by the selection of persons on whom they have been bestowed—some notorious quacks being decorated with the medal, while many really distinguished men, and whose exertions were of the most useful kind, have been passed over.

PETITION AGAINST THE SOCIETY OF APOTHECARIES.

We perceive that the petition to which we alluded last week has been presented. By the way, we are informed that that part of it which states the grievance of being obliged to serve a five years' apprenticeship to a member of the society, is not quite correct—no such strict provision being in existence. It has been further noticed to us that the desire of the petitioners to be suffered to practise in England as apothecaries, on the strength of their Scotch diploma, is unreasonable, inasmuch as it is laying claim to a privilege which is not conceded to members of the London College of Surgeons, nor to the graduates of Oxford and Cambridge.

CONCLUSION OF THE VOLUME.

In order to complete the various subjects of the present volume, we have been compelled to give a Supplement and the Index in two successive weeks. We have thus been able to bring to a close that division of Dr. Elliotson's lectures which relate to the Nervous System, and which it was the intention of that gentleman to have extended during the summer. We shall now have no difficulty in finishing the entire course in our next volume, instead of not accomplishing this object till the end of the following year. In the advertisements of the present volume, it was stated that some lectures by Mr. Brodie would appear: but finding that that gentleman was lecturing on the joints, and that he did not wish notes of the course to be published, as he is about to issue a new edition of his work, we substituted for them those of Sir C. Bell and M. Dupuytren.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *March* 26, 1833.

Abscess	3	Hæmorrhage	2
Age and Debility	40	Heart, diseased	2
Apoplexy	8	Hooping-Cough	30
Asthma	16	Inflammation	58
Cancer	4	Bowels & Stomach	5
Childbirth	8	Brain	2
Consumption	66	Lungs and Pleura	12
Constipation of the Bowels	1	Insanity	3
Convulsions	44	Liver, Diseased	7
Croup	7	Measles	10
Dentition or Teething	4	Mortification	2
Dropsy	19	Paralysis	3
Dropsy on the Brain	18	Rheumatism	1
Dropsy on the Chest	3	Scrofula	1
Erysipelas	4	Small-Pox	6
Fever	8	Spasms	2
Fever, Scarlet	6	Thrush	1
Fever, Typhus	1	Stillborn	22
Gout	1		

Increase of Burials, as compared with the preceding week 6

METEOROLOGICAL JOURNAL.

March 1833.	THERMOMETER	BAROMETER.
Thursday . 21	from 29 to 42	29·97 to 29·85
Friday. . . 22	25 39	29·89 29·80
Saturday . 23	24 39	29·74 29·80
Sunday . . 24	27 40	29·78 29·72
Monday . . 25	20 43	29·79 29·74
Tuesday . 26	27 40	29·76 29·84
Wednesday 27	29 42	29 86 29 96

Prevailing wind, N. E.

Generally cloudy; frequent rain, sleet, hail, and snow, during the week the latter, on the night of the 25th, covering the ground to a considerable depth.

Rain fallen, ·4 of an inch.

CHARLES HENRY ADAMS.

NOTICE.

Justus's letter is informal and uncalled for.

ERRATA *in Mr. Mackenzie's Paper on the* TENSOR TARSI.

Page 551, 1st col. line 40, *for* "secundi," *read* "secandi;" 2d col. line 19, *for* "extendente," *read* "extendere;" line 23, *for* "indevit," *read* "invenit;" p. 552, 1st col. line 12, *for* "muscles," *read* "muscle;" line 16, *for* "fascial," *read* "facial;" 2d col. line 16, *for* "sides," *read* "nose."

INDEX TO VOL. XI.

(VOL. I. FOR THE SESSION 1832-33.)

C.

D.

F.

G.

M.

Q.

R.

S.

T.

U.

V.

END OF VOL. XI.

W. WILSON, PRINTER, 57, SKINNER-STREET, LONDON.