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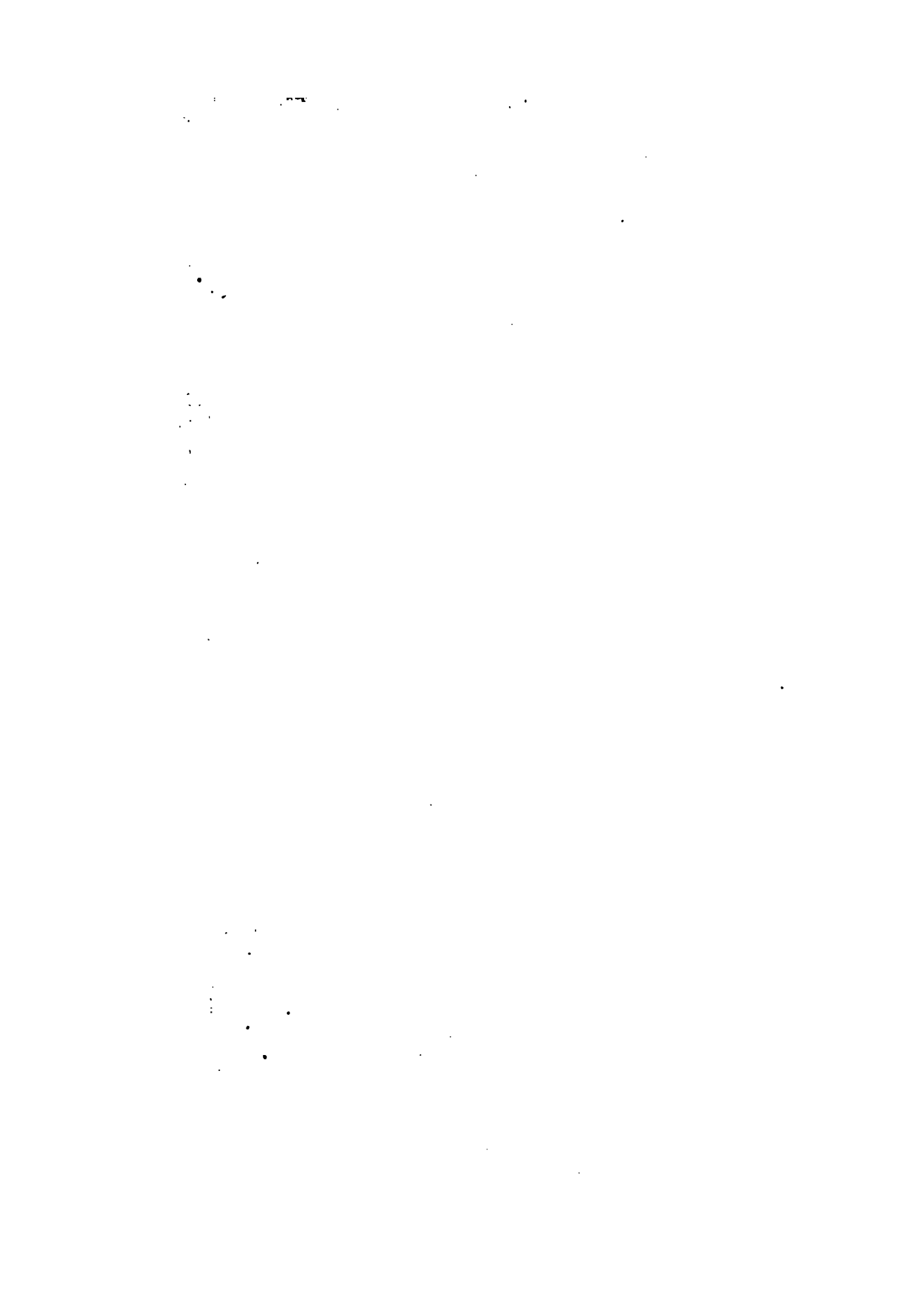


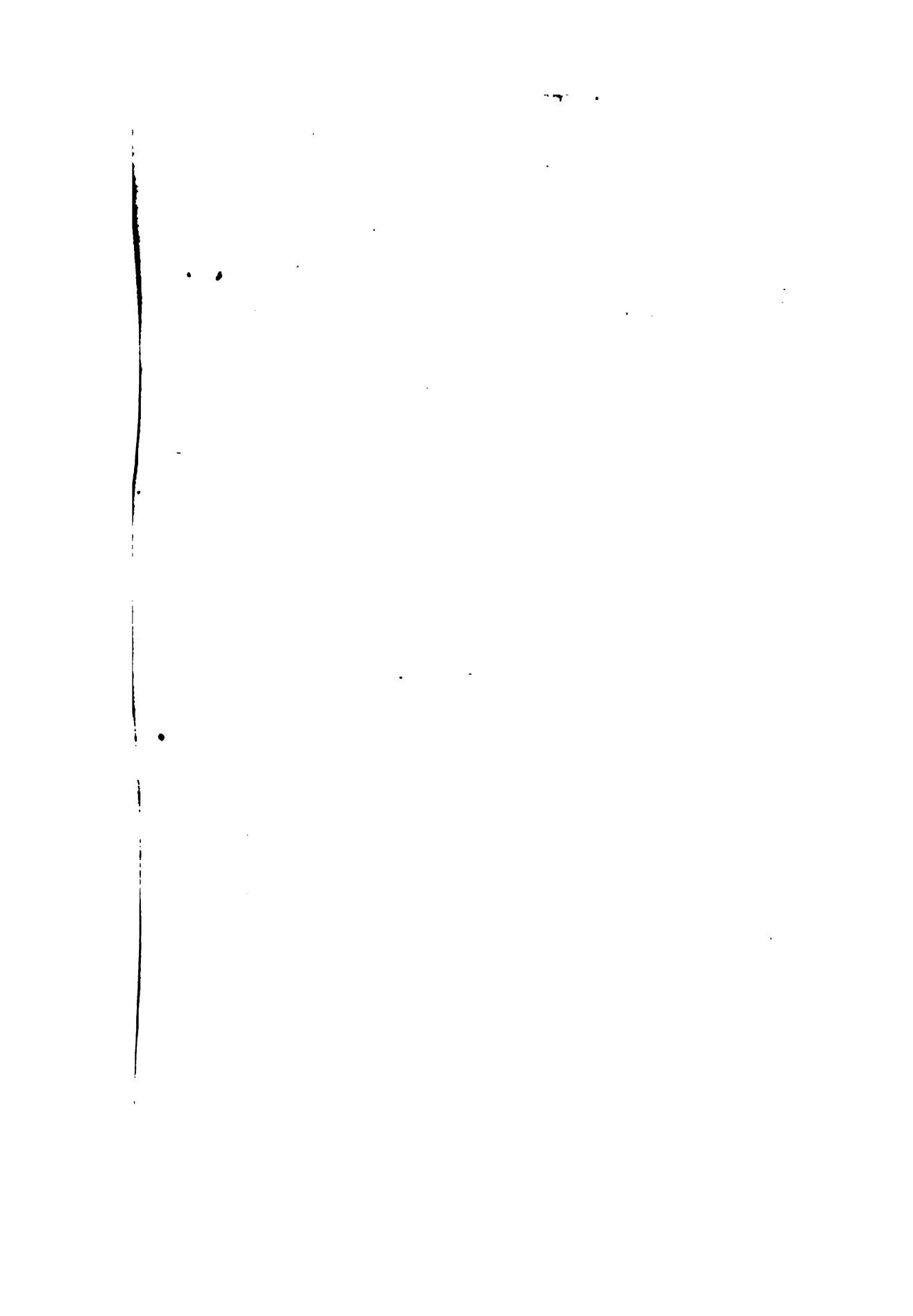
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Page 2 *MC*
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James Hamilton







BY THE SAME AUTHOR.

MODERN
SURGICAL
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A COMPENDIUM OF
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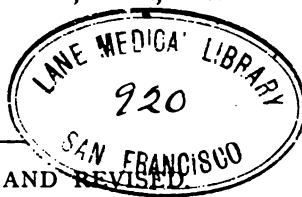
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MODERN
MEDICAL
THERAPEUTICS:
A COMPENDIUM OF
RECENT FORMULÆ
AND
SPECIFIC THERAPEUTICAL DIRECTIONS,

FROM THE PRACTICE OF EMINENT CONTEMPORARY
PHYSICIANS, AMERICAN AND FOREIGN.

By GEORGE H. NAPHEYS, A. M., M. D., Etc.

FIFTH EDITION, ENLARGED AND REVISED.



PHILADELPHIA:
D. G. BRINTON, 115 SOUTH SEVENTH ST.,
1878.

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EDITOR'S PREFACE.

(TO THE FIFTH EDITION.)

THE active demand, which in less than a year has exhausted the fourth edition of the present work, testifies in the strongest terms to the real and great value it has to the practitioner of medicine. The unanimous opinion of the leading medical journals, and the verdict of those who have purchased it, have been to the same effect.

The editor, therefore, has felt it a duty to prepare the present edition with as little delay as possible consistent with a thorough revision down to the latest date. By separating the work into two independent books, one on Medical Therapeutics, the other on Surgical Therapeutics, an opportunity has been offered to treat each subject in a more complete manner, and to introduce a number of important topics not previously discussed.

Thus in the present edition of the Medical Therapeutics, will not only almost every article be found revised and extended, but a large number added to those in the last edition. The principal of these are as follows: Spasmodic Diseases, Spinal Irritation, Empyema, Hay Asthma, Irritable Heart, Intestinal Worms, Diabetes Insipidus, Nephralgia, Dengue, Hemorrhagic Malarial Fever, Intermittent Fever, Relapsing Fever, Typho-malarial Fever, and the whole of the last chapter on Toxic Diseases, including the very important subject of Alcoholism, acute and chronic, and the Opium Habit.

All the additions have been drawn from the most recent authorities, and in a number of instances from unpublished sources, which have been kindly placed at the disposal of the editor. For these and other assistance in preparing this edition, the editor desires to

return his thanks to all who have thus aided him, and especially to Drs. C. C. VANDERBECK, LAWRENCE TURNBULL, F. PEYRE PORCHER, J. B. MATTISON, and T. D. CROTHERS.

As to the nature and purpose of this work, and the points in which it differs from works of similar title, the following extract from the preface to the fourth edition will be in place:

"This work stands alone, of its kind, in medical literature. It presents the Art of Therapeutics in all its aspects, and divested of that barren theorizing which has been its bane. Acquainting the reader with the exact treatment of each disease by living clinical teachers and careful practitioners of several countries, it vastly widens his therapeutic resources, prevents him from becoming a routinist, and inspires him with confidence in the remedies he employs.

"So far from leading him to become a mere *formularum præscriptor*, the diversity it exhibits teaches him independence of thought; while the care with which the indications calling for particular remedies or combinations are given, awakens and instructs his powers of clinical observation.

"But this remark is not intended to belittle the value of definite formulæ. The author has most wisely preserved these whenever possible. By skillful combinations, nauseous articles are rendered palatable, which is often no slight matter; ingredients of facile decomposition may be given permanence; the labors of the pharmacist are lightened; and, more than all, the efficiency of pharmaceutical products may be very largely increased.

"The intelligent recognition of the last-mentioned fact may be claimed as one of the later advances of medical science. The polypharmacy of our forefathers in the profession has disappeared, not giving way to any nonsensical "law of the single remedy," as Homœopathy advocates, but to a clear insight into the *synergic* action of remedies, by virtue of which a judicious combination of several drugs acts in a given direction more forcibly than any one of them singly. It is needless here to quote instances of this truth. They may be found in abundance in the pages which follow."

In addition to what is here stated, the following extracts from the Author's Preface to the fourth edition (which he did not live to complete) gives additional information on what he aimed to accomplish in his work, and some of the details of its plan :

" This volume differs from ordinary works on the Practice of Medicine, in being devoted *exclusively* to Practice ; from works on Material Medica, in treating only of Therapeutics ; and from a Formulary in that it is not a mere collection of prescriptions, but aims at a systematic analysis of all current and approved means of combating disease.

" As I have received a portion of the matter here presented directly from the authors, in this country and in Europe, this much of the volume will not be found elsewhere. When I have drawn from medical periodicals, the name and date of the journal are given in the text. But where a monograph or systematic treatise has been the source of information, the name of the author and his residence are given, and by consulting the index to his works the reader can readily verify the quotation or abstract of his views.

" Formulæ from foreign sources have generally been rendered into the terms of the United States *Pharmacopœia*, equivalent officinal preparations replacing those unknown to the shelves of our apothecaries. A formula that cannot be filled by the druggist is useless to the physician, or, at least, puts him to the labor of translating it into familiar ingredients. The new nomenclature is adopted, the salts of the alkaline metals being designated as of the particular metal, and not of its oxide, etc.

" The diseases are arranged in alphabetical order under the general nosological division to which they belong. The treatment of each is first stated as given by different practitioners, then by various hospitals, after which follows a résumé of the more important remedies employed in its management. An asterisk * designates those especially commended.

" American, English and Continental practitioners are quoted in nearly equal numbers. As I have not attempted to mention every remedy employed for a disease, but only such as have some good

authority, or else a very plausible theory for their use, so I have endeavored to select as authorities either practitioners of acknowledged reputation, or else such as have sustained their therapeutic suggestions by sound reasoning and sufficient evidence."

The plan here laid down by the author has, with unimportant modifications, been observed by the editor, and will, it is believed, be found a serviceable one by the reader.

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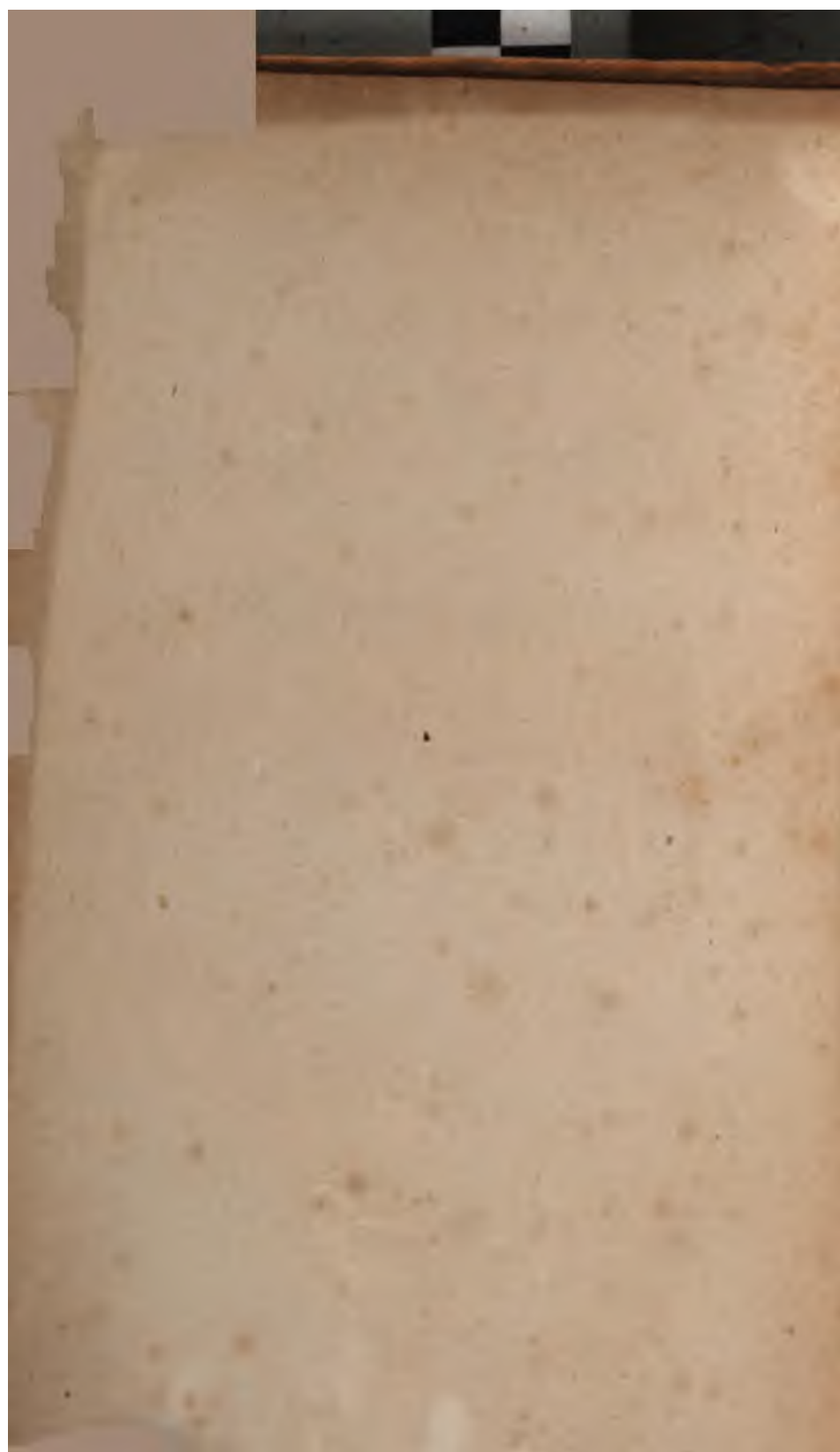
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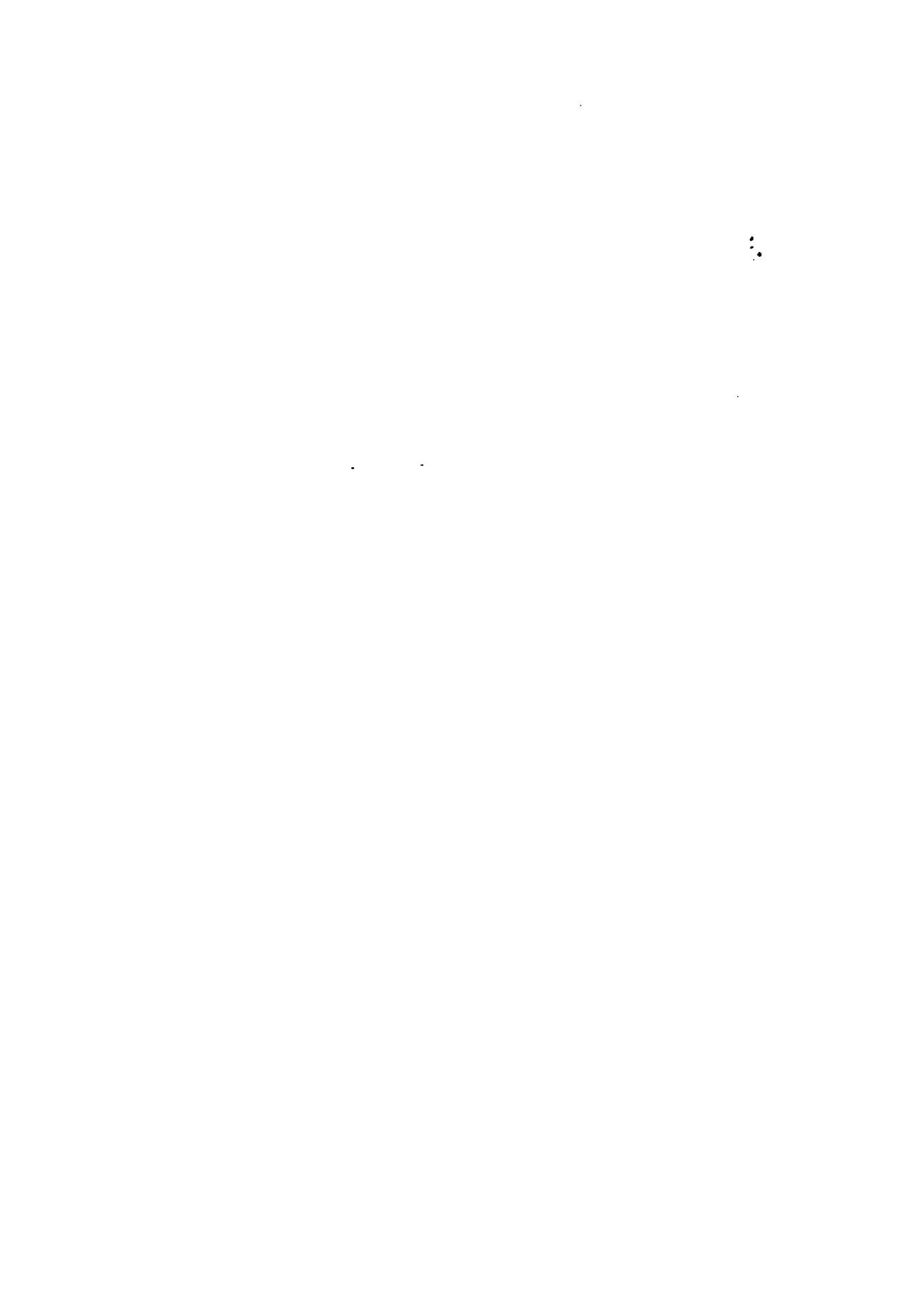
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The following enemeta are recommended :

- | | | | | |
|---|---|----|--------------------------------|----|
| 2. | ℞. Olei ricini,
Olei terebinthinæ,
Tincturæ assafœtidæ,
Decocti avenæ, | ḡḡ | f. ʒiiss
f. ʒij
f. ʒxij. | M. |
| To be thrown up by means of a long stomach-pump tube. | | | | |
| 3. | ℞. Olei ricini,
Olei terebinthinæ,
Olei tiglii,
Decocti avenæ, | ḡḡ | f. ʒj
ʒvj
f. ʒiv. | M. |
| For an enema. | | | | |

All employment of *emetics* is to be condemned. *Blood-letting* may be resorted to, if the patient be seen during the fit, if the tendency to death is by coma, if the pulse be full, or hard, or thrilling, if the vessels of the neck be congested, the heat of the scalp increased, if the face be full and turgid, and especially if the action of the heart be vigorous, its sounds normal, and the heat of the skin preserved. Ten ounces will generally be sufficient, if taken at the first outset of the attack ; but if the pulse does not improve, and the symptoms remain unrelieved, sixteen to twenty ounces may be taken. The head and shoulders should be raised while the blood is flowing. When the pulse is small and slow, feeble or almost imperceptible, the skin cold and clammy, with a tendency to death by syncope, then no advantage is to be gained by the abstraction of blood. Blood-letting is, therefore, contra-indicated in anæmia, aortic valvular disease, and in cases commencing with syncope. If the blood-letting be not followed by some degree of consciousness, it may be inferred that the amount of blood effused is considerable, and that the patient, in all probability, will not recover. Still, an additional chance may be given by applying to the head *cold cloths*, or *crushed ice* in a bladder, *leeches* to the temples, and *mustard cataplasms* to the feet ; also by placing a drop or two of *croton oil* on the tongue, and by throwing up a *cathartic enema* of castor oil or other purgative.

The *diet* should be low until all apprehension of a relapse is past. It should be limited to milk, boiled vegetables, light puddings and fish. At no subsequent period should a full animal diet or undiluted wines be indulged in. At the same time, the irritability of the system and the heart's action must not be increased by ordering too lowering a regimen.

PROFESSOR WILLIAM A. HAMMOND, M. D., NEW YORK.*

The treatment of cerebral hemorrhage should be directed, *first*, to the prodromic stage of cerebral congestion; *secondly*, to the apoplectic seizure; *thirdly*, to its consequences.

1. In active cerebral congestion, *local bleeding*, as cups to the nape of the neck, or leeches to the temples or just inside the nostrils, often affords marked relief. *Cold* is another very useful agent, applied as ice or cold water to the cranium and nape of the neck. During sleep the head should be elevated. The clothing should be loose about the neck. Sinapisms to the feet and mustard to the epigastrium, are often of service. Internally, the *bromides* of potassium, sodium, calcium or lithium are indicated.

4. ℞. Potassii bromidi, ℥j
Aquæ, f.ʒiv. M.

A teaspoonful three times a day, in a little water.

This continued for about ten days is usually sufficient to relieve the head symptoms. The *bromide of lithium* often acts more promptly than either of the others. Dose gr. xxx. *Ergot* contracts the cerebral vessels, and is of great value in the treatment of active cerebral congestion in all its forms, especially in the first or hyperaemic stage. An excellent formula is:

5. ℞. Sodii bromidi, ℥j
Ergotæ extracti fluidi, f.ʒiv. M.

A teaspoonful three times a day.

Or the *ergotin* of Beaujon may be given in pill form, gr. iij.-x, *ter die*. When the pain in the head is a prominent feature, prompt relief is often given by

6. ℞. Extr. fl. paulliniæ, f.ʒss-j, p. r. n.

In conjunction with these remedies, the oxide of zinc gr. ij, thrice daily, is a powerful agent in relieving congestion and giving tone to the nervous system. It should be taken after meals to avoid nausea.

After the symptoms of congestion have disappeared under this treatment, it becomes expedient to give tonics and restoratives. Among these, strychnia, phosphorus and cod liver oil stand first. The following extemporaneous mixture is preferable to any of the manufactured syrups or elixirs, with like ingredients:

* *Treatise on Diseases of the Nervous System.* 1876.

- | | | |
|-------|-------------------------|-----------|
| 7. R. | Strychniæ sulphatis, | gr. j |
| | Ferri pyrophosphatis, | |
| | Quinæ sulphatis, | āā 3j |
| | Acidi phosphor. diluti, | |
| | Syrupi zingiberis, | āā f. ʒij |

A teaspoonful three times a day in a little water.

Phosphorus almost always acts well in such cases. given in the form of the phosphorated oil, or the phosphoric resin; or in one of the following formulæ :

- | | | |
|-------|-------------------|---------|
| 8. R. | Olei phosphorati, | f. ʒss |
| | Mucil. acaciæ, | f. ʒj. |
| | Olei bergamii, | gtt. xi |

Make an emulsion. Dose, 15 drops thrice daily.

- | | | |
|-------|------------------|---------|
| 9. R. | Zinci phosphidi, | gr. iij |
| | Rosar. conserv., | q. s. |

Make 30 pills, Dose, one three times a day.

Arsenious acid, in doses of one-fiftieth of a grain, thrice daily, after eating, has a favorable action, especially in those cases of cerebral congestion which have been the result of mental exertion or anxiety.

The bowels should be kept in a soluble condition, sexual exertion avoided, the stomach should not be overburdened, alcoholic stimulants should be shunned, and the mind kept tranquil.

2. During the attack, when there is coma and the symptoms of the apoplectic condition, there is nothing to be done in the way of medication which can afford the slightest relief. Blood-letting, purgation and the iodide of potassium are good at all, and the first two probably harm. The patient should be kept perfectly quiet, with the head well elevated, and in a room with the temperature about 60°, and well ventilated. The bladder, if not moved naturally every day, may be emptied by an injection of warm water; the urine should be drawn off with a catheter if required; the strength, if feeble, as indicated by the pulse, should be kept up by the cautious use of stimulants; and if the patient is restless and does not sleep well, some one of the bromides should be administered. The food should be of the most nutritious character and taken frequently. If symptoms of inflammation appear, their appearance, cold to the scalp and blisters to the face should be called for.

3. In about two weeks after the stroke it will be proper

action to restore the power of motion. The means are passive motion, strychnia, phosphorus and electricity. The muscles of the affected limb should be kneaded and the joints flexed and extended, and the surface rubbed every day for five or ten minutes at a time. Strychnia should be administered, preferably by hypodermic injection in doses of $\frac{1}{32}$ of a grain once a day. In many old cases of hemiplegia, this has an excellent effect. Phosphorus may be employed as follows:

10. R.	Zinci phosphidi, Extracti nucis vomicae,	gr.ijj gr.x.	M.
--------	---	-----------------	----

Make 30 pills. One three times a day.

No agent is so valuable, however, as electricity. The induced current is usually sufficient for recent cases; but old cases may require the primary current. The poles, terminated by wet sponges, should be applied to the skin covering the paralyzed muscles, or to the nerves. The interrupted current should be applied. The same agent is valuable to restore sensibility to the parts.

J. HUGHLINGS JACKSON, M. D., LONDON.

There is, unfortunately, little to be done. The chief thing is to keep the patient quiet. Two drops of *croton oil* should be put on the tongue and the urine drawn off, if it do not pass freely without help. The application of blisters to the back of the neck, or of mustard plasters to the calves of the legs, is a common practice, with no evidence to show that these applications are of service. Still, in certain cases of chronic cerebral disease, blisters relieve the patient of severe pain in the head; and it is not possible to deny that they may be of service when the circulation of the brain is quickly disturbed after a clot. Were our author to use blisters, which he never does, he would only employ them where there is secondary disturbance of the circulation. It is hard to believe that mustard plasters to the calves of the legs can be of any service or disservice. Dr. JACKSON never prescribes any medicine, except *croton oil*, by the mouth.

If the patient is found in, or has passed into, a condition in which the face is flushed, the temperature above 100, the veins prominent, and the respiration and circulation largely disturbed, treatment, beyond, perhaps, purgatives, is of little use. If, however, the pulse be not very rapid, little more than 100, and if it and the respiration be regular, it is not unreasonable to think that the

system may be relieved—though the ultimate size of the clot may not be influenced—by *bleeding*. The practice of bleeding in cerebral hemorrhage, deprecated by TROUSSEAU and TODD, must be exceeding rare in England, as in the whole course of Dr. JACKSON'S life he has seen but one person bled for cerebral hemorrhage. If the pulse be very high, 120, 130 or 150, or if it be weak, venesection must not be thought of.

This is about all of the little that can be done for patients who are in the apoplectic condition. When this condition is passed, we are practically unable to help in the immediate difficulty of infusion of blood in nervous tissue. We have still, as in many other diseases, to improve the general health. The proper care of a patient who has a clot of blood in his brain, and who is liable to have more effused, consists in attending to his diet, excretions, sleep and exercise. Yet there is nothing in this peculiar to the treatment of cerebral hemorrhage. For the immediate lesion, blood in nervous tissue, our author knows of no direct treatment.

PROF. PAJOT, FACULTÉ DE MÉDECINE DE PARIS.

According to the age and strength of the subject, *bleed*, or apply *leeches* to the anus or behind the ears. Repeated and energetic *counter-irritants* should be applied, from place to place, along the limb. A purgative *enema* is often of great benefit. The head should be kept raised, and all constriction of the circulation carefully guarded against. *Cold compresses* of water, or water and vinegar, may be applied to the head, or even a bladder half filled with *ice*, which should be withdrawn at intervals.

RÉSUMÉ OF REMEDIES.

Acidum Arseniosum is of benefit in strong plethoric subjects with a tendency to apoplectic congestion, but it is not applicable to old weakly persons. It is supposed to act by reducing the excess of the red globules of the blood.

Aloes. Aloetic purgatives are frequently indicated and often prove beneficial.

Colocynthis. In full doses, repeated until it operates freely, colocynth is useful as a powerful cathartic and derivative.

**Hydrargyri Chloridum Corrosivum*. Dr. HEADLAND recommends for the threatenings of apoplexy in old age (*e. g.*, vertigo, confusion of ideas and general embarrassment of the mental faculties) corrosive sublimate in doses of gr. $\frac{1}{8}$ in solution, three times a day, for three or four weeks.

Hydrargyri Chloridum Mite. Administered as recommended by Dr. J. COPLAND (grs. x-xv, mixed with a few grains of gamboge, rubbed up with butter, and placed at the root of the tongue), calomel, although a speedy and effectual purge, is not unattended with danger. Alarming ptyalism has followed this treatment.

Oleum Terebinthinæ is used both externally and internally. A full dose with an equal quantity of castor-oil, acts, when the patient can swallow, as a useful purgative.

* *Oleum Tiglii* is peculiarly adapted as a purgative, derivative and revulsive in apoplexy, from the readiness with which it may be administered, by being simply placed at the back of the tongue.

Potassii Iodidum has been recommended in cerebral apoplexy, on account of its eliminative power, after the acute symptoms have subsided.

Sinapis. In cases of apoplexy from over distention of the stomach, mustard, in doses of a tablespoonful or less in a tumbler of warm water, is a good and quick emetic, which, by removing the exciting cause, is of essential benefit.

Strychnia. Dr. MARSHALL HALL has derived great benefit from the use of acetate of strychnia in the threatenings of apoplexy. He advises the following formula:

℞.	Strychniæ acetatis,	gr. j	
	Acidi acetici,	℥xx	
	Alcoholis,	f.ʒij	
	Aquæ,	f.ʒvj.	M.

Dose, ten drops, combined with a rigid system of mental discipline, diet, etc.

Blood-letting is no longer the routine practice in apoplexy. It is now generally recognized that there is less danger in not bleeding at all than in taking blood in doubtful cases, in which there may be some of the indications for bleeding.

The *contra-indications* of bleeding in apoplexy are an age over sixty; a feeble, very frequent, intermitting, slow or large pulse, or one inclined to double beat; a respiration labored and accompanied with *cold* perspiration; great mobility of the nervous system, with weak muscles, whether the body be thin or corpulent; an attack soon after a full meal, or after great mental or bodily fatigue.

The *indications* for bleeding are a quick, wiry, resisting pulse; flushed countenance; warm perspirations; noisy breathing; a tendency to spasmodic muscular contraction; and an age under sixty.

* *Diffusible Stimulants* may be given with advantage, particularly when the pulse has a double beat, in atonic cases where bleeding is contra-indicated. *Aqua ammoniæ* is one of the best of these: ℥ xij-xv may be administered in water, and the vapor also applied to the nostrils. Or f.ʒss-j of the *aromatic spirit of ammonia* may be given in water or camphor mixture. Or grs. v of the carbonate of ammonium may be ordered.

Enemata. Terebinthinate and other enemata often afford relief, not only by removing scybala, but by their powerful revulsive action.

EXTERNAL REMEDIES.

Counter-irritation. *Capsicum cataplasms* to the feet are powerful and excellent revulsives, which will, however, cause vesication if kept on too long. *Sinapisms* to which have been added powdered capsicum, or oil of turpentine, may, in most instances, be applied with evident benefit to the soles of the feet and the inner parts of the calves and thighs. *Blisters* applied to the calves of the legs and sometimes to the nape of the neck, are of benefit in *simple* or "*serous*" apoplexy, but of little advantage in *sanguineous* apoplexy. An open blister at the nape of the neck (or better, a seton or issue there) is often very useful when there is a tendency to apoplexy.* *Turpentine stupes* to the extremities are frequently productive of benefit.

Electricity is considered by Dr. HAMMOND an invaluable agent for the relief of the sequelæ of an apoplectic attack (p. 21). It will generally be found to restore the sensibility of the part before removing the motor paralysis. The electric wire brush and the wet sponge are the appliances most frequently demanded. In recent cases this will almost invariably prove effectual. Hyperæsthesia, which is sometimes a troublesome legacy of the cerebral extravasation, may be similarly managed.

Ice applied to the head while the feet are immersed in hot water, is sometimes productive of benefit, but must be employed with great caution in debilitated or old subjects. Dr. BARTHOLW is of opinion that ice is often used without due discrimination. When the face is pale, the surface cool and the circulation depressed, cold applications to the head are harmful. On the other hand, Dr. JAMES M. GOODHART, of Guy's Hospital, London, believes that the indication to restrain the hemorrhage is so imperative, that the application of cold locally is very generally called for, although its employment seems rather contradictory to the general course of treatment otherwise required.

**Leeches.* In threatened apoplexy arising from the suppression of a habitual discharge, as from piles, leeches applied to the verge of the anus often afford prompt relief. If the threatened attack arise from suppression of the menses, the leeches should be applied to the inner side of the thighs. Sir HENRY HOLLAND states that he knows of no mode in which a given quantity of blood can be removed with equal good effects. Leeches to the verge of the anus give more immediate benefit than three times the number to the temples or elsewhere.

· CHOREA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

The indications of cure are: 1. To remove, if possible, all morbid states of the body which may tend to aggravate the disease, such as constipation, anæmia, amenorrhœa, worms. 2. By well regulated purgative medicines to subdue any cerebral congestion. 3. To sustain the strength and improve the vigor of the nervous system by tonic and stimulant medicines, by food and by the cold bath.

- | | | | | |
|---|---|---|----------------|----|
| 12. R. | Camphoræ,
Syrupi, | • | ℥v
q. s. | M. |
| Divide into twenty pills. One three times a day. Useful after discharges have become healthy by the action of the purgatives. | | | | |
| 13. R. | Spiritus ætheris nitrosi,
Aquæ camphoræ, | | f.ʒj
f.ʒij. | M. |
| Tablespoonful three times a day. | | | | |

Many young women, who attribute the attack to fright, get well under this treatment.

G. H. BARLOW, M. D., LONDON.

In ordinary cases the exhibition of purgatives to keep the bowels freely open, and the *sulphate of zinc*, in doses gradually increased from gr. j—xij—xv—xx, or even more, will effect a cure; when, however, the sulphate has been used in these large doses, its sudden discontinuance seems to be felt by the system, and a return of the symptoms ensues; the best rule, therefore, for its exhibition is as follows:

The bowels being kept open, the sulphate should be commenced in doses of gr. j, for a child æt. 12 years, and this should be increased by the addition of gr. j to each dose, daily, until it either causes sickness, or there is an obvious diminution of the choreal movements. In the former case, the dose should be diminished by at least one-half, and so continued for several days, with a view of establishing a tolerance; but if, on the other hand, there be marked improvement, it should be no further increased, but continued without alteration until either the improvement ceases—in which case it should be again gradually increased—or the disease has altogether subsided. When the latter is the case, the dose should be diminished day by day, rather than discontinued suddenly, as

of following the former course we have no reason to dread a relapse. When attending a patient you are more careful over the disease than usual.

THE BROMIDE SALTS

In the treatment of chorea Dr. Brouard prescribes *chloral*, two and a half scruples in the course of the day. During the sleep this quantity is divided into four parts. Our author affirms that *chloral* carefully prepared may be administered to children of from twelve to fifteen years in doses of gr. $\text{xxx}-\text{xxxv}$, repeated daily during ten or fifteen days without any bad results.

FORMULA FOR CHOREA. A. D. 1821. LONDON.

℞. *Acid. valerianicæ* ana. ʒij
Chloral ʒiij to be increased to ʒiij ,
 if not better in six or eight days by the general condition.

Appropriate management of patients afflicted with chorea frequently prevents the cure. One of the most common errors of injudicious management is the fixing of the attention of patients upon their infirmity, by telling them how bad they are, offering unnecessary help, &c. They should be encouraged to make every exertion to direct the movements of the limbs, as by slow walking to school, carrying trays and crockery, and other things that demand care. In order that their attention may be withdrawn from their infirmities, looking glasses and the distressing sight of other patients should be avoided. They should be got away from home as soon as possible. Sent under the care of a judicious person to the seaside, or anywhere else for an excuse, children often recover rapidly; whereas, had they remained at home, they would have continually relapsed.

PROP. J. M. DA COSTA, M. D., PHILADELPHIA.

℞. *Zinc. valerianicæ*, ʒij
Cinchonæ sulphatis, ʒj M.
 For twenty pills; one thrice daily.

The *bromide of iron* has lately been employed by our author with excellent effects. It should be given in increasing doses, beginning with never less than five grains for a child, and running up the dose rapidly to twenty grains three times a day.

℞. *Cupri ammoniaci*, gr. ʒ
 In pill thrice daily; to be gradually increased to gr. ʒij .

17. ℞. Extracti cimicifugæ fluidi, gtt.xx.
For one dose, three times a day.

PROF. WM. A. HAMMOND, M. D., OF NEW YORK.

Of the preparations of zinc, Dr. HAMMOND prefers:

18. ℞. Zinci bromidi, ʒi
Syr. simplicis, f.ʒj. M.
Ten drops three times a day, increased as rapidly as the stomach can bear it.

After the disappearance of the chronic symptoms the doses should be diminished in the same gradual manner they were increased. Dr. HAMMOND's main reliance, however, is upon *strychnia*.

19. ℞. Strychniæ sulph., gr. ij
Aquæ, f.ʒj. M.
Five drops three times a day to a child from ten to fifteen years of age.

This dose should be increased one drop daily until the physiological effects of the medicine are manifested, as evidenced by stiffness of the legs and neck. When this takes place the dose should be at once reduced to five drops, and increased again as before.

He also found ether spray to the spine of unequivocal value. The whole spine is exposed, and the ether spray is thrown upon it from the occiput to the sacrum for about ten minutes every day or every other day.

DR. A. W. HAMILTON, NEW YORK CITY.

This writer gives the results of his observation with various drugs in the *New York Medical Journal*, February, 1877. He has found *strychnia* serviceable carried up to the point where stiffness of the sural muscles is arrived at. Next to this comes *arsenic*. It must be given in large doses. Occasionally digestive troubles are produced very quickly by this drug, and then *strychnia* may be substituted. Cold to the spine cannot be overestimated as a plan of treatment; either the ether-spray, or ice-bags every day, allowing them to stay on about ten minutes. PERROUD, who has used the ether spray, makes applications from four to eight minutes in duration every day. In thirty-five cases treated with the ether-spray, from fifteen to twenty applications produced permanent benefit. The spray should be directed to the upper part of the cord, over the upper cervical vertebræ. *Eserine* has been recommended, and

ium, are of little or no use. Antispasmodics, such as valerian and assafoetida, are also useless.

Our author has seen good results from the employment of *baths of sulphuret of potassium* :

22. ℞. Potassii sulphureti, ʒiv
 Aquæ (90° F.), C. xxx.
 For a bath; the patient to remain in it for an hour daily.

This bath is also recommended by Dr. FELIX VON NIEMEYER, when there is anæmia.

Gymnastic exercises, shampooing and passive movements, are of service. As many muscles as possible should be exercised, without fatiguing any of them. *Shower baths* are useful in the latter stages, when the patient is not timid, or too much excited by them.

Dr. NIEMEYER quotes *Benedikt*, who declares that out of more than twenty cases of chorea, treated by him by the *constant galvanic current*, not one has failed to recover. The current which he employs is just strong enough for the patient to feel it distinctly, and he applies it along the spine, the patient standing erect. Painful currents aggravate the symptoms.

J. W. OGLE, M. D., LONDON.

23. ℞. Pulveris physostigmatis, ʒj
 Alcoholis, f. ʒj. M.
 Begin with twenty minims, thrice daily, and increase, by ten minims a dose, to f. ʒj. Our author reports several cases treated in this manner successfully.

C. B. RADCLIFFE, M. D., LONDON.

Our author, though he has great faith in the efficacy of *arsenic* in chorea, has been obliged to discontinue it in a number of cases, on account of the gastric disturbance it produced. He, therefore, resorted to its use hypodermically and endermically, with favorable results.

Hypodermically, he employs Fowler's solution, diluted with an equal part of water, in doses of ℥ij per day, gradually increased in about two months' time to ℥xiv.

Endermically, he advises :

24. ℞. Liquoris potassii arsenitis, ℥xv-xx. M.
 To be dropped upon lint moistened with water and applied, covered with oil silk, night and morning, to a raw blistered surface.

the New York Academy of Medicine, 1876,) that chorea arises from irritation dependent upon anomalous refraction of the eye, and in a very large proportion of cases upon hypermetropia. Hence in regard to treatment the first and great indication is to correct the faulty refraction by the use of proper glasses. This will often relieve the patient at once. If glasses for any reason cannot be supplied or used, the child's eyes may be covered, for it is a well-known fact that when the patient with chorea sleeps, the choreic movements often cease; this is doubtless because the eyes are at rest.

The Calabar bean has of late years been found of value in the treatment of chorea; and, when we remember that its peculiar and characteristic effect is to stimulate the ciliary muscle, we shall see that its use is rational.

As children and others suffering from chorea usually also suffer from general want of vigor, tonics, chalybeates, and arsenic are generally indicated.

The success which Dr. STEVENS has met with in a number of cases, goes to show that, in some instances at least, this view is well founded.

THOMAS HAWKES TANNER, M. D., LONDON.

31. R.	Zinci phosphatis,	gr. xx-xl	
	Acidi phosphorici diluti,		
	Tincturæ ferri chloridi,	āā	f. ℥iiss
	Aquam menthæ piperitæ,	ad.	f. ℥vj.
	Two tablespoonfuls thrice daily.		M.

The only plan to be followed in treating chorea, consists in regulating the bowels, subduing irritation, and strengthening the system. For the first purpose, *calomel* and *jalap*, or, when worms are suspected, *oil of turpentine*, may be employed. A combination of tonics or antispasmodics, with purgatives, is often serviceable. The two great remedies are the *cold shower* or *douch bath*, and *iron*. The former should be employed every morning, on the patient's rising. *Cod-liver oil* is generally useful, administered with tonics. Mental excitement should be guarded against, and nutritious food and exercise in the fresh air insisted upon.

PROF. TROUSSEAU, PARIS.

32. R.	Strychniæ sulphatis,	gr. j	
	Syrupi,	f. ℥iijss.	M.

A teaspoonful thrice daily; the dose to be gradually increased until itching of the scalp and slight stiffness of the masseter muscles are observable.

This remedy must be employed with caution.

JAMES TURNBULL, M. D., LIVERPOOL.

33. ℞. Anilinis sulphatis, ʒss.
Divide into twenty powders, one to be taken three times a day.

The sulphate of aniline has also been given in as large doses as three grains every third hour. (*Half-yearly Compendium of Medical Science*, January, 1869.) It is a white powder, easily taken.

M. WENZ, M. D., DÜRSBACH.

Local anæsthetization of the skin over the spine has been employed with success in chorea. RICHARDSON'S apparatus is used, with from fifteen to thirty drachms of ether, slowly traversing, once a day, the whole length of the spinal column. (*Aertzliches Literaturblatt*, July 7th, 1871.

HOSPITAL FOR SICK CHILDREN, LONDON.

A large number of cases of chorea have been treated (*The Lancet*, October 21st, 1871) with gradually increasing doses of *sulphate of zinc* at this hospital. In no single case was its use unattended with some advantage, for those patients who did not entirely recover on sulphate of zinc only, appeared to derive considerable benefit from it. In some cases, recovery followed its exhibition with remarkable rapidity, and in others, it succeeded after the failure of many other remedies. The tolerance of the drug which may be established in what would appear to be decidedly emetic doses, is well shown in every case. The mode of administration in this hospital is as follows:

34. ℞. Zinci sulphatis, gr.viiij-xvj
Aquæ, ʒiiv. M.
A tablespoonful three or four times a day, *after a meal*.

Occasionally to this is added, in anæmic patients, a grain or two grains of *sulphate of iron*.

The quantity of zinc is then increased by the addition of a grain every day, or every other day, until either the choreic movements have very decidedly diminished, or until the medicine has caused excessive sickness, when either the quantity is gradually lessened or its use is at once discontinued.

As regards diet and confinement to bed, the children have usually been kept recumbent, and fed on pounded meat, or beef-tea

and milk, during the earlier stages of the treatment; but as the irregular movements decreased, and without reference to the quantity of zinc then taken, they have been put upon meat diet and allowed to get up. Stimulants, too, have always been allowed in those cases which appeared to require them. One fact has often been noticed—namely, that if no other treatment be adopted than mere confinement to bed, the choreic movements will frequently diminish in a marked degree during the first week or ten days, after which no further improvement takes place.

Whether the sulphate of zinc acts as a nervine tonic, or whether, as Dr. WEST has expressed his opinion, in his lectures at the College of Physicians, it may exert "a specific power over chorea," is a question which still awaits decision.

HÔPITAL DES ENFANTS, PARIS.

The means of treating chorea more particularly employed at this hospital, are the *tartar emetic* plan advocated by GILLETTE, and still employed by ROGER; *gymnastics*, advocated by BLACHE; and *sulphurous baths*. The tartar emetic plan is this: Three days' treatment: during the first day, 3 to 6 grains of the remedy (according to age); during the second, 5 to 10 grains; during the third, 8 to 12 grains; then three days' rest; then three days' treatment; commencing the new series with a dose one grain stronger than in the first series—to end with a third turn, often attended by good effects. Gymnastics are highly beneficial in milder cases of chorea, and in the declining stage of the severer forms. As much may be said of sulphurous baths. The other means employed at the hospital are: *Opium*, *chloroform inhalations*, *salt baths*, *hydrotherapy*, *tonics*, etc. Strychnia, so warmly advocated by Prof. TROUSSEAU, is scarcely ever employed at the Hôpital des Enfants.

RÉSUMÉ OF REMEDIES.

**Acidum Arseniosum* is highly recommended by numerous authors. Dr. BEGBIE, who, in an experience of thirty years, states that he has never known it to fail, prescribed five drops of Fowler's twice daily, after a meal, and added one drop to the dose every day, until the specific effects appeared, when he suspended it for a time. Dr. EUSTACE SMITH, of London, remarks that the tolerance of children for arsenic is a matter of common observation, and this tolerance is especially marked in the case of a non-febrile disease, such as chorea, where there is no increased irri-

tability of the digestive organs. To a child between the ages of five or six and twelve, the subject of this complaint, Fowler's solution may be given in doses of ten minims three times a day, directly after meals. The influence of this treatment upon the disorder is seen almost immediately, and it is rare for any of the physiological effects of the drug to be observed. By this means, cases of the disease which had resisted smaller doses of arsenic may be cured in a few days, and even severe cases seldom last longer than a fortnight or three weeks.

Ether as well as chloroform inhalations are employed. Ether is also applied in spray along the spine. (p. 27, 32.)

Ammonii Carbonas is favorably mentioned by Dr. C. B. RADCLIFFE.

Ammonii Valerianas has been employed with success.

Anilin, first employed by Dr. JAMES TURNBULL, is also recommended by Dr. F. E. ANSTIE. (F. 33.)

Autimonii et Potassii Tartras is recommended by Dr. C. WEST in acute cases, given in full doses. Dr. THOMAS HILLIER, however, condemns its use (which he has found inutile), as a depressing remedy, ill adapted to a disease like chorea of weakly, badly-fed children. In French practice it is advocated by GILLETTE and ROGER. (p. 33.)

Apomorphia has had a limited but favorable trial in this disease.

Argenti Nitras is much less employed than formerly, before the discovery of other remedies of greater efficiency.

Assafetida has been recommended in cases due to the irritation of intestinal worms.

Belladonna, though formerly much employed, is characterized by Dr. THOMAS HILLIER as of "little or no service," and such seems to be the general modern verdict.

Brominium, see *Potassii Bromidum*.

Camphora is a remedy in which Dr. C. B. RADCLIFFE states he has considerable confidence. He gives it generally dissolved in cod liver oil.

Cannabis Indica has been found useful in some cases. Dr. C. B. RADCLIFFE and THOMAS HILLIER, however, hold it in light estimation. In the sleeplessness attendant upon severe chorea the tincture has proved an excellent hypnotic, in full doses.

Chloral, by its hypnotic effect and the consequent ameliorating influence of the sound sleep it produces, has been found of benefit in many cases.

Chloformum Purificatum. Chloroform inhalations are not approved of by Dr. C. B. RADCLIFFE, unless alcoholic stimulants are given before the inhalation. Friction along the course of the spine night and morning with a liniment composed of equal parts of chloroform and oil of almonds, is beneficial in some cases.

**Cimicifuga* is highly recommended by many physicians. Prof. A. STILLÉ considers it as one of the most valuable remedies in this disease in pure uncomplicated cases, given in doses of sufficient strength to develop its specific effects. Dr. SYDNEY RINGER,

however, finds it only effectual in cases of rheumatic origin, and even in these he prefers arsenic.

* *Conium* is very highly lauded by Dr. JOHN HARLEY. He gives the succus in full doses, and asserts that, apart from its effects on the motor centre, conium possesses no direct influence on the circulatory, nutritive or secretory functions, and that its use can be prolonged with safety, it being entirely destitute of any cumulative action.

Cupri Sulphas has been thought useful, but is doubtless of less value than conium, and a number of other remedies.

Cuprum Ammoniatum once enjoyed a high reputation in the purely nervous form of chorea. (F. 16)

* *Ferri Bromidum*. This remedy is much used by Prof. DA COSTA. He was led to it almost accidentally at first, but having now used it for three or four years, his experience from the treatment of a large number of cases giving abundant opportunity to witness its good effects, induces him to like it better than any other one article in the treatment of chorea. It should be given in increasing doses, never starting with less than five grains for a child, and rapidly increasing the dose to twenty, thrice daily. It may be given in plain syrup and water, in the form of a pill, or better, in an effervescing powder. It not only affects the chorea, but also influences the nervous system as a sedative, quieting it and giving the patient rest. It is a valuable agent in treating the incontinence of urine in children, and it was in a case of this kind, complicating chorea, that he first observed its value; being surprised and pleased to see that, as the symptom which led to its administration improved, the chorea also diminished, and soon disappeared. Since then he has used it almost continuously. In answer to the question whether it is the bromide or the iron that benefits, he thinks it is the combination; that neither *alone* accomplishes the result; for it will benefit cases that have previously taken iron without improvement; and, as regards the other bromides, we certainly cannot claim for them any especial value in chorea, as they frequently disappoint us. The remedy occasionally fails, as all remedies sometimes do in this obstinate affection, but it certainly is one of the most valuable agents we possess for the treatment of chorea.

Ferri Carbonas is often a useful remedy.

Ferri Oxidum Hydratum in large doses (ʒss-j increased to ʒiii-iv, every six hours) is highly recommended by Drs. ELLIOTSON and WILKS, conjoined with the use of active purgatives. Children readily take half-drachm doses in treacle. *Ferri et Quinia Citras* has also been found useful.

Ferrum Redactum has been given with benefit. (F. 30.)

Hypophosphites are recommended by Dr. RADCLIFFE, combined with cod-liver oil.

* *Morrhua Oleum* is very favorably spoken of by Drs. F. E. ANSTIE, C. B. RADCLIFFE and THOMAS HILLIER in cases of chorea in scrofulous children or those of spare habit. Dr. RADCLIFFE generally gives the oil in conjunction with hypophosphite of soda (gr. v-viij),

making the draught containing the hypophosphite the vehicle for the oil. Sometimes he adds carbonate of ammonia to the solution of the hypophosphite; and sometimes dissolves camphor in the cod-liver oil, thus masking the taste of the oil and making the stomach more tolerant of it.

Moschus has been employed with benefit, but generally fails.

Nux Vomica was employed by ROUGIER in minute doses gradually increased. TROUSSEAU preferred strychniæ sulphas (which see).

Oleum Terebinthina is sometimes given with the view of obtaining its anthelmintic, purgative and stimulant effects.

Opium is tolerated in very large doses in this disease, but Dr. RADCLIFFE'S experience is not favorable to its use.

Phosphorus is favorably reported upon, by a number of physicians, as a remedy in this disease. (F. 31.)

Physostigma has been used with success by Drs. HARLEY and OGLE.

**Potassii Sulphuretum*. Drs. HILLIER and VON NIEMEYER recommend baths of this salt. (F. 22.)

Potassii Bromidum has proved a failure in the hands of Dr. RAMSKILL, but has been favorably reported upon by a number of French physicians.

Potassii Iodidum is considered useful by Dr. HILLIER, in cases of chorea occurring in children subject to chronic rheumatism. It is also beneficial in patients tainted by syphilis or scrofula.

Quiniæ Sulphas has been employed in some cases with advantage.

**Santonin* proves often valuable, by disclosing the unsuspected cause of the choreic movements, viz., worms.

Sodii Arsenias is useful in those cases in which other arsenical preparations are badly borne.

Stanni Chloridum has been employed in doses of gr. $\frac{1}{8}$ to $\frac{1}{4}$ three times a day in pill, or dissolved in hydrochloric ether. If it increase the symptoms at first, this is regarded as a good omen. If it be followed by gastro-intestinal irritation or dryness of the throat, it must be stopped or the dose lessened.

Stramonium is of doubtful efficacy in chorea.

Strychniæ Sulphas is recommended by TROUSSEAU. Its effects should be carefully watched, and its administration confined to obstinate chronic cases.

Valeriana is recommended by some writers.

Zinci Oxidum is generally considered inferior to the sulphate of zinc.

**Zinci Sulphas* is very highly recommended by some physicians (BARLOW, GOLDING BIRD and WEST), but in the hands of others (STONE, HILLIER, etc.), it has not fulfilled expectations.

Zinci Valerianas is employed by Prof. DA COSTA and others.

**Cathartics*, when combined with antispasmodics and tonics, give better results than can be obtained from either singly. The tendency to constipation which exists in this disease requires to be combated by their administration.

EXTERNAL REMEDIES.

Electricity is principally useful in cases dependent upon deranged catamenial function. Dr. GOLDING BIRD recommends it in the form of sparks taken in the course of the spinal column, every alternate day, for about five minutes at each time. Dr. HAMMOND states he has used both the primary galvanic and induced currents in many cases, but he is of opinion that they are inefficacious, except in that form where there is distinct paralysis.

Ether Spray. The application of atomized ether along the spine has proved of service in relieving the spasms, especially in recent cases and those originating in fright. It is said also to be of benefit in chronic cases and in rheumatic chorea.

Frigus. *Cold Shower Baths* are often valuable adjuncts to other treatment. Dr. HILLIER considers them useful in the later stages of the disease, when the patient is not too timid or too much excited by them; *cold affusions* to the back of the head and neck, each morning, are also useful, but rarely proper in the winter season, and seldom applicable to very feeble and excitable children.

Hygienic Measures. Fresh air, change of scene, regulated movements, good food, and friction to the spine, are of the utmost importance in all cases. Gymnastics are especially recommended in the milder forms of chorea, and during convalescence in the severer cases. Drs. E. B. GRAY and H. M. TUCKWELL, have published large numbers of cases (*Lancet*, Nov., 1876,) to show that the hygienic plan is alone sufficient to cure chorea, and quite as promptly as by any drug. They trust to judicious nursing and good diet, and merely give a placebo of sugared water. As early as 1871, they showed that the average duration of chorea treated on the expectant plan was, as far as our observations had then gone, from ten to eleven weeks; and that the average duration of chorea treated with arsenic in gradually increasing doses, according to BEGBIE'S plan, was likewise from ten to eleven weeks; the difference, if any, being slightly in favor of the expectant plan. They also compared these results with the estimate of Dr. HILLIER, who, in his work on *Diseases of Children*, gives the mean duration of thirty cases treated with arsenic, etc., as "about ten weeks;" and with SÉE'S estimate of "sixty-nine days," as the average duration of one hundred and seventeen cases treated with various medicines. An isolated ward; a good nurse; a large crib, well padded round, and walled in with pillows; plenty of nutritious food, without stimulants—on these they feel inclined to rely in the treatment of severe chorea, till we obtain more conclusive evidence than has yet been adduced that the disease can, in the slightest degree, be favorably influenced by any medicine as yet discovered.

Sulphur Baths are often of value in conjunction with other remedies. They are particularly indicated when there is anæmia.

Vapor Baths are also useful.

EPILEPSY.

PROF. C. E. BROWN-SÉQUARD, M. D.

35. R.	Potassii iodidi,	ʒj	
	Potassii bromidi,	ʒss	
	Ammonii bromidi,	ʒij	
	Potassii bicarbonatis,	ʒij	
	Infusi calumbæ,	f.ʒvj.	M.

A teaspoonful before each of the three meals, and three tablespoonfuls at bed time, with a little water.

The above is given in cases of idiopathic epilepsy, in which patients derive no benefit, or have ceased to have any, from the bromide or iodide of potassium alone or combined, or of the bromide of ammonium alone.

When the patient's pulse is weak, substitute for the bicarbonate of potassium in the above formula the carbonate of ammonium, and for the six ounces of infusion of columbo, an ounce and a half of the tincture of that medicine, with four ounces and a half of distilled water.

Dr. BROWN-SÉQUARD gives the following very important *rules relative to the treatment of epilepsy by the bromide of potassium and ammonium*, employed together or separately.

1. That the occurrence during the day of the sleepiness caused by these remedies can be avoided by giving relatively small doses in the daytime and a much larger dose late in the evening.

2. That the quantity of these medicines to be taken each day must be large enough to produce an evident though not complete anæsthesia of the fauces and upper parts of the pharynx and larynx; that daily quantity being from 45 to 80 grains of the bromide of potassium, and from 28 to 45 grains of the bromide of ammonium, when only one of these salts is employed, and a smaller quantity of each, but especially of the second, when they are given together.

3. That an acne-like eruption on the face, neck, shoulders, etc., should be produced, and it is most important to increase the dose when there is no eruption, and also when the eruption is disappearing, unless the dose already given in the twenty-four hours is so large that any increase of it causes great sleepiness in the daytime, a decided lack of will and of mental activity, dullness of the senses, drooping of the head, considerable weakness of the body, and a somewhat tottering gait.

4. That it is never safe for a patient taking either of the bromides or both, and receiving benefit therefrom, to be even one day without his medicine, so long as he has not been at least fifteen or sixteen months quite free from attacks.

5. That the debilitating effect of the bromides in patients already weak, as are most epileptics, ought to be prevented or lessened by the use of strychnia, arsenic, the oxide of silver, ammonia, or cod-liver oil, cold douches or shower baths, and, of course, wine and a most nourishing diet. In making use of strychnia or arsenic, it must be kept in mind that not only the bad influences of the bromides, but also their favorable influence against epilepsy, can be diminished by these powerful agents (especially strychnia), and that it is therefore necessary, when these agents are used, to increase the dose of the bromides.

6. That *iron* and *quinine*—which are generally injurious to epileptics, except in cases in which the nervous affection is caused, or at least aggravated, by chlorosis, anæmia, or malarial cachexia—are more particularly injurious in cases in which the bromides are taken.

7. That a gentle purge every five or six weeks usually gives a new impulse to the usefulness of the bromides against epilepsy.

36. R. Morphiæ sulphatis, gr. $\frac{1}{4}$
Atropiæ sulphatis, gr. $\frac{1}{10}$. M.

For one *hypodermic injection*, in a few minims of distilled water. Our author has succeeded in curing a case of epilepsy by the use of this injection.

Inhalation of Chloroform.—In a case of a gentleman who had pretty regular weekly attacks of epilepsy, our author employed chloroform by inhalation almost without interruption, for two or three days successively, with the object of preventing the expected fit or fits. It was of the greatest importance in that case to prevent a fit, as the patient, in a preceding attack, had fractured and dislocated one of his arms. The inhalation of chloroform saved him from the expected attack, and the callus had time to be formed before he had another fit.

GEORGE JOHNSON, M. D., *King's College Hospital, London*, also speaks in high terms of chloroform in connection with bromide of potassium in this affection. He thinks that the action of chloroform inhalation in warding off a threatened fit and in cutting short a violent and prolonged paroxysm, is as uniform and certain as the action of anæmia in exciting convulsions.

THOMAS HAWKES TANNER, M. D., London, has also used the vapor of chloroform, and believes that the fits have diminished, both in severity and numbers, from its employment.

Mechanical and Physical Means.—Dr. BROWN-SÉQUARD has found:

1. That it is not necessary to apply an irritation (by a ligature, pinching, etc.), on the very limb from which an aura seems to start, as the same means applied elsewhere may succeed; but the chance of success is much greater by the former than by the latter way.

2. That a constant or a frequent irritation (by a blister, an issue, a seton, the actual cautery, etc.), on the place from which an aura seems to start, may not only prevent fits, but, by some change of nutrition locally (if the aura is really of peripheric origin), and in the nervous centres, may reduce or even destroy altogether the tendency to fits, and lead to a complete cure.

3. That as a circular ligature may procure a temporary good effect, so a narrow *circular blister* applied all around a limb, a toe or a finger, or a circular cauterization with a white-hot iron, may cure epilepsy in cases with a distinct aura.

4. That even in cases in which there is no aura, felt or unfelt, ligatures, pinching, and other means of irritation, may prevent the occurring of expected fits.

When an attack of epilepsy is followed by a comatose state, or even a sleep with heavy breathing, it is of the greatest importance to place the head of the patient in such a position that the tongue, which is then paralyzed, will not fall on the larynx and cover its aperture.

T. S. CLOUSTON, M. D., EDINBURGH.

From extensive and very elaborately conducted experiments, to determine the precise effects of bromide of potassium in epilepsy, and its proper dose, Dr. CLOUSTON found that the diminution of the fits, and all the other good effects of the medicine, reached their maximum in adults, at thirty-grain doses thrice daily; while ill effects were manifested when thirty-five grain doses thrice daily were reached.

J. WARING CURRAN, M. D., DUBLIN.

37. ℞.	Zinci oxidi,	gr.ijss	
	Extracti glycyrrhizæ,	q. s.	M.
For one pill. One or two thrice daily.			

This, together with the bromide of potassium in mixture, forms

a method of treatment not to be equaled in epilepsy, when assisted by the occasional application of *Chapman's spinal ice-bag*. Neither remedy succeeds so well alone; the one is essential to the other.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

38. ℞. Zinci valerianatis, gr. iij
 Extracti belladonnæ, gr. ⅓
 Pulveris digitalis, gr. ¼. M.

For one pill. To be taken thrice daily in cases of epilepsy, associated with irregularity of the heart.

PROF. WILLIAM A. HAMMOND, M. D., OF NEW YORK.

Among medical remedies the bromides stand preëminent. They must be taken for a long time in order to effect a cure. The cachexia which attends their use occasionally prevents their full administration. The ordinary dose of either one of the bromides—of potassium, sodium or calcium—is gr. xv, three times a day in solution. After two months this must be increased by one-half, and more if paroxysms have intervened.

Dr. H. has used the *bromide of zinc* with very beneficial results. His formula is :

39. ℞. Zinci bromidi, ʒj
 Syrupi simplicis, f. ʒj. M.

Ten drops three times a day, gradually increased to thirty or more, largely diluted with water.

There is no danger of bromism in using this agent, and it exerts a positive curative influence.

In the nocturnal form of epilepsy, *strychnia* is sometimes remarkably efficacious. A good formula for its administration is :—

40. ℞. Strychniæ sulphatis, gr. ij
 Aquæ destillatæ, f. ʒj. M.

Dose.—Eight drops three times a day for the first two weeks, then nine drops for the next two weeks, increasing thus a drop every two weeks for a year, and perhaps longer.

In cases produced by gastric derangement this will also be found a useful treatment.

The *nitrite of amyl* acts well as inhibiting the paroxysms and preventing individual convulsions, but as a curative agent exerts no power.

Epileptiform seizures due to syphilitic infection require the iodide of potassium.

Of surgical measures the excision of any cicatrix, which by en-

tangling a nerve may be the source of reflex irritation, is occasionally a useful measure. In epilepsy following injuries of the skull trephining often relieves. A seton or the actual cautery to the nape of the neck has at times proved decidedly beneficial.

The hygienic treatment is important. Moderate exercise in the open air, nutritive and easily digested food, fresh air, etc., should be insisted upon. Causes of eccentric irritation, as intestinal worms, disordered menstruation, and local irritations, must be removed.

DR. ALLAN M'LANE HAMILTON, NEW YORK CITY.

This able therapist has recently reviewed the therapeutics of epilepsy in a careful manner (*Chicago Medical Journal and Examiner*, Dec., 1876). In regard to the bromides, he prefers the sodic bromide, administered on an empty stomach, to the extent of ℥j in the twenty-four hours. He has observed that a heavy dose at night is apt to do more good than if the amount prescribed is equally divided up through the day. In a great many patients the attacks occur at the waking hour, probably owing to the sudden change in the cerebral circulation. A mild diffusive stimulant has overcome this, and in many cases warded off the attack. He directs his patients who have their convulsion at this time to keep a glass of sherry or a small quantity of Spts. Ammonia Aromaticus near at hand, to be taken before arising. Cold douches to the head are valuable. If the attacks be irregular, it will be found necessary to divide up the dose.

Belladonna and its alkaloids are of great value when the seizures occur in the daytime, or are of the variety known as *petit mal*. He has injected the Sulphate of Atropia in $\frac{1}{4}$ gr. doses beneath the skin at the back of the neck with good effect. It should be administered until dryness of the throat is obtained, and should be given a patient trial. A remedy of his own suggesting is *nitro-glycerine*. He says it is as powerful a medicinal agent as it is an explosive, one-tenth of a drop producing a rapid cerebral hyperemia. It is safer than amyl-nitrite and produces a more lasting congestion, and acts better as an abortant of the attack.

41. R.	Nitro-glycerinæ, Alcoholis,	gtt.v f.℥j.	M.
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Ten drops of this contains about one-tenth of a drop of nitro-glycerine, which amount is the proper dose. Mixed with alcohol it is non-explosive.

Dr. HAMILTON has found a combination of the various anti-epileptic remedies to act better than any one singly, and for many years has derived much satisfaction from the following formula:

42. B.	Strychniæ sulphatis,	gr. j
	Fl. ext. ergotæ,	ʒiſs
	Sol. potass. arsenitis,	ʒij
	Sodii bromidi,	ʒiſs
	Tr. digitalis,	ʒiij
	Aquæ menth. pip.,	ad. ʒiv.

M. Sig.: A teaspoonful before eating, in a half tumblerful of water.

If the attacks be of the form known as *petit mal*, he thinks either *ergot* or *belladonna* are our best agents. With either form of treatment it may be found often necessary to use auxiliary general treatment. The syrup of the combined phosphates, or the syrup of the Lacto-Phosphate of Lime, is a good adjunct; and salt baths, cold head douches, regular food, early hours, and the breaking off of bad habits, will often cure the disease, even when it has lasted for many years.

As a last resort, should continued medication prove useless, the *actual cautery* or a deep *seton* at the back of the neck, will occasionally arrest these bad cases.

In regard to the dose of bromide of potassium in epilepsy, Dr. HAMMOND states that the symptoms due to large doses of the bromide may be enumerated as follows, in the usual order of their occurrence: 1. Contraction of the pupils; 2. Drowsiness; 3. Weakness of the arms and legs; 4. Depression of mind; 5. Failure of memory; 6. Delusions. The first three of these are the usual accompaniments of a dose of the medicine capable of producing any influence over epilepsy. In adults they never follow less doses than ten grains. Doses of five grains produce no effect.

C. C. VANDERBECK, M. D., PHILADELPHIA.

In the treatment of Epilepsy, this physician has no faith in the *oxide of zinc* has rarely seen any good from its use, and in one case he is positive that it did much harm, increasing the number of paroxysms, and making the days of gloom more numerous and more severe. In case a mineral tonic is required, he trusts to *iron* and sees it often work wonders. He uses by preference dialized iron.

There are times in epileptic cases when the patients seem to be almost overwhelmed with depression, strange feelings and utter woe, and seem to be bordering on insanity, or, as often expressed

by them, possessed of the devil. He has found marked relief very many times from small doses of aromatic spt. ammon., repeated, sometimes combining it with a little paregoric or wine. He has very rarely seen any benefit in such cases from *valerian* and kindred preparations.

43. ℞. Potas. bromid., ʒiij
 Ammon. bromid., ʒiij
 Pot. bicarb, gr.xxv
 Tinc. columbæ, ʒiij
 Aquæ, ʒxij. M.

S. Dose from teaspoonful to tablespoonful, and in some cases much larger doses, t. d. The addition of Columba Tincture makes the preparation keep, and obviates some of the evil effects of prolonged bromide treatment upon digestion.

MARSHALL HALL, M. D., LONDON.

44. ℞. Strychniæ acetatis, gr.j
 Acidi acetici, ʒxx
 Alcoholis, f.ʒij
 Aquæ destillatæ, f.ʒvj. M.

Ten drops (gr. $\frac{1}{10}$) to be taken in water thrice daily.

J. SPENCE RAMSKILL, M. D., LONDON.

45. ℞. Bruciæ, gr.iv
 Alcoholis, f.ʒij
 Aquæ destillatæ, f.ʒvj. M.

Ten minims to be taken diluted with water twice daily: every third day an addition of five minims should be made to the dose, until from a third to a half grain is reached, in the treatment of stomachal epilepsy.

If any stiffness of the jaws or other toxic symptoms appear, the dose is to be diminished five minims, and continued until any new objectionable symptom is manifested; then it is again lessened. No benefit will be derived until a full dose is reached; often the reverse effect (*London Lancet*, January 16th, 1869). As a rule, patients will take twice as much brucia as strychnia without any necessity for diminishing the dose. After the continuous administration of brucia for a month, it is well to suspend its use for some days, and then again resume it. Great satisfaction will be obtained by giving the bromide of potassium in large doses at bedtime, and at the same time ordering brucia twice daily, thus insuring the sedative influence of the bromide and the tonic effect of the brucia on the whole nervous system.

DR. SCHMITT, GERMANY.

46. ℞. Tincturæ iodinii, gtt.xv
 Aquæ menthæ piperitæ,
 Aquæ destillatæ, ℞ā f.ʒij
 Syrupi, f.ʒj. M.

A tablespoonful every two hours, to prevent the return of an attack.

47. ℞. Tincturæ iodinii, f.ʒj
 Alcoholis diluti, f.ʒss
 Spiritûs calamûs, gtt.j. M.

Five drops every two or three hours, in sweetened water, to prevent a return of an attack.

DR. E. C. SEGUIN, OF NEW YORK.

Dr. SEGUIN'S method of prescribing the bromides in the treatment of a case of "idiopathic" epilepsy is the following :

Two solutions are employed.

48. ℞. Potassii bromidi, ʒj
 Ammonii bromidi, ʒss,
 Aquæ fontanæ, ʒvij. M.
- S. To be given by the teaspoonful.

And

49. ℞. Sodii bromidi, ʒj
 Ammonii bromidi, ʒss
 Aquæ font., ʒvij. M.
- S. To be given by the teaspoonful.

The quantity administered is, as a rule, so divided as to give by far the largest dose in the evening. The bromide is cautiously increased, still keeping the nocturnal dose the largest, until slight bromism is produced. It is usually necessary to maintain slight bromism for months, but just as little is to be given as will prevent the attacks. The precise quantity required must be studied in each case. Children tolerate the bromides, as well as the iodides, in relatively large doses. It is regarded as important thoroughly to dilute the bromides in order to facilitate their absorption—the dose to be taken in a wineglassful or half a tumblerful of water. Under no circumstances should the bromides be discontinued; they may be *diminished*, but not *stopped* until the word *cure* can be pronounced. They should be continued at least three years after the last attack.

The adjunct treatment consisted in the use of measures to prevent the acne to a certain extent, such as the occasional use of arsenic, sulphur-ointment, mercurial plaster, and alkaline lotions;

to correct the general debility or slight paresis, by the use of strychnia, nux vomica, oxide of zinc, and quinia; to relieve the dizziness by the inhalation of nitrite of amyl, by stimulants, and by quinia; regulating the patient's diet and hygiene, and the use of cream, cod-liver oil, iron, quinine, phosphorus, strychnia, with nitro-muriatic acid, wine, beer, or whisky. In certain cases such medicines as act more directly upon the morbid state of the nervous centres are associated with the bromides, and the favorite among these is belladonna. In the treatment of cases of epilepsy, in which a definite causative lesion can be made out, the bromides are used simply to combat the habit.

Regarding the method of using the bromine salts in the treatment of epilepsy and other neuroses, he makes the following remarks:

1. The prolonged use of bromides is contraindicated by congenital feebleness.
2. The bromides are well borne by persons of fairly full habit and good nervous power.
3. The bromides are indicated in cases of abnormally great irritability of the nervous system in its motor (muscular and vasomotor) and ideational tracts.
4. The contraindications above named are to be much less regarded in the management of that formidable neurosis, epilepsy.
5. Epilepsy is the only disease which justifies the deliberate production of a degree of bromism for its cure.

WALTER TYRRELL, M. D., LONDON.

Our author states that he has watched the effects of *strychnia* upon various forms of epilepsy, and has no hesitation in affirming that in a large majority of cases its effects are most beneficial. He found but three cases in which it produced no favorable result, and no cases in which it produced an unfavorable effect. He gives a medium quantity as a dose, for a lengthened period, rather than carrying the dose too high at first. The best results are obtained from gr. $\frac{1}{10}$ to gr. $\frac{1}{8}$, twice a day, in solution, the system appearing to regain its nervous strength under the continued use of the medicine.

HOSPITAL OF DISEASES OF THE CHEST, LONDON.

50.	℞. Potassii bromidi,	gr. x	
	Tincturæ conii,	℥xxx	
	Tincturæ valerianæ ammoniatæ,	℥x	
	Aquæ camphoræ,	f. ʒj.	M.

For one dose, thrice daily.

HOSPITAL OF UNIVERSITY COLLEGE, LONDON.

51. R. Potassii bromidi, gr. x
 Spiritus chloroformi, ℥xviii
 Infusi quassiaë, f. ʒj. M.
 For one dose, thrice daily.

RÉSUMÉ OF REMEDIES.

Ammonii Bromidum is often prescribed in epilepsy alone, or in combination with bromide of potassium. (F. 35, 43, 48.)

Ammonii Carbonas is a valuable palliative, though possessed of no curative influence in this disease. Dr. ANSTIE and others assert that, if there be time to administer a dose previous to an impending attack, it will often avert it. PEREIRA recommends it in large doses (grs. x-xx), in the hysterical form of the disease.

Ammonii Formias has been of service in some forms of epilepsy, hurtful in others. Dr. RAMSKILL advises a further trial of this remedy.

Ammonia Aqua is recommended by Dr. HOPE and others, in epileptic congestion of the brain, arising from debility. The following formula is most efficacious:—

52. R. Aquæ ammoniæ, ℥xij
 Aquæ menthæ viridis, f. ʒiss. M.

For one dose. If taken at the first warning of an attack of this character, it seldom fails to arrest its supervention. The inhalation of ammoniacal vapor immediately after the first warning of an attack, is recommended by PEREIRA, PINEL and others, as often averting its occurrence.

Ammonii Valerianas, although very deliquescent, and therefore uncertain in its operation, is favorably reported upon by a number of writers as a remedy in epilepsy.

Anilina is recommended by Drs. TURNBULL and ANSTIE. The latter finds that large doses aggravate the fits, but that one grain thrice daily, with an additional grain on the occurrence of any prodromata of a fit, delays or mitigates the paroxysm, or even averts it for a considerable time. (F. 33.)

Antimonii et Potassii Tartras has been used internally, and also in the form of the tartar emetic ointment, to secure postulation of the scalp and spine.

Argentii Nitras is no longer given in prolonged courses, at the risk of the patient's turning blue, a fate so frequently reserved for epileptics in former times. Other remedies of equal or greater efficacy, and less danger, have now, to a great extent, displaced it.

**Arseniosum Acidum* is employed in epilepsy, but it is much less effective in this disease than in chorea. Dr. RADCLIFFE employs it hypodermically and endermically, in the same manner as for chorea, see p. 29.

Arsenici bromidum. Dr. CLEMENS, of Frankfort-on-the-Maine, has employed for a number of years a *liquor arsenici bromidi*, as follows:

Cinchona is rarely successful in true epilepsy, but of great benefit in the epileptiform paroxysms of intermittent fever.

Conium has been found by Dr. HARLEY to cause rapid and decided improvement in epilepsy arising from sexual abuse, or from the irritation of dentition, but in that arising from peripheral disorder of sensation, from menstrual irregularity, or from emotion, it fails to exercise any beneficial influence.

Cupri Sulphas has been successfully employed in $\frac{1}{4}$ gr. doses, combined with quinine.

Cuprum Ammoniatum is now not much used in epilepsy.

Digitalis has proved of little service in epilepsy, though it has been recommended in large doses.

Hydrargyri Iodidum Rubrum has been recommended by Dr. FULLER, (*Medical Times*, February 14, 1857) in cases where there is reason to suppose thickening of the dura mater.

Hyoscyamus in occasional full doses (f.ʒiv-vij of the succus or f.ʒiv-vij of the tincture) has been found by Dr. HARLEY very serviceable in epilepsy arising from emotional disturbances, but in other varieties of this disease it has proved useless in his hands.

**Morrhue Oleum* has been employed by Dr. ANSTIE, with encouraging results, in cachectic cases. It must be persevered in for a long time.

Moschus is sometimes useful. Dr. A. T. THOMSON says that it diminishes the violence of the paroxysms of idiopathic epilepsy, and greatly lengthens the intervals, when administered as follows:—

ʒi. ℞. Moschi, ʒj.

In a bolus for one dose, every eight hours.

Nitrite of Amyl by inhalation, has been found eminently useful by WEIR MITCHELL, in a case brought on by inordinate venery. It is said by Dr. CRICHTON BROWNE to be invaluable in many cases in not only postponing but in altogether preventing epileptic seizures. A vinaigrette, or small stoppered bottle containing a sponge soaked in nitrite of amyl, should be carried in the pocket, and the fumes inhaled on the first symptoms of the aura. Even in the advanced stage of the *status epilepticus*, Dr. B. believes its inhalation very beneficial in most cases. (*West Riding Lunatic Asylum Reports*, 1873.)

Nux Vomica. In epilepsy following the disappearance of the menstrual discharge, COPLAND recommends *nux vomica* combined as follows:—

ʒi. ℞. Extracti nucis vomicæ, gr. x
Pilulæ aloes cum myrrha, ʒj. M.

For thirty-six pills. From one to two night and morning. Its employment demands caution.

Opium is now rarely employed, since the discovery of the value of bromide of potassium, in this affection.

tolerance. He gives it at first in two grain doses, in pill, thrice daily, and gradually increases the quantity until ten grains are taken during the day.

**Zinci Oxidum* is regarded by Dr. RUSSELL REYNOLDS as superior to the sulphate of zinc in epilepsy. He gives it in doses of grs. iii-v thrice daily. Dr. WARING CURRAN strongly urges it as an adjunct to bromide of potassium.

Zinci Sulphas is a long-used remedy in epilepsy, but is now generally considered inferior, in this disease, to both the oxide and valerianate.

Zinci Valerianas is considered by many as the best salt of zinc in epilepsy. It is especially valuable in cases of a hysterical character. The dose should be small at first, one grain, gradually increased as the stomach will bear it. Dr. DA COSTA sometimes prescribes it with belladonna and digitalis. (F. 38.)

Emetics, given when an attack is imminent, will often, according to Dr. MARSHALL HALL, ward it off.

Sedatives are useful by controlling undue readiness of action of certain portions of the nervous centres.

Stimulants. A draught of wine or of some diffusible stimulants may put off an attack.

EXTERNAL REMEDIES.

Cold Shower Baths are useful in epilepsy when the patient is not too timid nor too much excited by them.

Turkish Baths are sometimes employed, but great caution is required in the use of so powerful an agent.

**Blisters*. A narrow circular blister applied above or at the starting point of the aura will sometimes prevent or modify a paroxysm.

Cathartics are of little service in epilepsy, excepting when the bowels are overloaded.

Dry Cupping, sometimes, according to Dr. GRAVES, averts a paroxysm of epilepsy where previous headache or other premonitory symptoms advertise its approach.

Electricity has given unsatisfactory results in epilepsy. Dr. COPLAND says that "the safest method of employing electricity is to place the patient on the insulating stool and subject him to the electric bath, and to draw sparks from different parts when thus insulated, and placed in connection with the prime conductor."

Forcible Extension of the muscles where the aura is seated, or the application of pressure between the starting point of the aura and the trunk, may avert an attack.

Hypodermic Injections. *Atropia*, subcutaneously, in this disease, was proposed by BROWN-SEQUARD, combined with morphia. (F. 36.) Prof. BARTHOLOW has also employed this combination. **Morphia* alone, or in combination with atropia, has been found, when injected hypodermically, not only to relieve quickly the paroxysms in violent cases, but to afford permanent benefit by diminishing the number, frequency and severity of succeeding

DISEASES OF THE NERVOUS SYSTEM.

attacks, and, therefore, to dispute with the bromide of potassium for the foremost position among the remedies against epilepsy. As one may succeed when the other fails, Prof. BARTHOLOW points out that bromide of potassium is most effective in cases of *grand mal*, in which the paroxysms occur frequently, with great violence, and during the day-time, and less effective in those which occur chiefly at night; while the hypodermic injection of morphia is preferable in epilepsy, the paroxysms of which occur at night, in the *petit mal*, and in convulsive tic, but not proper, as a general rule, in cases of epileptoid character dependent upon cerebral lesion. Prof. B. advises, when the paroxysms succeed each other rapidly, and are violent, that the injection be made during an attack, and without loss of time, but states that ordinarily two or three times a week will suffice (dose gr. $\frac{1}{4}$), the onset of an expected attack being anticipated whenever practicable.

Actual Caутery. This is a most valuable resource in epilepsy. BROWN-SÉQUARD'S rules are as follows: 1. The instrument has to be heated to whiteness; 2. It must be shaped like an olive (blunt end); 3. It must not be allowed to burn the skin, but is passed rapidly along the space to be acted upon, so that after the operation is over nothing is seen but a *white line*, very much resembling a scratch with a finger nail. So applied, it is never painful. It can be repeated every other day, as there are no scars and no irritation left. The necessity for observing these rules is obvious, as the object of the operation is to act on the terminations of nerve-fibres in the skin, but not to destroy them; hence it is clear that the method of first applying ether-spray on the spot to be cauterized, so as to deaden the pain of the cautery, mars the good effects of the application of the instrument, because the ether-spray is itself *more painful* than the actual cautery when the latter is used after the manner above stated; and, moreover, it anæsthetizes the nerve-ends upon which it is desired to effect, so that the cauterization becomes useless.

Seton. Dr. THOMAS J. GRIFFITHS has strongly urged the employment of the seton in epilepsy. (*Report of the Supervising Surgeon, U. S. Marine Hospital Service, 1876.*) He introduces a large seton, fifteen or twenty strands of silk or flax thread, and allows it to remain for months, if necessary, removing only when the patient seems to be permanently improved or has recovered, unless too great irritation be produced by its presence, when it is removed temporarily, to allow the irritation to subside. The place of election for its introduction is the back of the neck. Of five cases of epilepsy, four were cured or greatly benefited. No other treatment was used except tonics. The disturbance of the mental faculties, which is the common attendant in such cases, rapidly improves after the insertion of the seton.

HEADACHE.

PROF. HARVEY L. BYRD, M. D., BALTIMORE.

In the treatment of *sick headache*, Prof. BYRD recommends the use of an emetic of ipecacuanha, and after its action the use of the following:

60.	℞.	Chlorali	ʒj	
		Aquæ,	f.ʒij.	M.

A tablespoonful every hour until sleep is induced.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

In *congestive headache* the use of saline cathartics is of service. Also, a mustard foot bath every night. The application of a *hot salt bag* to the back of the neck often affords relief. This form of headache is frequently associated with cardiac enlargement.

PROF. AUSTIN FLINT, M. D., NEW YORK.

Periodical headaches, as regards successful treatment, belong among the opprobria of medical art. If patients be not unpleasantly affected by opiates, an attack may sometimes be warded off, or its severity much lessened, by a full dose of opium or one of its alkaloids. The carbonate of ammonium and a saline purgative are sometimes effective at the commencement of an attack. Various palliative measures may be resorted to, such as *inhalation of chloroform*, *evaporating lotions to the head* (alcohol, spirits, vinegar, ether), etc. In some cases a towel or napkin, wrung out in water as hot as can be borne, and wound around the head, is more efficient than cold applications. *Warm stimulating pediluvia*, strong *coffee* or *tea*, and the application of the *galvanic* or the *electro-galvanic current*, are useful in some cases. During the intervals the remedies which are sometimes of service by way of prophylaxis are, *nux vomica* or *strychnia* in small doses, *arsenic*, small doses of *quinia*, *belladonna*, and the preparations of *zinc*, more especially the valerianate. They may be tried in succession. Hygienic measures are important, and the avoidance of everything which experience shows, in individual cases, to act as exciting causes.

NERVOUS HEADACHE.

PROF. R. J. GRAVES, M. D., DUBLIN.

61.	℞.	Olei terebenthinæ,	f.ʒj-ij.
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For one dose, to be given in cold water.

Our author places much reliance on this medicine in the hysterical and nervous headaches of young women. Some will bear and derive benefit from two or three of these doses in the day, experiencing from its use a diminution of headache, the removal of flatulence, together with a moderate action on the bowels and kidneys. The turpentine may also be given in the form of an enema. Occasionally it causes dysuria and cannot be persevered in.

Dry Cupping at the nape of the neck, between the shoulders, and below the clavicles, is often of great service in hysterical headaches. Six cups should be applied and allowed to remain on for ten or fifteen minutes.

PROF. WILLIAM A. HAMMOND, M. D., NEW YORK.

62. ℞. Zinci oxidi, ℥ij-v
 Confectionis rosæ, q. s. M.
 Divide into twenty pills. One to be taken three times a day, after meals.

This formula is of great value. The minimum dose (gr. ij) should be commenced with, gradually increasing to the maximum (gr. v) if necessary.

63. ℞. Extracti nucis vomicæ, gr.v
 Ferri redacti, ℥j
 Quiniæ sulphatis, gr.x
 Syrupi, q. s. M.
 Divide into twenty pills. One to be taken three times a day, after meals.

Nux vomica is preferable to strychnia.

64. ℞. Bismuthi subcarbonatis, ℥ij
 Confectionis rosæ, q. s. M.
 Divide into twenty pills. One after each meal.

These pills will often take the place of those of oxide of zinc. They are particularly useful when there is gastric disturbance.

Bromide of potassium is serviceable when the nervous system has been irritated; when exhausted it does harm.

Bromide of ammonium is similar to the bromide of potassium in its action, but the dose need not be so large. Our author often uses both combined.

Opium and its preparations are rarely of value in this disorder. If used, the hypodermic method is the best.

Narcein has, Dr. HAMMOND still thinks, a decided hypnotic effect when given in large doses.

Nitrite of amyl has been used by Dr. R. A. DOUGLAS LITHGOW, with much success. He places two drops on the palm of the patient's hand, and quickly diffusing these with his finger over the palmar surface, tells her to cover her mouth and nose with her hand, and to inspire deeply and quietly. No time should be lost after the nitrite is dropped on the hand, as it evaporates rapidly. The patient should be seated while inhaling, as the peculiar effects of the nitrite are produced almost instantaneously, and may occasionally alarm a very nervous or hysterical female. Fortunately these symptoms last a very short time—generally less than two or three minutes—and with their cessation the pain almost invariably ceases. Two drops may be given as a draught in water, instead of by inhalation, but the latter mode is much more satisfactory.

Phosphorus is beneficial in all the forms of nervous headache. It is, however, difficult of administration, and leaves an unpleasant odor about the person. The best results are obtained from the following method of administration:

65. ℞. Acidi phosphorici diluti, f.ʒvj
 Syrupi phosphatum compositi, f.ʒiij.
 A dessertspoonful, in water, three times a day.

Arsenic as a nerve tonic stands next in value to zinc. Granules of arsenious acid (gr. $\frac{1}{6}$) are preferable to FOWLER'S solution.

Galvanism is highly praised by some, and severely condemned by others, in this affection. The brain cannot be acted upon to any considerable extent by the induced current or by reflex action. Our author advises always the *constant current*; being careful to avoid too great intensity, lest amaurosis be produced. (*Half-yearly Compendium of Medical Science*, July, 1868.)

GEORGE KENNION, M. D., HARROWGATE, ENG.

66. ℞. Carbonis bisulphidi, f.ʒij.
 As a local application in neuralgic, periodical and hysterical headache, and even in many cases of dyspeptic cephalalgia.

About two drachms of the bisulphide of carbon is poured upon cotton wool, with which a small glass-stoppered bottle is half filled. The mouth of the bottle is applied *closely* to the temple or behind the ear, or as near as possible to the seat of pain, and so held from three to five or six minutes. In a minute or two a sensation as of several leeches biting the part is felt, and in three or four minutes

more the smarting and pain become rather severe, but subside almost immediately after the removal of the bottle. (*Medical Times and Gazette*, July, 1868.) It is very seldom any redness of the skin is produced. The effect of the application is generally immediate; it may be repeated, if necessary, three or four times a day. The sedative vapor of the bisulphide is probably absorbed through the skin, and acts upon the superficial nerves of the part to which it is applied.

DR. LETENNEUR, FRANCE.

67. ℞. Potassii bromidi, ℥ij
Aquæ destillatæ, f.℥x. M.

A tablespoonful before the mid-day meal, and two tablespoonfuls at bedtime, in migraine with periodical returns. During the attack the patient will take, three or four times a day, small doses of morphia.

DR. LABORDE, FRANCE.

68. ℞. Quinæ sulphatis, ℥ss
Tincturæ aconiti radiceis, ℥xv
Althææ pulveris, q. s.

Divide into thirty pills. Three or four a day in hemicrania.

DR. J. E. LOCKRIDGE, OF INDIANAPOLIS.

This writer (*American Practitioner*, March, 1877,) gives a formula which he has found of great service in every variety of headache, almost. It is

69. ℞. Potassii bromidi, ℥ij
Tinct. radiceis aconit., f.℥j
Aquæ destillatæ, ℥ss
Syrupi simplicis, f.℥ij. M.

Take a dessertspoonful in some water every hour until relieved.

This is a large dose of the principal ingredients, but it rarely has to be repeated, and he believes a less dose is not to be depended upon.

JAMES FERRIGO, M. D., MONTREAL.

Our author reports (*Canada Medical Record*, March, 1874,) a case of severe headache in a business man, which resisted all ordinary treatment, but which yielded promptly to *guarana*. Thirty grains of the powder in water were prescribed, to be taken when the pain was severe. The medicine acted exceedingly well, completely relieving him of all his headache. He can invariably prevent an attack by taking the above dose when he feels the premonitory symptoms coming on.

THOMAS HAWKES TANNER, M. D., LONDON.

70. ℞. Quiniæ sulphatis, gr.xxiv
Pulveris rhei, gr.xxxvj
Glycerinæ, q. s. M.

Divide into twelve pills, and order one to be taken at night.

Often of service in curing *bilious headaches*; the patients also taking daily exercise in the open air, and avoiding too much sleep.

71. ℞. Acidi nitro-muriatici diluti, f.ʒij
Strychniæ, gr. ʒ-½
Spiritus chloroformi, f.ʒvj
Tincturæ zingiberis, f.ʒiij
Aquam, ad. f.ʒiij. M.

A teaspoonful in water three times a day, *in nervous headache*.

Holding the arms high above the head produces a marked effect upon the cerebral circulation, and will frequently relieve the severity of that peculiar morning headache with which some persons constantly awake.

Compression of the temporal arteries with a couple of pads and a bandage may sometimes be of service.

Cold lotions, eau de cologne, etc., to the head, dry cupping or blisters, or setons to the nape of the neck; the removal of decayed teeth or stumps from the mouth, and change of air, are occasionally indicated.

72. ℞. Zinci valerianatis, gr.xij-xxiv
Extracti belladonnæ, gr.ij-vj
Extracti gentianæ, gr.xxiv. M.

Divide into twelve pills. One to be taken three times a day.

Useful in *hysterical headache*, especially when there is habitual constipation.

73. ℞. Zinci phosphatis, ʒj-ij
Acidi phosphorici diluti, f.ʒiiss
Tincturæ cinchonæ, f.ʒvj
Aquam menthæ piperitæ, ad. f.ʒiij. M.

Tablespoonful in half a wine glass of water three times a day, *in hysterical headache associated with general debility*.

HENRY G. WRIGHT, M. D., LONDON.

74. ℞. Tincturæ capsici, f.ʒij
Liquoris ammoniæ acetatis,
Tincturæ aurantii,
Syrupi aurantii corticis, āā f.ʒvj
Aquæ, f.ʒss. M.

A teaspoonful, to relieve the headache that ensues after *inebriety*, etc.

75. R. Linimenti chloroformi,
 Linimenti belladonnæ, ℞ f.ʒiiss
 Tincturæ opii, f.ʒj. M.
 For external application, *in rheumatic headaches.*

Mustard plasters applied to the neck are also exceedingly useful as a means of counter-irritation. In such cases (rheumatic headache) the following aperient is of advantage, viz.:

76. R. Pilulæ colocynthidis compositæ, gr.xv
 Extracti colchici acetici, gr.iiij
 Olei carui, ℥j. M.
 Divide into four pills. Two to be taken at bedtime, and one on consecutive nights. These pills should be followed, in persons of costive habit, by a morning purgative, as follows:

77. R. Magnesiæ, Div
 Liquoris potassæ, ℥xlvj
 Extracti sennæ fluidi, f.ʒij
 Syrupi zingiberis, ℞ f.ʒss
 Tincturæ aurantii, f.ʒj. M.
 Aquæ,
 Dose—a tablespoonful.

The administration of an alkaline medicine containing potash, if continued with regularity, will generally be followed by rapid amelioration of the pain and tenderness. The following may be used:

78. R. Potassii carbonatis, Div
 Potassii chloratis, ʒiiss
 Tincturæ cinnamomi, ℞ f.ʒvj
 Tincturæ aurantii, f.ʒiiss. M.
 Syrupi aurantii corticis,
 A dessertspoonful to be taken twice or three times a day.

If imprudent exposure to cold has produced an aggravation of the headache, and particularly if the patient be subject to catarrh, it is advisable to administer a sudorific at bedtime, such as

79. R. Pulveris ipecacuanhæ compositi, gr.xij
 Pulveris camphoræ, ℞ gr.iv. M.
 Pulveris guaiaci,
 For one powder, to be taken about bedtime.

In *gouty* headaches colchicum may be employed with greater freedom than in ordinary gout, care being taken that the bowels are freely open during its administration. An actual attack is best relieved by a brisk aperient followed by an effervescing mixture, containing an excess of potash, viz.:

80. R. Potassii carbonatis, ℥iv
 Ammonii carbonatis, ℥ij
 Tincturæ serpentariæ, f.ʒss
 Aquæ camphoræ, f.ʒijss. M.

Two tablespoonfuls to be added to a tablespoonful each of water and lemon juice, and to be taken effervescing twice or three times a day.

In the treatment of *plethoric headaches* the employment of medicines should, as far as possible, be dispensed with. They should only be resorted to when the necessities of business prevent, or the solicitations of indolence interfere with, a strict control over the diet and regimen. In these cases a saline diuretic should be ordered, such as

81. R. Potassii acetatis, ℥ij
 Potassii nitratis, ℥j
 Spiritus juniperi compositi, f.ʒxj
 Aquam menthæ piperitæ, ad. f.ʒiv. M.

A teaspoonful twice a day, together with an occasional aperient at night, viz.:

82. R. Pilulæ colocynthidis compositæ, gr. l
 Saponis castilliensis, gr. ix
 Olei anethi, ℥ij. M.

Divide into 12 pills; two to be taken at bedtime, and followed by a Seidlitz powder in the morning.

Persons subject to plethoric headaches should not partake of animal food more than once a day; should never indulge the appetite to satiety; should avoid beer, spirits, coffee, and all stimulating beverages; should bathe the head freely at night and lie with it elevated on a hard pillow during sleep; should have an airy bedroom and rise so soon as fairly awake, for otherwise activity of the thoughts in a recumbent position will congest the head and cause it to ache.

When the patient has been exposed to cold, and the headache comes on at night, with the head hot and the skin harsh and dry, the following sudorific, taken at bed-time, is often of great service, the body being kept warm during its action:

83. R. Antimonii et potassii tartratis, gr. ʒ
 Pulveris Jacobi veri, gr. v
 Pulveris potassii nitratis, gr. x. M.

To be taken at night.

In the plethoric headache of pregnancy, relief is afforded by the use of saline medicines, as

88. ℞. Pulveris ipecacuanhæ, gr. xxv
 Ammonii carbonatis, gr. v
 Aquæ menthæ viridis, f. ℥ss. M.
- Take at one dose, and follow by some warm fluid.

Where the pain ensues some hours after taking food, a warm draught, with the following formula, is generally beneficial :

89. ℞. Pulveris rhei, ℥ijss
 Magnesii carbonatis, ℥ij
 Spiritus ammoniæ aromatici, f. ℥ij
 Syrupi zingiberis, f. ℥ss
 Aquam menthæ piperitæ, ad. f. ℥ij. M.
- A tablespoonful in water.

Such a headache may often be warded off by the following :

90. ℞. Pulveris rhei, gr. xvij
 Pulveris capsici, gr. v
 Sodii carbonatis exsiccatae,
 Pulveris aloes,
 Saponis castillensis, ℥ss gr. xij. M.
- Divide into twelve pills. One to be taken before the meal, as a dinner pill.

91. ℞. Pilulæ hydrargyri,
 Pilulæ rhei compositæ, ℥ss gr. iv
 Extracti hyoscyami, gr. ij. M.
- Divide into two pills. To be taken at night, in cases of headache depending upon *dyspepsia*.

Or,

92. ℞. Pulveris ipecacuanhæ, gr. j
 Pilulæ colocynthis compositæ, gr. vij
 Extracti gentianæ, gr. ij
 Olei carui, ℥½. M.
- Divide into two pills. To be taken at bedtime.

When the system is debilitated it is often more advisable to employ the following, in place of the night pills:—

93. ℞. Infusi sennæ,
 Infusi rhei, āā f. ℥v
 Tincturæ cardamomi compositæ, f. ℥j
 Syrupi, f. ℥ss. M.
- To be given as a draught in the morning.

Great benefit is generally derived from the combination of a bit-r with an alkali, as in

94. R. Sodii carbonatis, ʒij
 Spiritus ammoniæ aromatici, f.ʒvj
 Tincturæ aurantii,
 Syrupi aurantii corticis, ʒʒ f.ʒijj
 Tincturæ gentianæ compositæ, f.ʒijss. M.
- A dessertspoonful twice a day.

If the stomach be very irritable, with excessive flatulence, the following mixture is more suitable:

95. R. Bismuthi subnitratæ,
 Sacchari,
 Pulveris acaciæ, ʒʒ ʒj
 Tincturæ cardamomi compositæ,
 Tincturæ zingiberis, ʒʒ f.ʒss
 Aquæ anethi, f.ʒijjss. M.
- A tablespoonful taken twice a day.

The same medicine may be combined with soda and capsicum, thus:—

96. R. Bismuthi subnitratæ,
 Sodii carbonatis exsiccata, ʒʒ ʒijss
 Pulveris capsici, gr.vijj. M.
- For eight powders. One to be taken twice a day, in dyspepsia with much acidity, with loss of appetite and general want of tone.
97. R. Argenti oxidi, gr.xij
 Pulveris capsici, gr.iv
 Extracti gentianæ, gr.xxiv. M.
- Divide into eight pills. One to be taken twice a day.

In atonic dyspepsia, when the tongue is pale at the tips and edges, and the system weakly, few recipes prove so invariably successful as the above.

98. R. Morphię muriatis, gr.j
 Pulveris camphoræ, gr.xxiv
 Mucilaginis acaciæ, q. s. M.
- Divide into six pills.
- In Intermittent Headache.* One pill to be taken when the headache is very intense. Five hours are to be allowed to elapse before repeating the dose.

99. R. Quiniæ sulphatis, ʒss
 Ferri carbonatis saccharatæ, ʒj
 Pulveris aromatici, ʒijss. M.
- Divide into twenty powders. One to be taken twice or three times a day, commencing with half a powder. Useful in *periodical headache* occurring in delicate and weakly persons.

In the treatment of *Nervous Headache* and of cases of migrains,

Chloral is recommended in sick headache, by Prof. BYRD. (F. 51.)

Hydrargyri Chloridum Mite is of service in headaches arising from biliary derangement, or a torpid state of the bowels. It should be followed, at a short interval, by a saline or other purgative.

Magnesia, in cases accompanied with constipation, affords great relief.

Magnesii Citratis Liquor. A dose of the effervescing citrate is often very effectual in dyspeptic headache.

Podophyllum is prescribed with benefit in many forms of bilious headache.

Potassii Bromidum has been recommended for the prompt and certain relief of the paroxysm.

Rheum is advised by Drs. TANNER and WRIGHT, variously combined. (F. 61, 76.)

CONGESTIVE OR PLETHORIC HEADACHE.

Asarum Europæum, gr. ij–iij of the powdered root, snuffed into the nostrils, has proved useful in cases of severe chronic headache originating in inflammation of the frontal sinuses.

Aloetic purgatives are beneficial in congestive headaches.

**Leeches* may be applied with advantage to the temples, to the crown of the head, or to the verge of the anus.

Saline aperients are recommended by Drs. DACOSTA and WRIGHT.

Shower Baths are of advantage in congestive as well as hysterical headaches.

Sinapisms, to which have been added powdered capsicum or oil of turpentine, are often applied with benefit to the soles of the feet and the inner parts of the calves and thighs.

**Water*, locally applied, *hot*, is often more effectual than the cold lotions usually employed. Diligently steeping the temples, forehead, occiput, and nape of the neck with water, as hot as can be borne, in many cases will be found a useful remedy. The hot foot-bath is often of signal service.

GOUTY HEADACHE.

Colchicum may be employed with greater freedom in gouty headache than in ordinary gout, according to Dr. WRIGHT. (p. 58.)

HYSTERICAL AND NERVOUS HEADACHES.

Ammonii Chloridum is advised by Dr. ANSTIE, to be administered in the same manner as for bilious headache (which see above).

Ammonii Bromidum is recommended by Prof. HAMMOND, alone or combined with the bromide of potassium.

Argenti Nitras is highly prized by Dr. GRAVES, administered in considerable doses, *i. e.*, gr. $\frac{1}{2}$ five or even six times daily, for five or six days at a time, when the paroxysm has abated. If there be constipation, the nitrate should be combined with minute doses of compound colocynth pill.

Bismuthi Subcarbonas is often prescribed by Prof. HAMMOND, particularly when there is gastric disturbance.

Cajuputi Oleum is used both externally and internally, in nervous, rheumatic, and neuralgic headaches.

Camphora is useful, combined with hyoscyamus.

**Chloroformi Spiritus*, in the dose ℥xv-xxx, often affords prompt relief in nervous and hysterical headaches.

Cimicifuga is useful in the headaches attendant on uterine derangement.

Caffea. A cup of strong coffee is of service in many cases of hysterical and nervous headache. The addition of the juice of a lemon adds greatly to its efficacy.

Guarana is particularly efficacious in the relief of sick headache, in doses of half a drachm to a drachm. (See p. 56.)

Hyoscyamus is strongly recommended by Dr. WRIGHT, in nervous headache. It may be combined with camphor, with chloroform, or with a diffusible stimulant.

Lavandula. The compound tincture, administered according to the following formula, makes an agreeable stimulant:—

104. ℞. Tincturæ lavandulæ compositæ,
 Spiritus chloroformi,
 Spiritus ætheris compositi, āā f.ʒj
 Aquæ camphoræ, f.ʒij. M.

Dose, two tablespoonfuls in water. Opium may be added if indicated. This is a very effectual recipe for the headache of hysteria.

Narcein is recommended as a hypnotic by Prof. HAMMOND. (p. 54).

Nitro-muriaticum Acidum is recommended by Dr. TANNER. (F. 61).

Opium is, Prof. HAMMOND states, of little value in these disorders.

Phosphorus is recommended by Prof. HAMMOND in all forms of nervous headache. (F. 56).

Quinia Sulphas is beneficial in hysterical headaches associated with anæmia.

Rosmarinus. The infusion is a mild stimulant, sometimes of service.

Stramonium has been prescribed with benefit by Dr. COPLAND.

Strychnia. Prof. HAMMOND considers *nux vomica* as preferable to *strychnia* in nervous headaches.

Terebinthina Oleum is recommended by Dr. GRAVES in hysterical headache.

**Valeriana* is of especial benefit in hysterical headache. Dr. ASHWELL recommends the following formula:—

105. ℞. Tincturæ valerianæ,
 Spiritus ætheris compositi,
 Spiritus lavandulæ compositi, āā ℥.xxx
 Tincturæ hyoscyami, ℥xx
 Aquæ camphoræ, f.ʒx. M.

For one dose.

Dr. CONNOLLY recommends the following:—

5-M

106. ℞. Tincturæ valerianæ ammoniatæ, ℥℥ ℥xxx
 Spiritus ætheris compositi, ℥℥ f.℥iss. M.
 Aquæ camphoræ,

Or,

107. ℞. Tincturæ valerianæ ammoniatæ, f.℥j
 Acidi sulphurici diluti, ℥℥xv
 Aquæ camphoræ, f.℥iss. M.

Make a draught to be given twice or thrice a day.

Zinci Oxidum is regarded as of great value in nervous headache, by Prof. HAMMOND.

Zinci Phosphas is recommended by Dr. TANNER, in hysterical headache, associated with debility.

Zinci Valerianas is also recommended by Dr. TANNER, combined with belladonna. (F. 62).

EXTERNAL REMEDIES.

Æther to the forehead, on a very thin compress, to avoid irritation of the skin, by thus favoring its free evaporation, is an excellent application.

Camphora, locally applied, is a valuable remedy in nervous headaches. The following formula may be employed :

108. ℞. Camphoræ, ℥j
 Aceti, Oj
 Aquæ, Oj-ij. M.

Another excellent local application is what is known in France as "L'Eau Sedative de Raspail," which is made as follows :

109. ℞. Aquæ ammoniæ, 100 parts.
 Camphoræ, 2 "
 Sodii Chloridi, 20 "
 Aquæ, 900 "
 Olei rosæ, q. s. M.

Dry Cupping is recommended by Dr. GRAVES.

Oleum Cajuputi. A few drops rubbed upon the painful part are often effectual.

Shower Baths are often of great advantage in hysterical headache.

NEURALGIC HEADACHE.

Ammonii Chloridum, given when the pain is most intense, in the dose of gr. x-xx, sometimes affords prompt relief.

Cajuputi Oleum is used, both externally and internally, by Dr. COPLAND and others.

Camphora, in the form of "Raspail's sedative water" (F. 109), is sometimes very useful.

Carbonis Bisulphidum is recommended by Dr. KENNION.

Caffein. The citrate has been recommended in doses of gr. j, every hour, for some time before the expected attack. Coffee is much used by Belgian physicians. The juice of a lemon makes a valuable addition to a cup of strong coffee in these cases. Caffein may also be employed hypodermically.

Nitrite of Amyl, by inhalation, has been successfully employed in neuralgic headache, associated with a diminished supply of blood in the brain.

EXTERNAL REMEDIES.

Acetum. A compress wet with vinegar and water, and bound upon the temples, often affords relief.

Ether applied to the forehead, on a very thin compress, so as to permit of its rapid and complete evaporation, is useful.

Sinapisms over the seat of pain sometimes afford relief.

Spiritus Aetheris Nitrosi makes a pleasant, cooling, evaporating lotion, if not continued so long as to irritate the skin.

PERIODIC HEADACHE.

Arsenici Iodidum has been found, by Dr. WALSHE, to give relief in the most violent cases of periodic headache. It should be given in doses of gr. $\frac{1}{16}$ — $\frac{1}{12}$, twice a day, two hours after eating, and continued for a month or two.

Ammonii Carbonas and a saline purgative, at the commencement of an attack, are recommended by Prof. FLINT. (p. 53.)

Belladonna is sometimes of service as a prophylactic.

Nectandra is a useful remedy in periodical headaches.

Potassii Bromidum often rapidly relieves headache of a paroxysmal character, with heat of the head and flushing of the face.

Quiniæ Sulphas, in small doses, is recommended, by way of prophylaxis, by Prof. FLINT.

Zincum. The various preparations of this metal, more especially the valerianate, may be employed with advantage in the intervals of the attacks.

RHEUMATIC HEADACHE.

Aconitum in small doses, either alone or in combination with other remedies, is often of service.

Chloroform liniment is recommended by Dr. WRIGHT. (F. 65).

Colchicum, combined with an aperient, is useful.

Potassii Carbonas is prescribed by Dr. WRIGHT.

Stramonium is recommended by Dr. COPLAND and others.

Sulphur internally is often of great benefit in rheumatic headaches and those which occur in women about the period of the cessation of the menses.

Alkaline treatment, if continued with regularity, will generally be followed by satisfactory results.

SEVERE IDIOPATHIC HEADACHE.

Ferri Carbonas has been prescribed with signal success, in the dose of gr. j twice a day.

Potassii Bromidum often proves a valuable remedy.

Zingiber. A ginger plaster applied to the forehead is said, by PEREIRA, to afford much relief.

Frigus. A freezing mixture of ice and salt is serviceable in those cases in which the headache is combined with much heat of the integuments, and when the symptoms appear to threaten secondary local inflammation.

Issues. Obstinate headache occurring in robust subjects often yields to an issue at the nape of the neck.

HEADACHE FROM MENSTRUAL DERANGEMENT.

Aloetic Purgatives are useful in cases arising from suppression of the catamenia.

Ammonii Chloridum is variously estimated by different physicians in cases of headache arising from irregularity or suspension of menstruation, some finding it powerless, others of great service.

Cimicifuga is often useful.

**Sulphur* given internally is of benefit in headaches occurring in women about the period of the cessation of the menses.

HEMICRANIA.

M. BERTRAND, PARIS.

110.	℞.	Veratriæ,	gr. v	
		Morphiæ,	gr. iij	
		Adipis,	ʒj.	M.

The painful parts to be rubbed with this ointment frequently, when the paroxysms of pain are at their height. Two or three frictions ordinarily suffice. A number of cases of facial neuralgia, and of neuralgic headache, in which quinine and blisters had been tried without effect, yielded promptly to this application.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

111.	℞.	Extracti conii fluidi,	ʒi.	
		Ammonii chloridi,	ʒij	
		Syrupi aurantii corticis,		
		Aquæ,	āā	f.ʒiss. M.

Teaspoonful thrice daily, in neuralgic headache associated with plethora, rather than anemia, in young women. Also, a drachm of cream of tartar, before breakfast, daily, or twice a day.

A small cup of strong coffee, with which the juice of a lemon has

been mixed, will, in some cases, afford relief in an attack of hemicrania.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

112. R. Caffeini citratis, gr. x
Syrupi, q. s.

Divide into ten pills. One to be given every hour, on the first symp, toms.

An infusion of unroasted coffee, drank daily, appears sometimes to render the attacks more rare and less severe.

RÉSUMÉ OF REMEDIES.

* *Acidum Arseniosum* is highly praised by Sir THOMAS WATSON, who states that four to six drops of Fowler's solution, three times a day, with due attention to the bowels, will, in nine cases out of ten, remove hemicrania.

Amyl-nitrite is highly praised in this affection.

Caffein, in the doses of one grain every hour, for some time before the expected paroxysm, is of great service. (F. 102.)

Cannabis Indica is sometimes very effective.

Conium is used in some cases, combined with chloride of ammonium. (F. 101.)

Digitalis has proved successful in conjunction with quinine.

Electricity. This is often a very efficacious means, when drugs fail. Dry faridization with the hand may be used. Labile applications with the moistened hand are often of service. Applications to the back of the neck or the stomach are sometimes more efficacious than directly to the head.

Ergota has been employed with very satisfactory results by Dr. E. WAKES. (*British Medical Journal*, Aug. 8, 1868.)

Ferri Sulphas, in doses of gr. viij-x, daily, either alone or combined with extract of hyoscyamus, will occasionally cure intermittent hemicrania.

Quinia Sulphas is a most valuable remedy in intermittent hemicrania.

Veratria is highly praised by a number of writers. M. BERTRAND's recipe (F. 100) may be employed, or the following formula by Dr. FULLER:

113. R. Veratriæ, gr. xx-xxx
Glycerinæ, f. ʒij
Spiritus rectificati, f. ʒvj. M.

Apply with a camel-hair brush night and morning, and rub in well along the course of the affected part, care being taken that there is no abrasion of the cuticle.

HYPOCHONDRIASIS.

W. W. GULL, M. D., LONDON.

It is obvious that the first duty of the physician is to encourage the hypochondriac to forget his woes, a difficult thing in practice, as it is a fallacy to suppose that his sufferings are unreal; on the contrary, they are most vividly real; and it is impossible that he should forget them until they cease. The key to the moral treatment is the breaking down of the patient's morbid self-concentration, and this object may be achieved, to some extent, in many cases, by a change in the course of his daily life. This may be most readily carried out with those in whom the constitutional tendency to hypochondriasis is aggravated by the ennui of an idle life. For these an active career or occupation which forces them to mix with the world is an immense gain. The isolated activity of the student is no real diversion from the fancies of hypochondriasis, as the case of Dr. JOHNSON and of many other famous intellectual workers abundantly proves. It is needless to say that all actively depressing influences should be removed, such as immoderate venereal indulgence, of whatever kind, or alcoholic intemperance. On the other hand, the influence of new emotions, which tend to lift the patient out of himself, can scarcely fail to benefit. It would be a real good fortune to a hypochondriac if he could fall in love in a natural and healthful manner, or if he could interest himself warmly in philanthropic schemes or other plans of public usefulness. And above all, something like a police supervision should be exercised over his studies, in order that he may be rigorously kept from the perusal of medical or other books which might remind him of his miseries; for though we do not believe that these things can create hypochondriasis, yet they may certainly prevent its cure.

The *constitutional treatment* is to be directed towards improving the general nutrition. The administration of *iron* is doubtless of great use to some anæmic patients, and *sea-bathing* frequently appears to exercise a very beneficial influence; but the first of these remedies is generally the most efficacious when taken in the form of the chalybeate waters of some foreign spa, and there is good reason to doubt whether both mineral waters and sea-bathing do not owe most of their apparent power to the moral influences of travel, and change of scene and mode of life. The more specific

nervous tonics, such as strychnia, quinia or phosphorus, seem to exercise but a doubtful and exceptional influence.

While it is desirable to avoid concentrating the patient's attention on parts which are the apparent seat of morbid sensations, it is important to relieve him of the distress caused by real (though mere functional) disorders of the digestive system. Decided acidity of the stomach should be counteracted by the use of antidotes, of which none is more efficacious than *magnesia* in ten grain doses thrice daily, with gentian or cascarilla. The excessive or too prolonged use of alkalies is, of course, to be avoided. The distressing flatulence which is often one of the earliest, and also one of the most annoying symptoms, is greatly relieved by *creasote* (one drop in a pill two or three times daily) or the *infusion of valerian*. Alcoholic tinctures should be cautiously employed, if at all, for there is real danger of the patient getting to appreciate the comforting sensations given by the spirit so highly that he gradually takes to drink; this is particularly apt to occur in hypochondriacal women, and in patients exhausted by masturbation, or other venereal indulgence. The constipation, frequently so obstinate and troublesome, should be remedied, if possible, without drugs, so as to avoid stimulating the patient's love of self-doctoring in the direction of the habitual use of purgatives. Fruit, green vegetables, etc., and active bodily exercise, are desirable means of accomplishing this object.

Physical exercise should be amusing, and never produce severe fatigue. A short continuance of the malpractice of carrying exercise to the fatigue point will usually suffice to produce a profound deterioration of the vigor of the nervous system, and an aggravation of the hypochondriacal fancies.

DR. HOMOLLE, FRANCE.

114. R. Extracti aloës,
 Quiniæ sulphatis, ℞ā ʒss
 Extracti valerianæ, q. s.

Divide into forty pills. One to four a day in hypochondria. Exercise in the open air, amusements, and appropriate regimen.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

The only way to cure a hypochondriac, is to rid him of his morbid sensations; but it is useless to dispute with him and try to convince him of the error of his ideas. In the first place, any exist-

ing derangement of the system which would cause a feeling of illness in a sane person, should be corrected. The benefit derived from various *natural mineral springs* is no doubt due to their happy effect upon the gastric disorders which so frequently give rise to this disease. Preparations of *iron, sea bathing, and cold foot-baths*, are frequently appropriate. Drastic *cathartics* must be used with caution, though they cannot be altogether dispensed with, and generally afford temporary relief. Patients should be warned against over-dosing. This also applies to the use of carminatives, for which they nearly always beg.

The *psychical* treatment should have in view the diversion of the attention from the sensory to the motor and intellectual spheres. This object will not be attained in educated patients by ordering long walks, wood-sawing, gymnastics, and mechanical pursuits, because the attention is not diverted by such action out of the sphere of sensation. A hypochondriac merchant sawing wood is always busy with the thought that he is doing so because he is sick. General rules are of little value, as the directions must always be in accordance with the capacity, education and means of the patient.

RÉSUMÉ OF REMEDIES.

Assafœtida, in combination with bitter tonics and mild aperients, may often be given with advantage in hypochondriasis attended with dyspepsia.

Creasotum, one drop, in pill, two or three times daily, will greatly relieve the distressing flatulence of hypochondriasis.

Fel Bovinum Purificatum is advised by Dr. COPLAND in hypochondriasis attended with torpor of the intestines :

115. R. Fellis bovini purificati,
 Pilulæ assafœtidæ compositæ, ʒss gr.xxx
 Extracti aloes, gr.xx
 Saponis, gr.x
 Pulveris ipecacuanhæ compositi, gr.viiij. M.

For thirty pills. One or two to be taken before dinner.

Ferri Sulphas is useful when anæmia co-exists.

Hyoscyamus has been found of service by Dr. HARLEY, in occasional full doses (f.ʒiv-viiij) of the succus.

Moschus, in the dose of one grain every two hours, often proves successful in the sleeplessness of hypochondriasis.

Potassii Bromidum is an uncertain remedy in this disease, affording great relief in some cases, and proving inert in others.

Rosmarinus. The infusion is sometimes useful.

Sumbul Radix. The resinous extract of this root, in doses of gr.j-ij, thrice daily, has proved beneficial in the hands of Russian physicians.

Shower Baths are often highly useful.

Turkish Baths have been employed with marked advantage.

HYSTERIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

The following directions are given by our author as to what may be done during a fit of hysteria: Everything tight about the patient's person should be loosened. The window should be opened and the cold air allowed to blow over her. The horizontal posture on a bed or the floor should be secured. This being done, many modes of further proceeding may be followed. Bleeding is, in all cases, of doubtful efficacy. When the jaw is locked, the following *enema* (recommended by Dr. Wood) may be used:—

116. R. Assafœtidæ, ʒij
 Aquæ, f.ʒss. M.

To be beaten up with the yolk of an egg; or, what is still better,

117. R. Olei terebinthinæ, f.ʒss.

To be mixed with the yolk of an egg, and then added to half a pint of water.

Another remedy is to *fill the mouth with salt*. But that which supersedes all others, and is unquestionably the best, is a *good drenching with cold water*. If the patient lie on the bed, the head should be drawn over its side, and a large quantity of water poured on it, from a considerable height, out of a pail, jug, or other large vessel, and directly over the mouth and nose of the patient, so as to stop her breathing and compel her to open her mouth. This practice is generally introduced into hospitals, and until it was adopted, it was not unusual to see three or four patients in hysteria in the same ward and at the same time. Under this practice, however, a hysterical case is rare, and the fit seldom occurs twice in the same person, and never becomes epidemic.

PROF. BOUCHUT, PARIS.

118. ℞. Chloroformi, ℥.xx
 Alcoholis, f.ʒiiss
 Syrupi, f.ʒviiij. M.
 Mix the chloroform and alcohol, then add the syrup, and shake. To be given by tablespoonfuls to hysterical patients, during the attack.

119. ℞. Moschii, ʒss
 Assafœtidæ, ʒij
 Camphoræ, gr.xv
 Extracti gentianæ, q. s.
 Divide into fifteen pills. Three a day in nervous and hysterical affections.

120. ℞. Zinci valerianatis, gr.ix
 Extracti belladonnæ, gr.ij
 Extracti gentianæ, ʒj.
 Divide into twelve pills. One thrice daily in hysterical headache, associated with habitual constipation.

THOMAS KING CHAMBERS, M. D., LONDON.

121. ℞. Acidi muriatici diluti, f.ʒiiss
 Aquæ calefactæ, (95° F.) C.xxx. M.
 For a bath. This tonic warm bath is to be used once a day, in order to prepare the patient for a *shower bath* twice a day.

Shower baths, in hysterical cases, are highly recommended by Dr. C. The making up the mind to the shock of a cold shower bath is a capital exercise of the will. Such baths have also a good influence by arterializing the cutaneous circulation, driving the venous blood home to the heart and lungs.

Our author rings the changes upon the following prescriptions in the treatment of this disease:—

122. ℞. Pilulæ assafœtidæ, No.xxx.
 Three to be taken thrice daily.

123. ℞. Spiritûs ammoniæ fœtidæ, f.ʒiiij.
 A teaspoonful in water three times a day.

124. ℞. Tincturæ castorei ammoniatæ, ·
 Aquæ fœniculi, ʒā f.ʒij.
 A dessertspoonful in water thrice daily.

125. ℞. Pilulæ galbani compositæ, No.xxx.
 Two thrice daily.

126. ℞. Zinci valerianatis, ʒj
 Syrupi, q. s.
 Divide into twenty pills. One to be taken three times a day.

SIR CHARLES LOCOCK, LONDON.

127. R. Potassii bromidi, ʒijss
 Aquæ cinnamomi, f.ʒiv. M.
 A dessertspoonful thrice daily.

In hysterical epilepsy, with disordered uterine functions, the treatment being prolonged. It was this use of bromide of potassium, suggested by our author, which led to its introduction as a remedy in forms of epilepsy other than the hysterical.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

128. R. Aurii et sodii chloridi, gr.v
 Tragacanthæ, ʒj
 Sacchari, q. s. M.

Divide into forty pills. Order at first one of these pills to be taken an hour after dinner, and another an hour after supper. Afterwards order two pills to be taken at these hours, and gradually increase the dose up to eight pills daily.

Our author speaks of this preparation as a nervine of great efficacy in hysteria. He has made use of it with signal effect in many cases where there was no indication for the local treatment of uterine disease, or else where the hysteric symptoms persisted, although the local uterine affection had been cured.

THOMAS HAWKES TANNER, M. D., LONDON.

129. R. Tincturæ assafoetidæ, f.ʒij
 Ammonii carbonatis, ʒj
 Aquam camphoræ, ad. f.ʒiv. M.

One or two tablespoonfuls occasionally, when feeling languid or hysterical.

130. R. Tincturæ assafoetidæ, f.ʒij
 Spiritûs ammoniæ aromatici, f.ʒiij
 Tincturæ chirettæ, f.ʒvij.

Sixty drops in a wineglassful of water every two or three hours, until the paroxysms cease.

131. R. Tincturæ valerianæ ammoniatæ, f.ʒijss
 Infusi valerianæ, f.ʒiv.

Two tablespoonfuls to be taken occasionally.

132. R. Ferri phosphatis, ʒij
 Acidi phosphorici diluti, f.ʒiss
 Syrupi aurantii corticis, f.ʒj
 Syrupi acaciæ, f.ʒiij.

A tablespoonful, largely diluted, three times a day.

133. R. Phosphori, gr.j.
 Olei amygdalæ dulcis, f.ʒiij. M.

One teaspoonful in a wineglassful of barley water three times a day.

The patient's diet should be regulated. She should have nourishing food, and often a moderate quantity of wine or beer. Hot rooms and evening parties are to be proscribed, and stays ought not to be worn. Healthy mental occupation should be afforded.

EDWARD JOHN TILT, M. D., LONDON.

134. ℞. Tincturæ castorei, f.ʒiij
 Spiritus lavendulæ compositi, f.ʒvj
 Aquam camphoræ, ad. f.ʒvj. M.

A tablespoonful two or three times a day, when cerebral symptoms and hysterical phenomena are marked.

The therapeutical indications in the treatment of hysteria are: 1st. To blunt the sensitiveness of the nervous system by sedatives and antispasmodics, and to strengthen it by metallic and other tonics, and by hygiene. 2d. To cure all diseases of the sexual organs, and save the nervous system from visceral irritation, by good hygiene at menstrual periods; or by marriage, when the sexual organs crave for their legitimate satisfaction.

GERMAN PHARMACOPŒIA.

135. ℞. Tincturæ assafœtidæ, f.ʒiv
 Tincturæ castorei, f.ʒiij
 Tincturæ opii, f.ʒj. M.

From fifteen to thirty drops, by the mouth or in enemata, twice or three times a day, in the hysterical attacks of dysmenorrhœa. Bitter drinks and preparations of iron in the intervals of the attacks if the patient be anæmic.

RÉSUMÉ OF REMEDIES.

- Æther.* Nothing, according to STILLÉ, so distinctly moderates the paroxysms of this disease as the inhalation of ether. Those who have found the spasms aggravated by a certain degree of etherization have not administered a sufficient quantity of the vapor. If persisted in it would undoubtedly have put an end to the fit.
- Allium.* The smell of bruised garlic will sometimes promptly terminate a hysterical paroxysm.
- Atropia.* In hysterical trismus, nothing acts so well as hypodermic injections of this alkaloid. Full doses are required.
- Aurii et Sodii Chloridum* is prescribed by Dr. NIEMEYER. (F. 128).
- Aloes.* The pill of aloes and assafœtida is very serviceable in the constipation of hysteria.
- * *Ammonium.* The carbonate, the aromatic spirits, the fœtid spirit, the valerianate, and other preparations, are much used and of great value.
- Anthemis.* A wineglassful of the infusion of chamomile may be given with advantage thrice daily.

**Assafœtida* is a most valuable medicine in this disease. It may be given alone, or combined as directed (in F. 129, 130), or the following form may be used :

136. ℞. Tincturæ assafœtidæ,
Tincturæ castorei,
Tincturæ valerianæ ammoniatæ, ʒiij f.ʒij
Aquæ camphoræ, f.ʒviij. M.

Dose—one or two tablespoonfuls every hour. *Assafœtida* may also be given, in the form of an enema. (F. 106.)

Aurantii Flores. Orange flower water is much used and valued in France. It is an elegant stimulant and antispasmodic in doses of one to two fluidounces.

Brominium. See *Potassii Bromidum*.

Cajuputi Oleum internally is often of benefit.

Camphora is a very serviceable remedy, either alone or in combination with *assafœtida* or opium.

Cannabis Indica is sometimes useful.

Castoreum is a remedy of considerable value.

Chloral may prove of use in calming hysterical excitement.

Chloroform inhalation is highly praised by Dr. BROWN-SÉQUARD and Dr. GRAILEY HEWITT in severe and prolonged hysterical paroxysms. Internally it may be given with ammonia or *assafœtida*. A liniment of chloroform often speedily relieves hysterical pain in the side.

Cupri Sulphas, in small doses, long continued, is recommended by Sir B. BRODIE, in obstinate hysteria.

Cusparia Cortex. The infusion is an eligible light tonic in hysteria.

Ferrum is indicated in hysteria associated with anæmia. It may be given combined with valerian and other antispasmodics.

Galbanum sometimes agrees better than *assafœtida*, and may produce equally favorable results, particularly in cases associated with disordered uterine functions. A galbanum plaster over the sacrum often affords relief.

**Lavandula* is sometimes an effectual remedy.

Lupulin has been recommended in chronic hysteria, attended with morbid vigilance, in doses of ten grains every six hours.

Moschus, in doses of gr. x–xv thrice daily, is a valuable remedy, particularly when the surface is pale and the pulse languid.

Opium is useful in cases in which the paroxysms are brought on by pain.

Phosphorus is prescribed by Dr. TANNER (F. 132), and has been highly commended by others.

Potassii Bromidum is sometimes a useful sedative in hysteria. Its use was suggested by Sir C. LOCOCK.

Ruta. From two to five drops of the volatile oil, on sugar, is a popular remedy; so also is the infusion of rue.

**Santonin* sometimes proves useful in revealing the true cause of the hysterical symptoms, viz., worms in the intestinal canal.

**Spiritus Ætheris Nitrosi* is often very effectual in relieving hysterical spasms.

Terebinthinae Oleum, in enema, will often arrest a severe paroxysm when ordinary means fail.

**Valeriana* is a valuable remedy; it may be given both during the paroxysm and in the intervals.

Zinci Oxidum is considered by Dr. WARING CURRAN as more efficacious in hysteria than the valerianate.

Zinci Sulphas, in the dose of one grain, combined with extract of gentian, in pill, two or three times a day, is a valuable remedy in cases of hysteria depending upon debility. It will be found to agree better with many women than the preparations of iron, causing less irritation.

Zinci Valerianas is recommended by Dr. CHAMBERS. (F. 126).

Shower Baths often prove highly useful.

Turkish Baths are sometimes beneficial.

Cathartics are to be administered if constipation exists, as it is important in hysteria to keep the bowels open. Aloes are indicated if there be torpor of the uterine system; mercurials or podophyllin, if there be biliary derangement; and saline, if there be plethora; but active purgation is in no case advisable.

Dry Cupping at the nape of the neck, between the shoulders, or below the clavicles, during a paroxysm of hysteria, has been found, by Dr. GRAVES, to be attended with the best results.

Electricity. Dr. LAYCOCK advises the persevering and systematic application of electro-galvanism to the abdominal and pelvic regions, in combination with the internal use of tar. Drs. BEARD and ROCKWELL state, that combined with proper constitutional treatment, general faradization and central galvanization are the methods of electrization which are indicated for hysteria. In cases of extreme hyperesthesia it may be better to place the patient under the influence of an anæsthetic while the application is made. Strong currents do not appear to be injurious in such cases. Local treatment is occasionally called for, but is secondary to general.

Emetics. An emetic of ipecacuanha given when the paroxysm is impending, often prevents it.

Enemata of assafoetida, turpentine, and other antispasmodics, are often of advantage.

Frigus. The sudden application of cold to the surface of the body, in hysterical cases simulating death, will revive the signs of life.

Water Douche over the head and face, strongly recommended by Dr. AITKEN. (See above.)

INSOMNIA.

PROF. ROBERTS BARTHOLOW, M. D., CINCINNATI, OHIO.

Morphia and atropia may be combined for hypodermic injection, so as to procure sleep, care being taken that there is no excess of atropia, or an amount of atropia sufficient to antagonize the cerebral effects of the morphia. They should be used in the proportion of gr. $\frac{1}{16}$ – $\frac{1}{8}$ of atropia to gr. $\frac{1}{4}$ – $\frac{1}{2}$ of morphia. As the susceptibility to atropia varies immensely, the precise quantity to be employed in any case must be regulated accordingly.

C. E. BROWN-SÉQUARD, M. D., LONDON.

137. ℞. Potassii bromidi, $\overline{\text{ʒ}}\text{ss}$
 Aquæ cinnamomi, f.ʒij. M.

A dessertspoonful a quarter of an hour before the last meal, and the same dose, or three teaspoonfuls, repeated at bedtime, for adults.

Excepting when pain is one of the causes preventing sleep (in which case the alkaloids of opium, aconite, or hyoscyamus should be employed), Dr. BROWN-SÉQUARD has found that this remedy has a most wonderful power to produce a quiet and refreshing sleep, without any drawbacks. In some cases it is necessary to increase the dose of the bromide, and to give also a small dose of narceine or codeine an hour before bedtime. In those affections in which the bromide of potassium is not powerful enough as a sleep-inducing agent, a warm bath of four, five, or six hours' duration is often successful.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

138. ℞. Assafœtidæ, gr.x
 Extracti hyoscyami, gr.iiij–v. M.

For one suppository. To be introduced at night, to quiet restlessness and induce sleep where it is not desirable to give opiates.

(GRAVES mentions that in persons of irritable and nervous disposition he has found musk or assafœtida, given more or less frequently during the day, effectual in procuring sleep at night.)

139. ℞. Pulveris digitalis, gr.iiij
 Extracti hyoscyami, gr.xij
 Camphoræ, āā M.

For twelve pills. One to be taken at night.

Prof. DA COSTA has found, in reference to the soporific and ano-

dyne properties of *narceine*, that it appeared, in doses in which morphia is prescribed, totally destitute of either; and in larger doses uncertain, and often palpably inert. It does not allay irritation. (*Pennsylvania Hospital Reports* for 1868.)

PROF. R. J. GRAVES, M. D., DUBLIN.

140. ℞. Tincturæ calumbæ,
Tincturæ quassiaë,
Tincturæ gentianæ,
Tincturæ cinchonæ, ℞ f.ʒj
Morphiæ muriatis, gr.ij. M.

A teaspoonful thrice daily, in a small cup of tea, an hour before the evening meal, to stop the nausea, quiet the nervous irritability and induce sleep, particularly in the case of those who abuse alcoholic drinks.

141. ℞. Assafœtidæ, ʒj
Morphiæ sulphatis, gr.ij
Mucilaginis acaciæ, q. s.

Divide into thirty pills. One or two at bedtime, in the insomnia of hypochondria, hysteria, and in general of nervous affections.

142. ℞. Chlorali, Div
Aquæ destillatæ, f.ʒv
Syrupi, f.ʒiss. M.

A tablespoonful from hour to hour, until sleep is produced.

PROF. WILLIAM A. HAMMOND, M. D., NEW YORK.

The principles which should prevail in the treatment of wakefulness may be arranged into two classes.

1st. Those which, by their tendency to soothe the nervous system, or to distract the attention, diminish the action of the heart and blood vessels, or correct irregularities in their function, and thus lessen the amount of blood in the brain.

2d. Those which directly, either mechanically or through a specific effect upon the circulatory organs, produce a similar effect.

In slight cases, the measures belonging to the first class often prove effectual. Among them are music, monotonous sounds, gentle frictions of the surface of the body, soft undulatory movements, the repetition by the insomniac of a series of words till the attention is diverted from the existing emotion which engages it, and many others of similar character. In persistent insomnia, however, these are nugatory.

Chief among the means embraced under the second head are those which tend to improve the general health of the patient.

In regard to food, while it is an error to suppose, as is generally

done, that a moderately full meal, eaten shortly before bedtime, is necessarily productive of wakefulness, there is no doubt that this condition is induced by an excessive quantity of irritating or indigestible food. A hearty supper of plainly cooked and nutritious food rather predisposes to sleep. This is due to the fact that the process of digestion requires an increased amount of blood in the organs which perform it, and consequently the brain receives a less quantity. This hypnotic effect is neutralized, however, when the food is immoderate in amount or irritative in quality, as it then, either by the pressure upon the abdominal vessels or through a reflex action on the heart, augments instead of diminishes the quantity of blood circulating in the brain. Attention should, therefore, be paid to the diet of the insomniac. As a rule people are under-fed. This is especially true of women. The tone of the system is thus lowered, and local congestions of different parts of the body are produced. If the brain be one of these, wakefulness results.

Most of the cases of insomnia in women are of the passive variety, and require not only nutritious food, but *stimulants*. Whisky is generally to be preferred to brandy and many kinds of wine. Nothing can be better, as a good stimulant, and at the same time tonic, than *Tarragona wine*, drank at dinner, to the extent of a glass or two. Next must be ranked good *lager beer*.

There are cases in which *coffee* induces sleep. Our author mentions several in which passive wakefulness was entirely and speedily cured by a cup of strong coffee, taken for three or four nights in succession, at bedtime. In females of languid circulation and a consequent tendency to internal congestions, it is particularly useful.

The employment of stimulants is only of service in the asthenic or passive form of insomnia; in the sthenic or active form they would, of course, increase the difficulty.

Physical exercise in the open air, extended to the point of inducing a slight feeling of fatigue, is productive of good effects.

The *warm bath* calms nervous irritability and determines blood from the head. Putting the feet in water of the temperature of 100° F. will often induce sleep, particularly in children, after other means have failed.

Cold water (32° F.) applied directly to the scalp, has a good influence in those cases in which the individual is strong, the heart

beating with force and frequency, and the mental excitement great. It is not admissible in the asthenic form of wakefulness.

Among the purely medicinal agents, *bromide of potassium* holds the first rank. It diminishes the amount of blood in the brain, and allays any excitement which may be present in the sthenic form of insomnia. The flushed face, the throbbing of the carotids and temporals, the suffusion of the eyes, the feeling of fulness in the head, all disappear as if by magic under its use. It may be given in doses of from ten to thirty grains; the latter quantity is seldom required, but may be taken with perfect safety in severe cases (see F. 137).

143. R. Zinci oxidi, ℞ij
Confectionis rosæ, q. s.

For twenty pills. One thrice daily, the last dose being taken just at bed-time.

Our author seldom employs *opium*; there are cases of insomnia, however, in which its influence is decidedly beneficial.

144. R. Tincturæ hyoscyami, f.ʒij.
From one to two teaspoonfuls in water, at bedtime.

Especially indicated in those cases which are accompanied by great nervous irritability. A good preparation of this drug is difficult to obtain. It possesses no advantage over bromide of potassium, to which it is not equal in any respect.

Our author has nothing to say in commendation of valerian, assafoetida and other antispasmodics. Tonics, especially iron and quinine, are almost always useful, even in the active forms of the affection.

In insomnia dependent upon severe and long-continued mental exertion, all means will fail if the individual will not consent to use his brain in a rational manner. Proper intervals of relaxation must be insisted upon, and in some cases mental rest. Travel is always of the greatest advantage in such cases.

C. HANFIELD JONES, M. D., LONDON.

It is often well, when sleeplessness depends upon hyperæsthesia, to give not only a *stimulant*, but also some *digestible nourishment*, about the time of going to rest, or even in the course of the night, when debility to a serious extent exists. A *mustard poultice* to the epigastrium is also an excellent hypnotic in some cases, proba-

bly owing to its stimulating a languid solar plexus. Among the various soporifics, it is doubtful whether any are more potent, especially for the weakly and hyperæsthetic, than prolonged exposure to the *cold open air*. This should be so managed as not to cause great fatigue, and be followed by a sufficient meal. The effects of a *monotonous voice* in inducing sleep are well known, particularly when the speaker or reader is dictating some matter not without a considerable tinge of dullness. The old monk's prescription for sleeplessness, viz., to tell your beads, was sound advice. *Hyoscyamus* frequently proves itself a really valuable remedy. It is well given in enema, in a dose not exceeding that for the mouth.

ANTOINE RUPPNER, M. D., NEW YORK.

145. ℞. Tincturæ hyoscyami, gtt.x-xx.
For a single hypodermic injection.
146. ℞. Tincturæ cannabis, gtt.x-xx.
For one hypodermic injection.

THOMAS HAWKES TANNER, M. D., LONDON.

147. ℞. Extracti stramonii, gr.ij
Extracti hyoscyami, gr.xviiij
Extracti lupulinæ, ℥ij. M.
For twelve pills. One to be taken every four hours until relief is obtained, in chronic disorders attended with suffering; in diseases of the nervous system accompanied with pain and restlessness; and in the dyspnœa of phthisis and emphysema.

Our author has seen good results in cases of wakefulness, particularly when there is any debility, from a tumblerful of port wine negus, or of mulled claret, or of white wine whey, taken the last thing at night. Where the skin is hot and dry a glass of cold water appears to be useful.

When there is any physical cause it must be removed. If the bowels are constipated or the excretion unhealthy, laxatives and alteratives will be required. Patients afflicted with heart-burn should take three or four *bismuth lozenges* before retiring to rest. If sedative drugs are necessary, resort should first be had to *hyoscyamus*, *hops*, *Indian hemp*, or *conium*. When stronger drugs are needed the following may be prescribed:

148. ℞. Morphiæ muriatis, gr.j-ij
 Spiritūs chloroformi,
 Tincturæ cardamomi compositæ, ℥℥ f.ʒj. M.

Dessertspoonful at bedtime ;

Or,

149. ℞. Extracti opii, gr.ijj
 Extracti hyoscyami, gr.xxiv. M.
 For six pills. One at bedtime.

Frequently the exhibition of opiate enemata or suppositories is preferable to the use of this drug by the mouth. The following may be employed:—

150. ℞. Tincturæ opii, ℥xx-xxx
 Mucilaginis amyli, f.ʒij. M.
 For one enema.

151. ℞. Pulveris opii, gr.j-ij
 Saponis, gr.x. M.
 For a suppository.

EDWARD JOHN TILT, M. D., LONDON.

152. ℞. Extracti hyoscyami, gr.xxiv
 Extracti cannabis indicæ, gr.ijj. M.
 For twelve pills. One or two to be taken at night, or oftener.

But Dr. TILT gives Indian hemp in one-grain doses, as soon as he finds it agrees, and sometimes in larger doses. If he desires a tonic as well as sedative effect, he orders

153. ℞. Extracti hyoscyami,
 Quiniæ sulphatis, ℥℥ gr.xij. M.
 For twelve pills. One to be taken every night.

This is a preparation that he has often found to be well borne by women who could not bear large doses of any tonic; some have continued to take it for months, not leaving it off during the menstrual period; and it will not interfere with the action of any purgative that may be required.

In one case of sleeplessness, one drachm of *lupulin*, in the form of pill, produced sound sleep after opium and hyoscyamus had failed.

CHARLES WEST, M. D., LONDON.

Our author states that the value of *tincture of hyoscyamus* as a sedative in the diseases of children can scarcely be too highly estimated. He orders

154. R. Tincturæ hyoscyami, ℥.xviii
 Syrupi, f.ʒiij
 Aquæ, f.ʒix. M.
 Dessertspoonful every six hours, for a child a year old.

To this mixture there may be added, if there is much peevishness,

155. R. Potassii bicarbonatis, ũā gr.xx.
 Acidi citrici,

(The treatment of Insomnia caused by pain is considered under the heads of Neuralgia, and of Rheumatism, which see.)

RÉSUMÉ OF REMEDIES.

Atropia and *Morphia*, combined hypodermically, are recommended by Prof. BARTHOLOW.

Cannabis Indica is often prescribed in sleeplessness, alone or combined with hyoscyamus. (F. 152) Dr. FULLER gives it in chronic rheumatism, to induce sleep, and Dr. OXLEY (*Liverpool Medical and Surgical Reporter*, 1868,) in chorea, in doses of ℥x of the tincture, for a child of seven, and so on.

* *Chloral* is a valuable remedy for sleeplessness in exhaustion of the brain through severe mental application or excitement of feeling, in convalescence from acute febrile diseases, and in insanity.

Caffea is recommended by Dr. ANSTIE in alcoholic sleeplessness. Dr. HAMMOND also recommends it in certain cases of insomnia. (p. 81.)

Hyoscyamus is prescribed by Drs. HAMMOND, RUPPNER, TILT, and WEST.

Lupulina is employed by Dr. TILT. (p. 84.)

Moschus has proved eminently successful in the hands of Dr. GRAVES, in persons of irritable and nervous disposition. He administers it in one-grain doses every two hours during the day, either alone or with assafoetida, in order to procure sleep at night.

Narcein in the hands of Dr. DA COSTA, has failed as a soporific (p. 80), but Dr. HAMMOND finds it a decided hypnotic in large doses.

Opium or *Morphia* may be given in certain cases, combined with hyoscyamus (F. 149), or in enema or suppository. (F. 151.) *Morphia*, given hypodermically in combination with atropia, is advised by Prof. BARTHOLOW. (p. 79)

* *Potassii Bromidum* is a powerful hypnotic, especially in cases of overtaxed mental energy or emotion, when opium and other narcotics have failed to procure sleep, and in the sleeplessness of convalescence from fever, at the termination of acute diseases, or after surgical operations. In such cases, from twenty to thirty grains at bedtime, repeated in the morning, and persevered in for days, will do more than the most powerful narcotics. It is highly praised by Dr. BROWN-SÉQUARD and Prof. HAMMOND.

Quiniaz Sulphas is sometimes prescribed with hyoscyamus by Dr. TILT.

Stramonium has been found a useful adjunct to *hyoscyamus* and *lupulin* by Dr. TANNER. (F. 147.)

Zinci Oxidum is sometimes employed in insomnia.

EXTERNAL REMEDIES.

* *Water, Warm Baths, Pediluvia, and Cold Water* to the scalp, are remedies recommended by Prof. HAMMOND in appropriate cases (p. 81). Prof. STILLÉ speaks of the value of *cold affusions*, or simply of the *cold bath*, in sleeplessness arising from over-excitement, due to severe study, or the stimulus of painful, or even of pleasant thoughts or occupations.

MENINGITIS (ACUTE, CEREBRO-SPINAL).

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

When arachnitis arises from mechanical injuries, the treatment is generally by *bleeding*, active *purgatives*, especially by *calomel* and *scammony*, and by *cold applications* to the head.

In advanced life general blood-letting is rarely indicated, but in vigorous constitutions it is sometimes necessary. As a rule, local blood-letting is more safe and more beneficial, especially when aided by keeping the head well raised and by the constant application of cold water to the scalp, or the occasional use of bladders filled with crushed ice. The bowels should be opened as rapidly as possible, unless the patient is feeble, emaciated or greatly exhausted. For this purpose employ

156. ℞. Hydrargyri chloridi mitis, gr.ij-ijj
 Extracti colocynthidis compositi, gr.iv-v.

Divide into two pills. Both to be taken at a dose, in cases accompanied with gout or Bright's disease, and followed in a few hours by a dose of salts and senna.

A fair proportion of *nutriment* must be given, in the form of milk, strong beef tea, sago, tapioca or arrowroot; and the patient should be kept in a quiet and darkened room. The more active symptoms being subdued, but not till then, a blister should be placed on the nape of the neck, if coma should ensue. If nervous irritability continues during convalescence, *hyoscyamus* or *chloride of ammonium* may be given. The bowels are to be kept open and

the strength supported by unstimulating nutriment. Tranquillity of mind and body must be preserved.

DR. NATHAN S. DAVIS, OF CHICAGO.*

157. ℞. Tincturæ physostigmatis, f.ʒj
 Extracti fluidi ergotæ, f.ʒjss. M.
 Half a teaspoonful every two hours.

The *Calabar bean* is used very freely by Dr. DAVIS in this disease, and with more apparent effect in controlling it than any other remedy he had tried. The pulse becomes slower, the respiration more regular, the patient quieter, the pain less intense. If the disease assumes a chronic form, with transient and wandering, but severe, neuralgic pains, a fretful condition of mind, variable appetite, debility and disturbed sleep, he has obtained very decided and permanent relief from

158. ℞. Tincturæ physostigmatis, f.ʒj
 Tincturæ opii camphoratæ, f.ʒjss. M.
 Half a teaspoonful three times a day. And at bed-time a moderately full dose of Dover's powder and quinia.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

In the treatment of acute meningitis it is not generally proper to bleed from the arm, but *leeches* may be applied to the brow and behind the ears, and, if the strength of the patient permit, the application may be repeated. The shaven head may be covered with *cold compresses*, and an active *purge* of calomel and jalap administered, viz.:

159. ℞. Hydrargyri chloridi mitis, gr.ij
 Extracti jalapæ, gr.viiij. M.
 Divide into two pills and order both to be taken.

In the latter stages of the disease, if there be coma and other signs of cerebral palsy, apply a large *blister* to the nape of the neck, and rub the following pustulating ointment on the head:

160. ℞. Olei tigllii, ℥xv
 Adipis, ʒss. M.
 One-fourth part to be rubbed into the skin every eight hours, until an abundant eruption is produced.

Still more efficacious than these derivatives are *douche baths*,

**Clinical Lectures on Various Important Diseases.* Phila., 1874.

pouring cold water over the head from a pitcher held some distance above it. The patient almost always recovers consciousness as this is being done, but it must be repeated at intervals of a few hours to secure a permanent result; with each successive employment the number of pitcherfuls is to be increased. Frictions with *mercurial ointment* and continued doses of *calomel* are much employed.

J. S. RAMSKILL, M. D., LONDON.

The application of cold to the head, by *irrigation*, often produces an almost magical effect. A small stream of cold water should be allowed to run on the shaven head from a vessel placed a little above it. This method of treatment should be employed with caution in children and aged persons.

RÉSUMÉ OF REMEDIES.

Antimonii et Potassii Tartras has been exhibited in repeated fractional doses with benefit. It is contraindicated if the patient be very young, if there have been prodromic symptoms, and if the inflammatory condition be not well marked.

Hydrargyrum. In regard to the use of mercury in acute meningitis, authorities differ. Dr. RUSSELL REYNOLDS has never seen any good results from its administration. Dr. J. S. RAMSKILL recommends it as a valuable remedy, and states that the system should be quickly brought under its influence, by combining with its internal administration (in small and frequently-repeated doses), the use of inunctions in the groin and axilla.

Opium is a most valuable agent in epidemic meningitis, when administered at the outset of the attack in cases in which the inflammatory predominates over the septic element.

Cathartics are indicated, unless the patient be very feeble.

EXTERNAL REMEDIES.

Cantharis. Blisters to the nape of the neck or vertex, although inadmissible during the acute stage of meningitis, are sometimes of great value after the excitement has passed.

Frigus. Cold affusions are recommended.

Oleum Terebinthinæ. Turpentine stupes applied to the extremities, often do good, as also do turpentine enemata.

FOR TUBERCULAR MENINGITIS, see HYDROCEPHALUS; for CEREBRO-SPINAL MENINGITIS of children, see under DISEASES OF CHILDREN.

NEURALGIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

When the neuralgia is superficial, compresses steeped in the solution of atropia have a good effect.

161. R. Atropiæ sulphatis, gr. v.
Aquæ destillatæ, f. ʒiij.

Renew the compresses several times in twenty-four hours. Continue them for at least an hour each time, and cover them with oiled silk to prevent evaporation. This is the formula recommended by TROUSSEAU.

FRANCIS E. ANSTIE, M. D., LONDON.

1. CONSTITUTIONAL TREATMENT.—(a) *Nutritive remedies*: fat, cod-liver oil, butter, etc. (b) *Preparations of iron* are useful (the carbonate especially) only where there is actual anæmia. (c) The *nerve tonics* (quinine, arsenic and zinc) are beneficial in some cases and not so in others. Sulphate of quinine is useful in malarial neuralgia, and also, in small doses, in some cases of non-malarial neuralgia, especially in ophthalmic branches of the fifth pair. Arsenic is useful, and more widely so than quinine, in both the above classes of neuralgia. Valerianate of zinc has also been employed with benefit. (d) *Constitutional remedies* directed against a real or presumed depravation of the blood by some special poison; as, iodide of potassium and corrosive sublimate against syphilitic neuralgia; colchicum against gouty neuralgia; and iodide of potassium against rheumatic neuralgia.

2. *Narcotic stimulant remedies for neuralgia*.—At the head stands *opium*, represented by *morphia*. Next, *belladonna*, or more exactly *atropia*. The *subcutaneous injections* of these substances are of considerable benefit. Best medium, hypodermic dose of morphia gr. $\frac{1}{6}$; or atropia gr. $\frac{1}{20}$ – $\frac{1}{30}$. Belladonna (gr. $\frac{1}{2}$ – $\frac{1}{6}$ of the extract) given by the mouth, has a special influence on painful affections of the pelvic organs. *Indian hemp*, internally (in pills of gr. $\frac{1}{4}$ – $\frac{1}{2}$, one every night), is very effective in certain forms of neuralgia, especially migraine and clavus. *Chloride of ammonium* (doses of gr. 10–20) is useful in migraine, clavus, intercostal and hepatic neuralgias. *Sulphuric ether* is supremely useful in certain visceral neuralgias, as gastralgia, uterine or ovarian neuralgia. *Turpentine pearls* are beneficial in sciatica. *Aconitia* is, ordinarily, too de-

pressing. *Alcohol* is most useful taken at meals, or especially for the relief of pain.

3. EXTERNAL REMEDIES.—Flying *blisters*, of extreme and general use; *mustard plasters*; liniments and ointments (best is chloroform, diluted with 7 parts of oil liniment); and *electricity* (continuous low tension current from BUNSEN'S or 'DANIELL'S battery) are recommended.

A. BERTRAND, M. D., PARIS.

- | | | | |
|---------|---|------------------------|----|
| 162. R. | Veratriæ,
Morphiæ muriatis,
Adipis, | gr.v
gr.iiij
ʒj. | M. |
|---------|---|------------------------|----|
- To be employed in friction during the paroxysms of facial neuralgia.

H. BOURDON, M. D., PARIS.

- | | | | |
|---------|---|---------------------------------------|----|
| 163. R. | Morphiæ acetatis,
Chloroformi,
Olei amygdalæ dulcis,
Ceræ albæ,
Adipis, | gr.iss
ʒiv
f.ʒiss
ʒss
ʒv. | M. |
|---------|---|---------------------------------------|----|
- Melt together the wax and lard and add the oil; mix the morphia and chloroform by shaking together in a wide-mouth flacon; add the melted wax and lard, and shake until cold. To be applied to the painful parts several times a day.

C. E. BROWN-SÉQUARD, M. D.

- | | | |
|---------|--|---|
| 164. R. | Extracti belladonnæ,
Extracti stramonii,
Extracti cannabis indicæ,
Extracti aconiti,
Extracti opii,
Extracti hyoscyami,
Extracti conii,
Pulveris glycyrrhizæ, | gr.ʒ
gr.ʒ
gr.ʒ
gr.ʒ
gr.ʒ
gr.ʒ
gr.ʒ
q. s. |
|---------|--|---|
- For one pill.

According to circumstances, BROWN-SÉQUARD gives, without producing any great constitutional disturbance, three, four, and even five pills in a day, and sometimes in about eight or ten hours, for the relief of neuralgic or other pains. There must be, therefore, some influence exerted by some of these substances upon the others, diminishing their bad and not their good effects. He recommends the following *hypodermic injection*:—

- | | | |
|---------|--|------------------|
| 165. R. | Morphiæ sulphatis,
Atropiæ sulphatis, | gr.ʒ - ʒ
gr.ʒ |
|---------|--|------------------|
- For one injection, in gtt. xx of distilled water.

The doses BROWN-SÉQUARD at first employed were gr. ½ of the

sulphate of morphia to gr. $\frac{1}{80}$ of the sulphate of atropia. He now employs those given above, the antagonistic effects of morphia and atropia on the brain rendering it possible, while securing the good effects against pain of the two remedies, to use safely, or at least without great or lasting cerebral or cardiac disturbance, large doses of these narcotics.

In this connection, we may give the doses employed by other authorities in administering morphia and atropia subcutaneously in neuralgia.

Dr. CHARLES HUNTER, of London, gives, as a rule, never to use, in the first injection, in any case, more than one-half the stomachic dose of these alkaloids for males, and not more than a third for females.

Dr. RUPPNER, of New York, places the minimum dose of morphia at gr. $\frac{1}{8}$; the maximum, gr. $\frac{3}{4}$; the minimum dose of sulphate of atropia, gr. $\frac{1}{80}$; the maximum, gr. $\frac{1}{30}$.

Dr. TILT, of London, states that the initial hypodermic dose of morphia (used alone) for a woman, should not exceed gr. $\frac{1}{2}$ (the acetate being the salt he prefers), and that of atropia should not exceed (used alone) gr. $\frac{1}{10}$. In combination, gr. $\frac{1}{8}$ of the sulphate of morphia with gr. $\frac{1}{80}$ of the sulphate of atropia.

DR. ROBERTS BARTHOLOW, OF CINCINNATI.

The *deep injection of chloroform* for the relief of neuralgia has been practiced by this physician and others with success. He gives the following directions regarding it:

1. *The Method.* The injections consist of five to fifteen minims of chloroform, thrown into the part by a hypodermatic syringe. This amount is sufficient to produce the best results. The needle is passed into the part deeply enough to reach the neighborhood of the affected nerve. The chloroform is then injected slowly, so that it may diffuse into the tissues immediately adjacent to the sheath of the nerve. The action is local and not systemic. He has heard with amazement of the subcutaneous use of chloroform, as morphia is employed. Thrown into the subcutaneous connective tissues, not only is the pain great, but there is danger of producing abscess and sloughing.

2. *The Site of the Injection.* This method is applicable only to superficial neuralgiae. It is essential to success that the chloroform reach the tissues about the trunk of the nerve. In the case

of tic-douloureux, the chloroform must be deposited near the foramina at which the various divisions of the nerve emerge; in the case of sciatica, about the ischiatic notch. The same rule obtains in regard to other forms of neuralgia.

3. *Theory of its Mode of Action.* The local effect of chloroform is to produce anæsthesia and analgesia. It accomplishes this result in part by suspending the power of the nerve to transmit impressions, in part by the local swelling which acts mechanically on the nerve-trunk. For the production and perception of pain it is necessary: First, that an irritation be made at the periphery; second, that end-organs exist for the reception of the painful impression; third, that conducting fibres are in a position to transmit the pain to the centres of consciousness; fourth, that these same conducting fibres are in a condition to refer outwardly the painful impression to the point at which it originated. It follows that, when the nerve-trunk is rendered incapable of transmitting the painful impression, that the pain ceases to exist, or, what is equivalent, ceases to reach the centres of conscious impressions.

The same writer extols a combination of anodyne and hypnotic remedies as follows:

166.	℞.	Chlorali hydrati,		
		Camphoræ pulv.,	āā	ʒj
		Morphiæ sulphatis,		gr.ij
		Chloroformi,		ʒxl.

The morphia will dissolve more readily if aided by gentle heat. Atropia may be added to this solution if desired. The proportion of atropia, as also of morphia, is determined by the uses to which the remedy is to be devoted. To the one hundred and sixty minims of the above solution one-twelfth of a grain of atropia may be added. Twenty minims of this solution will contain 7.5 (seven and a half) grains of chloral, the same quantity of camphor, one-fourth of a grain of morphia, and $\frac{1}{96}$ (one ninety-sixth) of a grain of atropia.

This combination Dr. B. extols as of wide application in all forms of neuralgic suffering. Locally it may be painted on the surface in superficial neuralgia, in *coccydynia*, in *acute rheumatism*, *cancer*, *ulcers*, etc.

Internally, it should be administered in capsules or on a lump of sugar, not mixed with water. As an anodyne the dose is gtt. x-xxx. Whenever pain or convulsive nervous action is to be allayed,

Dr. B. believes no combination of remedies will be found equal to this one in general usefulness.

PROF. HARVEY L. BYRD, M. D., BALTIMORE.

- | | | | |
|---------|---------------------------|---------|----|
| 167. R. | Olei menthæ piperitæ, | f.ʒiij | |
| | Olei origani, | f.ʒij | |
| | Olei sassafras, | f.ʒj | |
| | Olei terebinthinæ, | f.ʒiiss | |
| | Tincturæ opii, | f.ʒss | |
| | Tincturæ aconiti radidis, | f.ʒi | |
| | Alcoholis, | f.ʒij. | M. |

For local application in neuralgia and chronic rheumatic pains.

DR. CAMINITI, ITALY.

- | | | | |
|---------|--------------------|-------|----|
| 168. R. | Morphiæ muriatis, | gr.xv | |
| | Collodii flexilis, | f.ʒj. | M. |

Apply by means of a small brush on the parts, the seat of the neuralgic pains. If the pain return periodically, give the sulphate or valerianate of quinine.

- | | | | |
|---------|---------------------|-------|----|
| 169. R. | Ammoniaci, | ʒijss | |
| | Spiritus lavandulæ, | ʒxv | |
| | Camphoræ, | ʒiv | |
| | Alcoholis, | f.ʒj. | M. |

This liniment is useful in tic-douloureux. A compress moistened with it is applied to the painful part, covered with dry linen, and retained until the skin reddens; then the reddened skin is to be rubbed with a solution of morphia until the pain ceases.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

- | | | | |
|---------|------------|-------|----|
| 170. R. | Aconitiæ, | gr.iv | |
| | Veratriæ, | gr.xv | |
| | Glycerinæ, | f.ʒij | |
| | Cerati, | ʒvj. | M. |

To be rubbed over the painful parts, care being taken to see that there is no abrasion of the skin.

(Prof. GROSS sometimes employs veratria ointment in cases of neuralgia, of the strength of ʒj to ʒj.)

- | | | | |
|---------|-------------------|-------------|----|
| 171. R. | Potassii bromidi, | ʒss | |
| | Succi conii, | f.ʒx | |
| | Aquam cinnamomi, | ad. f.ʒiij. | M. |

A dessertspoonful to be taken three times a day.

Useful in epileptiform neuralgia.

- | | | | |
|---------|----------------------|-------|----|
| 172. R. | Strychniæ sulphatis, | gr.ss | |
| | Quiniæ sulphatis, | gr.xv | |
| | Cinchonæ sulphatis, | ʒj | |
| | Pulveris rhei, | ʒss | |
| | Extracti gentianæ, | q. s. | M. |

Divide into thirty pills. One to be taken four times a day, in intercostal neuralgia of malarial origin, associated with constipation.

DR. NATHAN S. DAVIS, OF CHICAGO.*

In many severe and obstinate cases of neuralgia, sciatica, tic-douloureux, etc., careful examination will reveal traces of inherited or acquired syphilis. In such, the only hope of recovery must be founded on an effort to change the diathesis. The means best calculated to effect this are:

1. Regular and judicious exercise in the open air.
2. A plain nutritious diet, chiefly of milk, farinaceous articles and fruits, with absolute exclusion of all alcoholic drinks, tobacco, and *strong* tea and coffee.
3. To use of alteratives, which will not depress the system.

To effect the last mentioned, small doses of the iodides and mercury are well to begin with, as:

173.	℞.	Sodii iodidi,	ʒiij	
		Hydrarg. chloridi corrosivi,	gr. j	
		Extracti conii fluidi,	ʒʒj	
		Syrupi simplicis,		
		Aquæ menthæ,	℥	ʒʒj. M.

A teaspoonful before each meal and at bed time.

As soon as this preparation has had a visible effect on the gums or the Schneiderian membrane (if the latter has been involved), it should be discontinued, and the following given in its place:

174.	℞.	Potassii iodidi,	ʒiij	
		Potassii bromidi,	ʒvi	
		Extracti conii fluidi,	ʒi	
		Aquæ menthæ,	ʒiij.	M.

A teaspoonful three or four times a day.

If under this treatment, which must be continued six or eight weeks, the patient becomes debilitated, some direct tonic must be given. The best Dr. DAVIS has used in such cases is the *syrupus ferri pyrophosphatis*, ʒʒj half an hour before each meal; or, a pill, as follows:

175.	℞.	Ferri citratis,	gr. ij	
		Strychniæ,	gr. ʒss.	M.

For one pill. One thrice daily before meals.

In many cases of uncomplicated neuralgia, Dr. DAVIS has derived great advantage from *belladonna*, in such combinations as the following:

**Clinical Lectures on Important Diseases.* 1874.

176. ℞. Aetheris nitrici, f.ʒij
Tincturæ belladonnæ, fʒij. M.
A teaspoonful in sweetened water every three or four hours.
177. ℞. Chloroformi,
Tincturæ belladonnæ, ʒā f.ʒij
Syrupi aurantii corticis, f.ʒij. M.
A teaspoonful every two hours until the pupil becomes slightly dilated,
when the interval between the doses should be doubled.
178. ℞. Tincturæ belladonnæ,
Tincturæ gelsemii, ʒā f.ʒss. M.
Twenty drops every two or three hours.

DR. SPENCER THOMSON, ENGLAND.

This practitioner stated, in an address, in 1876, before a branch of the British Medical Association, that he had used the tincture of *gelsemium sempervirens* in a large number of neuralgic cases in which it was applicable, and with almost constant success. In using the word "applicable," he does so in accordance with his own experience that the remedial power of the gelsemium seems confined to those branches of the trifacial nerve supplying the upper and lower jaw, more particularly the latter, and more especially when in either jaw the pain is most directly referred to the teeth or alveoli; indeed, he can scarcely recall an instance of the above in which relief was not speedily and thoroughly given. The usual expression of the patient has been, "It acted like a charm."

After referring to the solution of Calabar bean, to the tincture of *actæa racemosa*, and the nitrite of amyl, Dr. THOMSON concludes by saying that, with morphia, and occasionally—but only occasionally—atropia, to use hypodermically, with phosphorus in solution, with gelsemium, aided at times by the ordinary external appliances, such as heat, or freezing if need be, aconite, and chloroform, one ought to feel fully prepared to meet and subdue at the time most cases of neuralgic pain, and, indeed, of pain generally.

DR. C. L. GREGORY, OF OHIO.

Gelsemium has also been used by this writer with much success. The prescriptions he prefers in sciatic and crural neuralgia are:

179. ℞. Fl. ext. gelsemium,
" " black cohosh, ʒā ʒj. M.
Ten drops every four hours until the toxical effect of the gelsemium, drooping of the eye-lids, is noticed, when the dose should gradually be diminished.

In severe cases of malarial and continued fever, an agonizing pain often attacks the shoulder, elbow, hip, knee, etc., and becomes almost unbearable. He saturates a woolen cloth with chloroform and applies to the painful part, covering it with a dry cloth to prevent too rapid evaporation. This gives prompt relief. Internally, he gives :

180. ℞. Fl. ext. gelsemium,
 " " black cohosh, ℞̄ ℥j. M.
 Five to ten drops every three or four hours, as above.

The above prescription is used when the limb is left stiff and painful during and after convalescence. (*Cinn. Medical News*, Jan., 1877.)

DR. DUMAS, MONTPELLIER, FRANCE.

181. ℞. Castorei, gr. xxx
 Camphoræ, gr. xv
 Pulveris opii, gr. viij
 Confectionis rosæ, q. s.
 To be divided into fifteen pills, and used for nervous affections of the abdominal organs in women.

H. W. FULLER, M. D., LONDON.

Our author recommends highly the external application of aconitia in neuralgia, and in intercostal rheumatism. When, from the situation or other circumstances, it is difficult to apply the ointment, he directs the following solution :

182. ℞. Aconitiæ, gr. iij-iv
 Spiritûs rectificati, f. ℥vj
 Glycerinæ, f. ℥iij. M.
 To be applied by means of a camel-hair brush until the pain is relieved. It should only be employed in chronic cases, it proving ineffective so long as there is acute action. Even when the relief of pain is only temporary, this is an advantage of no inconsiderable importance.

Another local application recommended by Dr. FULLER, is the following :

183. ℞. Extracti belladonnæ, ℥j
 Tincturæ opii, f. ℥j
 Glycerinæ, f. ℥iij. M.
 A piece of lint wet with this mixture, and covered with oiled silk, often affords great relief when placed along the course of the nerve.

The following local application is also often useful :

184. ℞. Acidi hydrocyanici diluti, f.ʒss
 Glycerinæ,
 Aquæ rosæ, āā f.ʒij. M.
 To be painted over the seat of pain with a camel-hair brush.

The following local application is also recommended:

185. ℞. Tincturæ opii,
 Spiritus ætheris compositi,
 Glycerinæ, āā f.ʒij
 Extracti belladonnæ, ʒj. M.

Speedy relief often follows the application of a strip of flannel soaked in this mixture along the course of the nerve, and then covered with oiled silk to prevent evaporation.

DR. GRAY, FRANCE.

186. ℞. Tincturæ aconiti,
 Chloroformi, āā f.ʒijss
 Adipis, ʒx. M.

After applying the ointment to the affected part, the place is covered with cotton.

H. GREEN, M. D., NEW YORK.

187. ℞. Zinci valerianatis, gr.xv
 Extracti hyoscyami, gr.xxv. M.

Divide into thirty pills. Two or three a day in facial neuralgia.

188. ℞. Zinci sulphatis, gr.xv.
 Morphię sulphatis, gr.ij
 Strychniæ, gr.ij
 Pimentæ.
 Extracti hyoscyami, āā gr.xxx. M.

Divide into thirty pills. One every five or six hours in neuralgia unconnected with any organic lesion.

PROF. S. D. GROSS, M. D., PHILADELPHIA.

189. ℞. Quiniæ sulphatis, ʒij
 Morphię sulphatis, gr.j
 Strychniæ, gr.ʒ
 Acidi arseniosi, gr.j
 Extracti aconiti, gr.x. M.

Divide into twenty pills. One to be taken three or four times a day. Add to the recipe ferri sulphatis, ʒij, if the system be anæmic.

This pill is useful in a great variety of cases of neuralgia. Its effects should, of course, be carefully watched.

PROF. WILLIAM A. HAMMOND, M. D., NEW YORK.

190. ℞. Extracti belladonnæ, gr.v.
 Divide into twenty pills. One thrice daily, the dose to be increased as necessary.

The use of belladonna is chiefly to change the habits of the sys-

tem. This drug, although at one time much overlauded, is very efficient in the treatment of neuralgia. Our author has not used atropia often, as the dose is difficult to graduate.

Hypodermic injections of morphia may be used during the paroxysms of pain. In their use avoid the face; a good point is the inside of the arm.

191. ℞. Tincturæ aconiti, f.ʒss.
 Rub with a rag upon the painful part until a sense of pricking is felt.

This is next in value to the subcutaneous use of morphia. The action is often very powerful. Dr. H. once caused temporary paralysis of the arm in a lady, by the too free application of the tincture.

Chloroform may be used externally, internally, or by inhalation, not carried to insensibility. Repetitions of the inhalation may break up the paroxysm.

Hypophosphites are useful; may be given in doses of from ten to twenty grains. They act by setting free phosphorus in the stomach.

Galvanism.—The direct galvanic current may be successfully used both for the relief of the paroxysm and for breaking up the habit of the disease. For the first, apply the poles so that the position is near the seat of the greatest pain, and pass the current continuously for several minutes. To change the habit of the system, apply one pole to the nape of the neck, and the other over the course of each sympathetic nerve, moving it along the neck. DUCHENNE says, that neuralgia can generally be relieved by Faradization. Dr. H. has not been so uniformly successful, but often effects a cure by the application mentioned.

The use of tea generally aggravates neuralgia, while coffee, on the contrary, does not, but if strong is often of service.

DR. RAIMBERT, FRANCE.

192. ℞. Extracti opii,
 Extracti belladonnæ,
 Extracti stramonii, ūū gr.xv
 Aquæ laurocerasi, f.ʒiij. M.

Introduce from four to six drops of this solution into the ear, close the canal with cotton, and incline the head to the opposite side. A useful mode of treatment in facial and dental neuralgias.

PROF. P. RICORD, M. D., PARIS.

193. ℞. Extracti hyoscyami,
 Extracti belladonnæ, ūū ʒj
 Glycerinæ, f.ʒj. M.

Anoint several times a day, with this liniment, the testicle affected with neuralgia. Employ at night suppository containing from one-half to three-fourths of a grain of the extract of belladonnæ.

In *neuralgia of the fifth nerve* various authorities have recently reported favorably of *croton-chloral*. Dr. E. P. HURD, of Massachusetts, has employed it in various cases of intractable neuralgia, in the following formula:

194.	℞.	Croton-chlorali,	3j	
		Glycerinæ,		
		Syrupi aurantii,	ʒʒ	f.ʒj. M.

A teaspoonful as required.

Dr. JULES WORMS, after several experiments made with a view of rendering this drug less repugnant to the taste, recommends the following formula:

195.	℞.	Croton-chloral,	1 gram	
		Glycerin,	60 grams	
		Water,	60 "	
		Oil of peppermint,	3 drops	
		Simple syrup,	25 grams.	M.

This amount at one dose.

Intercostal neuralgia or pleurodynia, a complaint which is often a very painful and annoying one, may generally be relieved completely by applying two or three strips of plaster firmly round the side over the seat of pain. The emp. roborans is a good form of plaster for these cases. It is desirable that the practitioner should himself see that the application is properly made, and that it is not left to the patient, as the result entirely depends on its being accomplished in an effectual manner.

196.	℞.	Extracti belladonnæ,	ʒss	
		Chloroformi,	ʒl	
		Glycerinæ,	f.ʒss.	M.

Anoint with this liniment, several times a day, the affected parts in neuralgia of the anus, when there exists neither fistula nor any lesion of the rectum.

THOMAS HAWKES TANNER, M. D. LONDON.

197.	℞.	Quinæ sulphatis,	gr.xxiv	
		Extracti belladonnæ,	gr.iv	
		Camphoræ,	gr.xxx	
		Confectionis rosæ,	q. s.	

Divide into twelve pills. One to be taken two or three times a day, in cases of neuralgia in which the attacks are periodic.

198. ℞. Quiniæ sulphatis, ℥j
 Liquoris arsenici chloridi, f.ʒiij-iv
 Acidi sulphurici aromatici, f.ʒij
 Syrupum zingiberis, ad. f.ʒiij. M.
 One teaspoonful in tablespoonfuls of water directly after breakfast, dinner and tea, in severe neuralgia.

199. ℞. Ammonii chloridi, ʒiij
 Aquæ, f.ʒiij. M.
 A tablespoonful in water every hour, while the paroxysm of pain is on. If after the fourth dose there be no diminution of pain, it will be useless to persevere. As soon as the pain is relieved, the dose may be reduced to a dessertspoonful three times a day.

EDWARD JOHN TILT, M. D., LONDON.

200. ℞. Extracti hyoscyami, ʒj
 Extracti belladonnæ, gr.v
 Butyri cocoæ, q. s. M.
 Make into twenty *suppositories*, round, in pill form. One to be introduced into the rectum at night. This is the suppository Dr. TILT most frequently prescribes, for it relieves pain without constipating.

201. ℞. Extracti opii, ℥j
 Extracti belladonnæ, gr.x
 Butyri cocoæ, q. s. M.
 Make into twenty round suppositories. One to be well introduced into the bowel at night.

202. ℞. Morphix sulphatis, gr.iiij
 Butyri cocoæ, q. s. M.
 Divide into six *vaginal suppositories*. One to be used at night.

203. ℞. Liquoris opii (Battley's), f.ʒj
 Tincturæ hyoscyami, f.ʒj
 Aquæ, f.ʒiij. M.
 One tablespoonful of this, or double the quantity, to be added to a little warm milk for an *enema*.

204. ℞. Morphix sulphatis, [gr.viiij
 Atropix sulphatis, gtt.iiij
 Olei rosæ, gtt.ij
 Alcoholis, f.ʒss
 Oleum olivæ, ad. f.ʒiv. M.
 For a liniment. To be shaken before use.

The sulphate of atropia is preferable to atropia, because it is more soluble, and oil is much better than glycerine as a constituent of liniments.

Another excellent, and elegant, and sedative liniment, is the following :

205. R.	Atropiæ sulphatis,	gr.viiij	
	Morphiæ sulphatis,	gr.xvj	
	Aconitiæ,	gr.ij	
	Acidi sulphurici diluti,	ʒv	
	Alcoholis,	f.ʒss	
	Oleum olivæ,	ad. f.ʒiv.	M.

Or, if a stimulant effect is desired,

206. R.	Chloroformi,	f.ʒss	
	Spiritus terebinthinæ,	f.ʒj	
	Camphoræ,	ʒij	
	Olei lavandulæ,	ʒxx	
	Oleum olivæ,	ad. f.ʒvj.	M.

The first four ingredients should be mixed before adding the oil, and the liniment should be well shaken before it is applied.

207. R.	Atropiæ sulphatis,	gr.ij	
	vel		
	Morphiæ sulphatis,	gr.x	
	Glycerinæ,	f.ʒss	
	Olei neroli,	gtt.iv	
	Unguenti glycerinæ,	ʒj.	M.

Make an ointment, to be rubbed into the skin twice a day.

DR. TOURNIÉ, PARIS.

208. R.	Zinci valerianatis,	gr.v	
	Extracti opii,	gr.iss	
	Extracti hyoscyami,	gr.ijss	
	Confectionis rosæ,	q. s.	

Divide into six pills. Give one every three hours until three are taken, in tic-douloureux. Repeat the same medication the following day.

JAMES TURNBULL, M. D., LIVERPOOL.

209. R.	Extracti aconiti,	ʒij	
	Adipis,	ʒij.	M.

A useful ointment in neuralgic pains.

210. R.	Quiniæ sulphatis,	gr.vij	
	Morphiæ sulphatis,	gr.ʒ.	M.

Divide into three powders. Give one from hour to hour, in periodical neuralgia.

211. R.	Morphiæ sulphatis,	gr.iss	
	Sacchari,	gr.xxx.	M.

Divide into six powders. One morning, evening and night, in facial neuralgia.

AUGUSTUS WALLER, M. D., GENEVA.

Our author has found that certain substances, such as atropia, strychnia, morphia, and the tincture of aconite, when mixed with

chloroform and applied to the skin, are absorbed rapidly; but if alcohol is used instead of chloroform, absorption is delayed or altogether prevented. The ability of introducing rapidly into the blood these active narcotics, without the use of the hypodermic syringe, will be of much importance in those cases in which even a slight puncture of that instrument is dreaded. It will also be of value in those instances in which it is necessary or advisable to keep up the effect for a long time, as in hydrophobia, chronic neuralgia, etc.

212. ℞. Aquæ calcis, f.ʒj
 Spiritus terebinthinæ, f.ʒiiss
 Saponis, q. s.

Introduce the lime water, the essence of turpentine, and a small quantity of soap in a matrass, shake, and add, little by little, more soap, until the mixture acquires the consistence of a pomade. Useful in pains of a neuralgic or rheumatismal character.

GUY'S HOSPITAL, LONDON.

213. ℞. Liquoris plumbi subacetatis,
 Tincturæ opii, ṁṁ f.ʒij
 Mellis, ʒj. M.
 Confectionis rosæ,
 Make a liniment.

This is known in the pharmacopœia of the hospital as *linimentum plumbi opiatum*, and is much used.

LONDON HOSPITAL.

214. ℞. Tincturæ aconiti,
 Linimenti saponis, ṁṁ f.ʒj. M.
 To be used as an anodyne liniment.

RÉSUMÉ OF REMEDIES.

**Acidum Arseniosum* is a remedy of a deservedly high reputation in neuralgia, having a wider range of application than quinine. In malarial cases it should be given in larger doses (ʒx-xxx, thrice daily, of Fowler's solution) than in non-malarial. In the latter, ʒv of Fowler or gr. ʒ of the *arsenate of sodium*, in pill, with extract of lupulin, will prove effectual in the cases amenable to this remedy. It may also be given hypodermically and endermically.

**Aconitum* is a remedy of great value in chronic cases of neuralgia, when the secretions are in order and the general health not much impaired. Its use should, therefore, be often preceded by purgatives and tonics. In acute cases it is not indicated before all signs of active disease have been subdued by other means. Its external use should usually precede its internal administration, which need only be resorted to in case of failure of the former.

The combination of quinine with aconite seems to increase its efficacy, and add permanency to the relief afforded by it. This combination is especially indicated in anæmic or debilitated patients, where there is no apparent nerve lesion or exciting cause.

Æsculus Hippocastanum. The alkaloid of horse chestnut, *esculin*, has been given in doses of gr.xv, twice daily, with success, by French physicians, in the treatment of periodic neuralgia.

Æther. In simple neuralgia, particularly of the nerves of the head, Prof STILLÉ recommends combining the anodyne effect of ether with its revulsive effects, by applying it on small compresses covered with some solid substance, immediately over the points where the painful nerve emerges from its bony canal, or where it in any other way becomes superficial.

Alcohol. Dr. ANSTIE has several times observed, in acute neuralgia, that after large doses of various narcotics had been tried in vain, the first real and substantial relief was obtained by the use of a moderate dose of alcohol; the consequence of overdosing the remedy is, however, nearly always disastrous.

Ammonii Chloridum is often of signal benefit.

Ammonii Valerianas is favorably spoken of by some writers.

Anthemis. Chamomile, in substance, in doses of gr.lx, or in a very concentrated infusion, is administered with success in France, in neuralgia of the fifth nerve.

Apiol is said to be of service in intermittent neuralgia.

Assafatida is of little value in neuralgic affections.

Beberie Sulphas has proved successful in some cases, after the failure of quinine. In doses of gr.x, night and morning, it is more effective than in smaller doses.

**Belladonna*, whether used externally or internally, ranks among the first of the sedatives and anodynes of service in neuralgia. (p. 97.) It occasionally fails of effect, however. BROWN-SÉQUARD combines it with six other narcotics, for the relief of neuralgic pains. (F. 164.) *Atropia* is preferred by some to the preparations of belladonna, but the dose is more difficult to graduate.

Brominium. See Potassii Bromidum.

Caffea is much employed by Belgian physicians. Prof. HAMMOND finds that it is often of service, but that tea generally aggravates neuralgia.

Cannabis Indica is ranked as a neuralgic remedy, next in value to opium and belladonna, and their alkaloids.

Chloral is sometimes of service in this affection.

Chloroformum always acts as a palliative in, but rarely cures neuralgia.

Cinchona, see Quiniæ Sulphas.

Colchicum is recommended in conjunction with carbonate of ammonia and cinchona, by Dr. COPLAND. It should be preceded by cathartics.

Conium is occasionally useful, both externally and internally administered, but is inferior to opium and belladonna.

Creasotum has been given with success by Dr. ELLIOTSON in facial neuralgia.

Croton Chloral Hydrate, in doses of gr.ij every hour, has been found to promptly mitigate paroxysms of neuralgic pain.

Digitalis has proved of service in the hands of Dr. FULLER, in cases in which the pain is intermittent. He gives ℥x-xx of the tincture three or four times a day.

Fatty Remedies, like cod-liver oil, olive oil, butter and cream, are often of great service.

Ferrum (particularly Ferri Carbonas) is useful in cases associated with anæmia; in others it fails.

Galbanum has been found of service in neuralgia dependent upon uterine derangement, given as follows:

215. R.	Pilulæ galbani compositæ,	gr.iiij-vij	
	Pilulæ hydrargyri,	gr.ij.	M.
	One pill to be taken every other night.		

Glonoïn (nitro-glycerin) in very small doses (one drop diluted with 100 of rectified spirit) has been recommended, but should be used with caution.

Guaiacum is of service in forms of neuralgia of a rheumatic character. From ℥xx to ℥xl of the ammoniated tincture may be given every five hours, until relief is obtained.

Hyoscyamus is considered by Dr. HARLEY as more efficacious than bella donna in neuralgic affections of the internal viscera

Iodinium, see Potassii Iodidum.

Ipecacuanha. Dover's powder at night often affords much comfort. An eighth or a quarter of a grain of morphia may be added when indicated.

**Morphia*, hypodermically injected, affords speedy and often permanent relief. Dr. ANSTIE has cured cases by three or four injections of gr. ʒ, which would have been very tedious under the older plan of treatment. Many cases yield in a week or ten days to hypodermic injections twice daily.

Nux Vomica has been used with occasional success.

Oleum Cajuputi may be employed with advantage, either externally or internally, in cases unconnected with inflammatory action.

**Oleum Morrhuæ* is sometimes successful after the failure of quinine and other ordinary remedies.

Oleum Terebinthinæ is not unfrequently of benefit. It is equally appropriate to the inflammatory and non-inflammatory states of neuralgia, and it is said relapses are less frequent after it than after most other remedies.

Oleum Tiglii has been used with success in some cases, in which it has seemed to exercise a special influence apart from its purgative action.

Opium, both internally and externally used, is of great service in certain cases; but ordinarily, far inferior to morphia injected subcutaneously.

Oxygen inhalation sometimes relieves or cures neuralgia.

Physostigma has exerted local anodyne effects in several cases of neuralgia reported.

* *Plumbi Acetas* is said to be a safe and effective remedy in many cases of superficial neuralgia, and even in neuralgia of the abdominal viscera.

* *Potassii Bromidum*, in full doses, often effectually relieves some forms of neuralgia. Dr. DA COSTA sometimes prescribes it with conium. (F. 17.)

Potassii Chloras, in doses of gr. xxx a day, has, in three weeks' time, it is reported, produced wonderful effects in facial neuralgia.

Potassii Iodidum is of service in neuralgic affections dependent upon an inflammatory state of the nerve coverings.

* *Quinia Sulphas* is of great value in all neuralgias of malarial origin, and in a certain number of non-malarial cases. In the former, it should be given in full doses (gr. v-xx) shortly before the expected attack; in the latter, doses of gr. ij-ijj thrice daily are as large as are likely to benefit. Dr. ANSTIE says that he knows of no circumstances which indicate beforehand that quinine will be useful in non-malarial cases, excepting that in neuralgia of the ophthalmic branches of the fifth it is more effective than in other non-malarial neuralgias. Prof. GROSS frequently combines quinine with morphia, strychnia, arsenic and aconite, in the treatment of neuralgia. Dr. TANNER combines it with belladonna and camphor, and with the chloride of arsenic (above).

Salix is recommended, but rarely used.

Sodii Arsenias is of service in neuralgia where other arsenical preparations are badly borne.

Sodii Carbonas, often, in full doses, speedily arrests neuralgia connected with acidity of the stomach.

Sodii Hypophosphis, in drachm doses, given in beef tea, thrice daily, has proved successful.

Stramonium is only found of benefit, by Dr. FULLER, where the symptoms shift from limb to limb, but never when the disease is stationary.

Strychnia is of use in epileptiform neuralgia.

Valeriana exerts a favorable influence in neuralgia associated with hysteria. The ammoniated tincture may then be given combined with guaiacum.

Zinci Valerianas is a serviceable remedy in those cases in which the disease is purely nervous, and in those which accompany uterine derangement.

Cathartics are indicated when there is an overloaded state of the colon. Turpentine by the mouth or by enema, and croton oil, are valuable purgatives in these cases.

Emetics are useful in commencing the treatment of neuralgia arising from

dyspepsia, and in those cases which are regularly intermit-
tent an emetic should be given an hour before the expected pa-

- **Stimulants*. Dr. ANSTIE has found, in some cases of acute
neuralgia (particularly of the fifth nerve), that after the failure of
narcotics a moderate dose of alcohol has at once given relief.
He also states that in certain chronic neuralgias of the face,
where the power of digesting ordinary food is almost suspended
by reflex irritation, an almost exclusively alcoholic diet con-
tinued for some time, occasionally works wonders.

EXTERNAL REMEDIES.

- **Aconitia* locally applied over the seat of pain is a most power-
ful remedy in neuralgic affections. Dr. FULLER, having observed
that it fails so long as signs of active disease exist, restricts its use
to purely chronic cases. Dr. DA COSTA sometimes prescribes it
with veratria, in ointment. (F. 170.)
- **Aconitum* is a valuable local application in chronic cases. The
oil may be combined with chloroform, with soap liniment or
turpentine, etc.
- Acupuncture* is of use after inflammation has subsided, in those
cases in which there is effusion within the sheath of the nerve.
It promises speedy and effectual relief, but is useless, and
prejudicial in all other cases.
- Æther*. The local application of atomized ether is now usually
employed.
- Antimonii et Potassii Tartras*. Tartar emetic counter-irritation
is sometimes employed over the affected part, but its use is dis-
couraged by Dr. FULLER, on account of the pain and discomfort
which it occasions.
- Aqua Ammoniacæ*. The following method of applying strong water
of ammonia in neuralgia, is recommended by Prof. STILLÉ.
Cut small disks of cloth, about a half or three quarters of an
inch in diameter, and apply them, moistened with the ammoniacal
water, to such points in the course of the affected nerve as are tender
to pressure, or are the seat of spontaneous pain. Cover the
disks with cloth with coins, buttons, or other convenient bodies,
to prevent evaporation. Cotton contained in a thimble and saturated
with the caustic liquid forms a still more convenient arrangement.
As soon as slight vesication occurs, the pain is relieved, and
so thoroughly as when the same effect has been obtained by the
means of cantharides. The addition of morphia to the ammoniacal
liquid renders its effects more prompt and certain.
- Belladonna* is much used externally. TROUSSEAU highly recom-
mends the external application of belladonna when the neuralgia is
facial. In such cases may also be employed a compress saturated
with a solution of atropia. Dr. FLINT uses atropia in preference
to belladonna, in liniments and ointments. These applications
however, are all inferior to the hypodermic injection of atropia.
- **Cantharis*. Blisters should be tried in cases of any severity; if the

podermic injection of morphia and atropia has failed, flying blisters should be employed. Dr. ANSTIE states that in numerous early cases, one or two flying blisters, applied successively over the different points in the course of the painful nerve, have at once and permanently arrested the disease.

Calor. The actual cautery and the moxa are sometimes employed in severe cases.

Chloroformum may be applied pure (especially serviceable when the pain is localized in a small space) or in liniments. "Gelatinized chloroform," made by incorporating 1 part of chloroform and 2 parts of white of egg, is a useful form for application.

Cupping is recommended by Dr. GRAVES.

Electricity seems to be of service only in those cases of a purely neuralgic character, unconnected with irritation in distant parts of the body; then the continuous galvanic current is often of essential service. If employed before the pain has subsided, the interrupted current very generally aggravates the patient's sufferings. See Prof. HAMMOND's remarks, p. 98.

Enemata of turpentine and of opium are often beneficial.

Frigus. Ice applied to the spine, by means of his spinal bag, is recommended by Dr. CHAPMAN.

Hydrargyri iodidum viride. The following ointment has been strongly recommended:

216.	R.	Hydrargyri iodidi viridis,	ʒij	
		Adipis,	ʒj.	M.

Hydrocyanicum acidum dilutum is recommended locally by Dr. FULLER.

***Hypodermic injections.* Dr. ANSTIE says that the discovery of the hypodermic method has instituted a new era in the treatment of severe neuralgias. Atropia, or morphia, or the two combined, may be used. The face should be avoided in making the injection. Prof. BARTHOLOW says: "The neuralgias are best treated by the combined morphia and atropia solution. There are several reasons for this: much larger doses of morphia may in this way be injected without danger to the patient; and the larger the quantity, as BROWN-SÉQUARD has shown, the greater the curative power. Morphia and atropia combined are more effective than either singly. The systemic effects during the time of maximum narcosis, and also after the narcosis has disappeared, are much less unpleasant and depressing when the two agents are combined than when morphia is used alone. Sometimes atropia is better borne than morphia, and *vice versa*: in this case, the agent whose effects are least unpleasant should be in excess." He recommends the following proportions: $\frac{1}{18}$ to $\frac{1}{120}$ of a grain of atropia, $\frac{1}{4}$ to $\frac{1}{2}$ of a grain of morphia. The physiological effects of atropia here predominate, but the toxic effects are guarded by the morphia. For the facial neuralgia of pregnancy he uses morphia alone. This treatment promptly cures the affection, a fact first pointed out by Dr. H. R. STORER,

of Boston. "These cases, as is well known, are extremely obstinate under the old methods of treatment, and those who have suffered from them on former occasions are exceedingly grateful for the relief so promptly and permanently afforded by the hypodermic method." Dr. RUPPNER reports a number of cases of the various forms of local and general neuralgia treated with success by the hypodermic injection of the acetate of morphia. *Caffein* has also been found to relieve neuralgia when thrown into the subcutaneous cellular tissue. In one instance in the practice of Dr. ANSTIE, of severe neuralgia of the superficial branches of the circumflex in the shoulder, two successive injections of caffein (over the biceps) appeared to cut short the malady altogether. In a case of dorso-costal neuralgia, attending shingles, a daily injection of caffein, during five or six days, notably mitigated the pain on each occasion.

Iodoform has been recommended for local use in neuralgias, in the form of saturated solution in chloroform.

**Leeches* applied along the course of the nerve often afford immediate relief after the failure of anodynes and other local measures. They are particularly indicated when there is inflammatory action or much vascular excitement.

Monarda. Oil of horsemint, in liniment, with camphor and laudanum, sometimes affords prompt relief.

Morphia is second to no remedy for the relief of neuralgia, employed *hypodermically* (see above). The *endermic* application (gr. $\frac{1}{2}$ -gr. j, sprinkled on a blistered surface over the seat of pain) is sometimes beneficial.

Oleum Cajuputi is occasionally of service locally applied, in cases unconnected with inflammatory action.

Oleum Tiglii, in liniment alone, or diluted with soap liniment, makes an excellent friction in many cases.

Opium is recommended locally by Dr. FULLER and others, but its use is inferior to the subcutaneous injection of morphia.

Rectal Suppositories of belladonna, hyoscyamus, and opium, are some times employed.

Sinapis. Sinapisms over the seat of pain often afford relief.

Stramonium is sometimes employed locally in the same manner as belladonna, to which, however, it is inferior.

Turkish Baths have been employed in some cases with advantage.

Vaginal Suppositories (medicated pessaries) are also occasionally used. They are highly recommended by Dr. TILT. (F. 202.)

Veratria, when there are no active or inflammatory symptoms present, is often beneficial, externally applied, the ointment being rubbed in diligently until it causes a sense of heat and tingling. It is inferior, however, to aconitia.

PARALYSIS.

F. W. HEADLAND, M. D. LONDON.

Strychnia is only successful in paralysis in cases where the injury to the nervous centre has healed up, and when the limb continues paralyzed merely because the motor nerves have lost the power of transmitting the necessary impulse, from having been so long unaccustomed to discharge this office. On the other hand, when the lesion of the nervous centre is of recent occurrence, or when it has been of so serious or extensive a nature as to admit of no repair in the course of time, the remedy will be ineffectual.

CHARLES HUNTER, M. D., LONDON.

Strychnia is a useful remedy, given hypodermically, in paralysis. If, however, after three or four injections, improvement does not take place, it is almost useless to continue its employment.

DR. G. VIVIAN POORE, OF LONDON.

In his late writings on the therapeutic uses of *electricity*, this author lays down the following rules as to its application to paralysis: 1. *If the paralysis to the will remain absolute, and if the contractility of the muscles be perfect, we do no good by persevering with electrical treatment.* This condition is often met with in hemiplegia. The patient is absolutely helpless on one side, although the muscles are in no degree wasted, and their irritability remains normal. 2. *If the paralysis to the will remain absolute, and if the irritability of the muscles be diminished, then electricity is useful, in so far as it helps to improve the nutrition of the muscles, and restore their normal degree of irritability.* The normal degree of irritability being restored (the paralysis to the will remaining absolute), then electrical treatment may be discontinued. The irritability of muscles may be diminished from mere want of use, and electricity may serve to restore this irritability. 3. We should bear in mind the advice of Sir Thomas Watson, that "our aim should be to preserve the muscular part of the locomotive apparatus in a state of health and readiness, until peradventure that portion of the brain from which volition proceeds having recovered its functions, or the road by which its messages travel having been repaired, the influence of the will shall again reach and reanimate the palsied limbs." 4. Whenever we meet with the *degenerative reactions*, we should em-

ploy that form of current to which the muscles most readily respond, which is invariably the galvanic. We must persevere doggedly, and we may find our perseverance rewarded by the gradual return of the normal muscular irritability. 5. If the irritability to both forms of current has completely disappeared, we are not justified in persevering too long, nor in holding out delusive hopes to the patient. Nevertheless treatment should not be abandoned without a patient trial. In treating paralysis with electricity, an exact diagnosis is, above all things, necessary, and we should be able to bring our knowledge to decide as to whether or not the paralyzing lesion is of a permanent nature, or one that, according to our pathological knowledge, is or is not removable, or susceptible of improvement. If not, then our efforts to cure must of necessity be unavailing. It is in those cases where the paralyzing lesion has disappeared, or has improved, and we have only to combat with the effects produced by it, that our efforts are the most successful. *Hysterical paralysis* is especially susceptible to electrical treatment, and with it we occasionally work apparent miracles. When a patient who has no will to move her muscles sees that her muscles can be made to move in spite of her will, it is no wonder that such a discovery should exercise a wholesome moral influence over her mental condition.

SIR THOMAS WATSON, LONDON.

No good can reasonably be expected from *strychnia*, but much harm, unless the cord be free from organic disease. The *tincture of cantharides* has sometimes a very beneficial effect in thirty-minim to half-drachm doses.

RÉSUMÉ OF REMEDIES.

Aloetic purgatives often prove beneficial conjoined with *nux vomica*.

Ammonii Formias is recommended by Dr. RAMSKILL as a stimulant in cases of chronic paralysis accompanied by general torpor.

Argenti Nitrus, in doses of gr. $\frac{3}{8}$ - j daily, has been employed with success, by BOUCHUR, in paraplegia and progressive general paralysis, resulting from sexual or alcoholic excess.

Arnica has been employed with good results.

Cantharis. SIR THOMAS WATSON recommends tincture cantharides in paraplegia. Generally, when it does good, it acts as a diuretic.

Full doses of quinine promptly break up intermittent paralysis.

Recommended in those forms of paralysis arising from spinal

congestion, in paraplegia complicated with menstrual irregularity (MEADOWS), and in the constipation of the paralytic, after the most powerful cathartics have failed. (WARING CURRAN.)

Ferri et Strychnia Citras is serviceable in paralysis associated with anæmia.

Hydrargyrum. Dr. MAUDSLEY says: "To administer mercury systematically in general paralysis, as has been done, is as unaccountable in theory, as it undoubtedly is pernicious in practice."

Nux Vomica. See Strychnia.

Oxygen inhalations have been employed by Dr. RAMSKILL.

Petroleum has proved serviceable, used externally and internally.

Phosphorus has been successfully employed in some cases, in the form of the oil (made by gently warming two parts of phosphorus in 100 parts of almond oil, in a closed flask, for about twenty minutes, and decanting off, when cool, the oil from the undissolved phosphorus. Dose, gtt. iij-vij, in emulsion, or with cod-liver oil).

Potassii Iodidum occasionally proves successful in some forms of paralysis.

**Strychnia* is a remedy much prescribed in paralysis, but very variously reported upon. The different results obtained in different hands have been accounted for by the impurity of the drug, the inability of the patient to bear the remedy, and its injudicious application to all forms of the disease. When the brain is still in a disordered state, and sanguineous effusion exists, it will prove injurious rather than beneficial, having the effect of exciting inflammatory action. When, however, the effusion has been absorbed, and the paralysis continues, as it were, from habit, strychnia will be found of great service. It is most beneficial in those forms of paralysis not dependent upon disease of the nervous centres, as in lead, mercurial and rheumatic palsies. See opinions of Drs. HEADLAND, HUNTER, and Sir THOMAS WATSON (p. 110).

As for the manner of administering strychnia in paralysis, it may be commenced in doses of gr. $\frac{1}{32}$ — $\frac{1}{16}$ two or three times a day, and the quantity cautiously increased. After continuing it for a few days or a week, slight convulsive twitchings or a creeping sensation will be experienced *in the paralytic limb*. It should then be discontinued for two or three days, and resumed as before.

It may be employed hypodermically with great advantage in some cases.

Sulphur gives very good results, according to Dr. GRAVES, in paralysis of an asthenic or chronic character, when employed as a sequel to a course of strychnia. He uses it in the form of an electuary and in baths.

Toxicodendron is recommended by TROUSSEAU in paraplegia from concussion of the spinal marrow, administered as follows: gr.v the first day of treatment, increased daily by the same amount until gr.lx a day are reached. It is asserted that it strengthens rather

than enfeebles digestion, and causes no inconvenience other than occasionally slight strangury.

EXTERNAL REMEDIES.

Armoracia Radix. Poultices of fresh horseradish root form a ready counter-irritant in paralytical affections.

Cajuputi Oleum makes an excellent embrocation for paralytic limbs. Diligently rubbed in it stimulates the parts and relieves pain when present.

Delphina is believed, by Dr. TURNBULL, to be more useful in paralysis than veratria, from its property of exciting the circulation in the affected part.

Mucuna. The setæ maintained on the affected limb by a bandage have been employed as a local stimulant in paralysis.

Myristica. The oil, diluted with soap liniment, forms a useful stimulating embrocation.

Oleum Tiglii, in liniment, with or without the addition of soap liniment, may be employed with advantage as a stimulating friction.

Petroleum has proved serviceable in some cases.

Rosmarinus is a useful ingredient in ointments and liniments, to be rubbed over paralyzed muscles.

Sinapisms, with the addition of powdered capsicum, act as speedy derivatives, useful in some cases of paralysis.

Sulphuricum Acidum. The following ointment, perseveringly employed, has resulted beneficially :

217. R.	Acidi sulphurici,	ʒj.	
	Adipis,	ʒj.	M.

It acts as a powerful irritant.

Veratria ointment, diligently used, has occasionally been followed by great improvement.

Cold Shower Baths, in cases of paralysis consequent on severe inflammatory attacks of the brain and spinal column, are often attended with benefit, but sometimes fail, and may even aggravate the symptoms.

Turkish Baths, cautiously employed, sometimes benefit.

Cantharis. Blisters to the spine are useful when there is reason to expect effusion within the theca.

Electricity, carefully employed, is highly beneficial in appropriate cases. It should never be resorted to in recent cases, if there be reason to suppose that effused blood or coagulum remains unabsorbed, nor so long as there are any febrile or inflammatory symptoms present. It is of no benefit in cases with organic lesion of the nervous system. Its greatest utility lies in cases of purely *local* paralysis. Great and terrifying shocks are rarely beneficial where small and repeated shocks have failed. Both faradization and galvanism have been employed with success. Electro-punc-

ture has been used with good results in paraplegia and hemiplegia.

Frigus. Ice to the spine is recommended by Dr. CHAPMAN.

Issues and Setons are sometimes employed with advantage. The value of the *seton* has lately been strongly urged by DR. THOMAS J. GRIFFITHS, of the U. S. Marine Hospital Service. He uses neither electricity nor strychnia. His plan is described on page 52, being the same he uses for epilepsy. When the paralysis is due to the presence of a tumor, embolism, extravasation of blood or exudation of lymph, he thinks iodide of potassium would be indicated, although the results given by the seton have been so gratifying, that he has not relied on anything else. Out of twenty-six cases of hemiplegia treated by this means, sixteen recovered, and all the others but one improved very decidedly, and the improvement was permanent. The length of time required to produce these results was from three to nine months on an average. They are so favorable that they should arrest the attention of the profession.

Leeches at the verge of the anus are beneficial, where there is suppression of a habitual discharge, as from piles.

HYSTERICAL PALSY.

* *Cantharis.* Dr. RUSSELL REYNOLDS says that he knows of no mode of treatment in hysterical paralysis comparable in efficiency with that of placing narrow strips of blister completely around the affected limbs. It succeeds perfectly and rapidly, after all other measures have failed, and is worthy of trial in all cases.

RHEUMATIC PALSY.

Conium has been successfully employed in some cases.

* *Strychnia* is of great benefit in most cases of paralysis resulting from rheumatism.

* *Electricity* is employed with the same great advantage in this, as in lead and mercurial palsies.

PROGRESSIVE LOCOMOTOR ATAXIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

Persistent counter-irritation over the spine (by *blisters*, *actual cautery*, or *ice*) is indicated, cautiously employed. *Phosphates* in the form of phosphates of metals and salts, of *diluted phosphoric acid* as a drink in the daily allowance of water, and of *phosphate of sodium* as an aperient, may be given with advantage. *Nitro-muriatic acid* as a tonic, and *cod-liver oil* as a dietetic, may be of use. *Mercury* should be worn next the skin, and a chamois leather laid over it. The diet ought to be of the most nutritious kind. *Cannabis indica* and *belladonna* give the greatest relief to the patient.

If used at all, *electricity* ought only to be employed during the pauses in the course of the disease, and then with great caution in the form of a constant current, rather than the induced current or faradization.

W. LAMBERT, M. D., AMHERSTBURG, ONTARIO, CANADA

218. ℞. Acidi phosphorici diluti, f.ʒvj
Syrupi, f.ʒiij.

A teaspoonful in water thrice daily, gradually increased to a tablespoonful, together with the application of electricity (N. Y. *Medical Journal*, February, 1869).

PROF. TROUSSEAU, PARIS.

Our author advises not to employ setons, moxas, etc., along the spine, as they cause great pain and irritation, and do no good. *Electricity* is the great remedy which he recommends, combined with *flagellations* prudently employed, with *belladonna* to abate pain, with *sulphurous baths*, which have been very successful. *Hydrotherapy* may be of great service in the constitutional treatment, as well as other appropriate remedies of a like kind. Preparations of *mercury* and of *iodide of potassium* are of great use where there exists a syphilitic taint. TROUSSEAU recommends a "compresseur" of the prostate in the spermatorrhœa which sometimes attends the outset of the disease. *Turpentine* is useful in the vesical manifestations of the malady. Hygienic rules are strictly observed.

PROF. EBEN. WATSON, M. D., GLASGOW.

219. ℞. Tincturæ physostigmatis, ℥v-xxv.
For one dose, to be given every half hour

Five minims of the tincture equals one-half grain of the extract of Calabar bean. (*The Practitioner*, September, 1869.)

RÉSUMÉ OF REMEDIES.

**Argenti nitras* is recommended by Dr. ALTHAUS, as useful in a large proportion of cases (*Lancet*, December 30, 1865). It should be given in doses of gr. $\frac{1}{16}$ - $\frac{1}{8}$ two or three times daily. Its combination with hypophosphite of soda seems to add to its efficacy. After its use has been continued for four or six weeks consecutively, its administration should be interrupted for two or three weeks, and a slightly aperient mineral water given. The nitrate may then be resumed for a month or two. The gums should be carefully watched, and on the appearance of the slightest blue coloration, the remedy should be discontinued. Nitrate of silver has been thus employed in ataxia with variable success. In some cases it disagrees and has to be stopped; in others it seems without effect, but in the majority of cases it has proved very useful. It is a remedy upon which considerable reliance can be placed in this disease.

Belladonna and *Cannabis Indica* are both said, by Dr. AITKEN, to give great relief to the pains.

Hydrargyrum is advised, by Prof. TROUSSEAU, when the syphilitic taint is present.

Nitro-muriaticum Acidum is an excellent tonic in these cases.

Oleum Morrhuæ is of use as a dietetic.

Phosphorus is recommended by Dr. AITKEN. The administration of the phosphates of the metals and salts may be conjoined with the use of dilute phosphoric acid as a drink, in the daily allowance of water, and with phosphate of soda as an aperient. (F. 218.)

Physostigma has been used with advantage. (F. 219.)

Potassii Iodidum has been employed, but not very favorably reported upon. It is useful where there exists a syphilitic taint.

EXTERNAL REMEDIES.

Counter irritation over the spine, by blisters, actual cautery, moxa, or ice, persistently but cautiously employed, is sometimes resorted to, but the practice is deprecated by TROUSSEAU.

**Electricity* has been employed with good results. Dr. AITKEN says it must be resorted to with great caution, and only during the pauses in the disease. Prof. TROUSSEAU highly recommends its use. Prof. NIEMEYER considers it a very active remedy, but cannot claim any success from its use, though he has had an excellent apparatus in his clinic, and treated all his cases with it during four years, in the manner advised by REMAK.

Sulphur Baths are recommended by Dr. ALTHAUS as an adjunct to the nitrate of silver treatment. They relieve the pain and diminish the numbness (*Lancet*, December 30th, 1865).

DISEASES OF THE NERVOUS SYSTEM.

SCIATICA.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

220. R. Emplastri epipasticæ, 1½ in. x 5 in.
 To be applied over the affected part. Let it draw for five or six hours, & poultice it, and then remove the cuticle and dress with
221. R. Morphiæ sulphuris, gr. ʒ
 Pulveris marantæ, gr. ij. M
- For one powder. Also ten grains of Dover's powder, to be taken at night.

DR. LABORDE, FRANCE.

222. R. Olei terebinthinæ, f. ʒviiij.
 Chloroformi,
 Tincturæ opii, ʒʒ f. ʒij. M
- A useful liniment in sciatica. To be rubbed on by means of a piece of flannel, several times a day.
223. R. Aquæ ammoniæ, f. ʒv
 Olei terebinthinæ,
 Olei amygdalæ dulcis, ʒʒ f. ʒj. M
- Rub on three times a day, in obstinate sciatica.

PROF. FELIX VON NIEMEYER, M. D., TUBINGEN.

224. R. Olei terebinthinæ, f. ʒj
 Mellis, f. ʒj. M
- For an electuary. A tablespoonful twice daily.

ROMBERG also speaks very highly of this as a specific remedy in the treatment of sciatica.

THOMAS HAWKES TANNER, M. D., LONDON.

225. R. Sodii sulphatis, ʒij-iv
 Sodii carbonatis, ʒj
 Sodii chloridi, gr. xv
 Cretæ preparatæ, gr. x
 Ferri carbonatis saccharatæ, gr. xv. M
- Make a powder and direct it to be taken early in the morning, in half a pint of water.

In some cases in which Dr. T. could detect no cause for the sciatica, a cure has been effected by this treatment with the use of the hot-air bath twice a week.

EDWARD WAKES, M. D., LONDON.

226. R. Extracti ergotæ fluidi, f. ʒij
 Aquæ cinnamomi, f. ʒij. M
- A dessertspoonful in water every four hours.

Tinctura ferri chloridi may be added if indicated. When ergot is likely to be useful, its good effects commence immediately.

DR. HENRY LAWSON, OF ENGLAND.

Out of some eighty cases of sciatica, lumbago, and brachialgia, treated by this physician, some of them excessively bad cases, in not more than three did the *subcutaneous injection of morphia* fail to give relief, in most cases complete. By means of this relief, the patient was enabled to eat and drink with comfort, and by help of perchloride of iron, and in some cases by cod-liver oil, he was enabled to put on flesh rapidly, and to repair the waste of tissue under which he had been laboring. A valuable remedy in these cases is *hypophosphite of soda*. It is simply as a means of relieving the pain, not with any view of directly curing the sciatica, that Dr. LAWSON administers *morphia*. The salt he uses is the muriate. Five grains are dissolved by the aid of heat in one drachm of distilled water; it must be injected warm, as the solution solidifies on cooling. The place of injection should be chosen as near as possible to the seat of pain, and the point of the needle should not be more than half an inch long. Dr. LAWSON does not object to the puncture of a minute vein, as thereby the medicine is more rapidly absorbed, while the alarming symptoms which ensue are generally very transitory. The patient should have eaten a hearty meal about half an hour previous to the injection: this prevents to some degree the soporific effect of the drug, while it heightens its effect in allaying pain. (*Medical Times and Gazette*, Jan., 1877.)

A report in the *Practitioner*, Feb., 1877, on the subject of the treatment of sciatica by various practitioners, mentions several combinations of approved efficacy.

In rheumatic or gouty sciatica:

- | | | | | | |
|------|----|--|------|----------|----|
| 227. | ℞. | Potassæ bicarbonatis,
Potassii iodidi, | ʒiij | gr.x-xx. | M. |
| | | This amount thrice daily. | | | |
| 228. | ℞. | Salicin, | | gr.xij. | |
| | | This amount every six hours in acute rheumatic sciatica. | | | |
| 229. | ℞. | Tinct. colchici,
Pulv. opii, | ʒx | gr.j. | M. |

In gouty sciatica:

230. ℞. Tinct. aconit. rad., ℥x
 Potassii iodidi, gr. x.
 Thrice daily in rheumatic and neuralgic sciatica.
231. ℞. Quiniæ sulphatis, gr. ij-v
 Tinct. nucis vomicæ, ℥v.

In neuralgic sciatica :

232. ℞. Tinct. actææ racemosæ, f. j̄3-ij
 Potassii bromidi, ʒj.
 This amount thrice daily in neuralgic sciatica.

RÉSUMÉ OF REMEDIES.

- Aconitum* is, in the opinion of Dr. FULLER, not only a valuable and efficient remedy in many obstinate forms of this disease, but also a safe and manageable, when properly administered and watched.
- Ammonii Chloridum* is recommended by Dr. ANSTIE in the mild form of sciatica occurring in the young.
- **Atropia*, hypodermically, is a successful form of treatment, not generally employed.
- **Belladonna* is one of the most valuable sedatives and anodynes in this affection.
- **Cannabis Indica* ranks next in value to belladonna and opium.
- Conium* is sometimes of service, and may be resorted to when belladonna and opium fail or are contra-indicated.
- Creasotum* has been employed internally by Dr. ELLIOTSON, with excellent benefit.
- Digitális* is recommended by Dr. FULLER as a reliable remedy, when the pain is intermittent and of a purely neuralgic character. It gives either the powdered leaves (gr. j-iss), or the tincture (℥x-xx thrice daily).
- Ergota* has been advised. (F. 226.)
- **Morphia*, given hypodermically, affords speedy and often permanent relief. It may also be employed endermically. (F. 227.)
- Nitro-muriaticum Acidum*, in full doses, (℥vi-x), is an effectual remedy in sciatica accompanied with malaria. Its action should be aided by an occasional brisk purgative, the cold shower, or a cold douche down the spine, followed by friction and change of air and scene.
- Oleum Tiglii* has been employed with success internally.
- Opium*, although of great occasional service, is less used since the introduction of the more effective treatment by the hypodermic injection of morphia.
- Potassii Iodidum* is strongly advised by Dr. GRAVES, in doses of ʒj three times a day, dissolved in a decoction of sarsaparilla, in cases of a subacute or chronic character, and where the patient can follow his out-door avocations.

Strychnia is inadmissible in acute or inflammatory cases, but in others, *nux vomica* has been used with occasional success.

**Terebinthinæ Oleum* is considered by Dr. ANSTIE as a remedy worthy at least a trial, in doses of $\mathfrak{m}\mathfrak{x}$ thrice daily, in the more obstinate cases of sciatica. It is, however, usually very disagreeable to the patient. Dr. NIEMEYER also recommends it in electuary, (F. 224,) and Dr. ROMBERG speaks of it almost as a specific.

Cathartics are often indicated and of service.

EXTERNAL REMEDIES.

Aconitia is a very certain and powerful palliative applied over the seat of pain.

Aconitum is frequently employed externally.

Acupuncture is limited to purely chronic cases, and to those in which there is effusion within the sheath of the nerve. In appropriate cases, it promises speedy and effectual relief.

Belladonna may often be employed with benefit as a local application.

Cantharis. Great and immediate relief sometimes results from applying a blister to the heel.

Chloroformum is advised externally by Dr. FULLER, who says that a strip of flannel, soaked in chloroform, placed along the course of the nerve, and covered with oiled silk to prevent evaporation, proves sometimes extremely serviceable.

Morphia may be employed endermically, but its use in this way is inferior to subcutaneous injection. See Hypodermic Injections, below.

Opium is often used externally.

Pix Burgundica. Enveloping the whole thigh in a Burgundy pitch plaster, has, according to TROUSSEAU, cured sciatica after the failure of blisters and the endermic use of morphia.

Sulphur, externally, is highly praised by Dr. FULLER, who finds it very generally efficacious and worthy of a trial in every case, when all active symptoms have been subdued or are absent. He sprinkles a piece of new flannel, thickly, with precipitated sulphur, encases the whole limb in this, from the foot upward, and covers it with oiled silk or gutta-percha, which has the effect not only of increasing the warmth and confining the vapor of the sulphur, but of obviating the odor, annoying to the patient. It should be kept applied night and day. Absorption takes place rapidly, and the breath, urine, stools and perspiration unmistakably attest its presence in the system.

Dry Cupping often proves beneficial.

Electro-puncture, which should only be applied during the intermissions of pain, is sometimes serviceable.

Hypodermic Injections. Prof. BARTHOLOW strongly recommends *Atropia* hypodermically. He says: "The principal triumphs of atropia over neuralgia have been in cases of sciatica. It is now admitted that atropia is one of the best remedies for this disease. First proposed and used by Mr. HUNTER, it was afterwards em-

ployed by B&HIER, COURTY, OPPOLZER, LORENT, and others. It has been found, however, that distant injection, and even injection into the subcutaneous tissue of the affected thigh, do not produce such good results as throwing the fluid deeply into the neighborhood of the affected nerve. More frequently, indeed, than in any other form of neuralgia, except the most obstinate and protracted cases of tic-douloureux, the nerve itself, or its sheath, has undergone structural alteration; the limb is often diminished in size, its temperature and sensibility lowered, and the power of its muscles impaired. Under these circumstances more advantage is to be derived from local than from distant injection, just as LUTON, BERTIN, and RUPPNER have cured such cases by the injection of irritants into the affected parts. In severe cases of sciatica gr. $\frac{1}{8}$ of sulphate of atropia may be injected; but it should not be forgotten that this quantity will excite very severe symptoms in susceptible subjects. Generally gr. $\frac{1}{4}$ will produce decided atropinism. Cessation of the pain is not immediate upon the systemic effects as Mr. HUNTER originally pointed out; indeed, the pain is often at first increased, but improvement takes place after a variable interval, and is often more permanent than after the morphia injection." When atropia fails morphia may be tried, or both may be employed together. Morphia injected into the thigh, four inches below the hip joint, and over the course of the nerve, has been called "almost the only remedy for sciatica." Prof. BARTHOLOW says, in regard to the subcutaneous use of morphia, that "in severe and protracted cases, in which changes in the nerve and in the nutrition of the limb have taken place, permanent relief cannot always be guaranteed to the patient; but the injections, steadily continued in the maximum doses, will, in a great majority of cases, effect a cure finally."

SPASMODIC DISEASES.

DR. W. H. ERB, OF HEIDELBERG.

This contributor to Ziemssen's *Cyclopedia* considers spasmodic diseases among the most unsatisfactory objects of medical treatment. Whatever treatment there is, is purely empirical. Tonic and dietetic measures form an important part of it. Bathing, massage, travel, and the movement cure have all their applications. *Electricity* occupies a prominent place in curative measures, but definite rules for its use cannot be given. Several methods must often be applied in succession before the most effective one is discovered. Narcotics and nervines are the most valuable classes of drugs, and all of these have been tried with varying success.

In *mimetic facial spasm* or *convulsive tic*, brilliant results have often been obtained by neurotomy. Of other means, electricity is of greatest avail. The subcutaneous injection of morphia is important. But satisfactory results are rarely obtained.

PROF. WM. A. HAMMOND, M. D., OF NEW YORK.

The class of paralyzes or spasms produced by the habitual use of a set of muscles for a long time, as in *writer's cramp* or *scrivener's palsy*, etc., has been called by Professor HAMMOND *anapeiratic paralysis*. He believes rest from the labor causing the disease is indispensable in the treatment and sometimes sufficient in itself. The constant galvanic current has proved the most effectual agent in his hands. In incipient stages, *bromide of zinc* is valuable for restoring tone to the nervous system. It should be used in gradually increasing doses. Phosphide of zinc and *nux vomica* (F. 10) are also valuable.

DR. REUBEN A. VANCE, OF NEW YORK.*

This physician has derived great advantage in *writer's cramp* from the hypodermic use of *atropia*, combined with rest to the part.

The best place in which to inject the remedy is beneath the skin in the loose cellular tissue over the pronator muscles of the forearm. Either extremity can be used, but when the treatment is to be continued for a length of time, it is better to inject in each arm alternately. The hypodermic syringe should be small and armed with a gold-pointed needle. The solution of *atropia* should be concentrated so that but a small amount of liquid need be injected at a time. The following is a convenient formula:

233.	R.	Atropiæ sulphat.,	gr. j	
		Acid. sulph. dil.,	q. s.	
		Aquæ ad.,	ʒj.	M.
Dose, one minim.				

The injections should be administered about three times a week, and when attention is paid to the cleanliness of the needle and the due concentration and freshness of the solution, no danger of producing abscesses need be feared, if the operation is performed with a reasonable degree of dexterity.

DR. F. RUNGE has called attention to some causes of local irrita-

**On Writer's Cramp. A Monograph.* New York, 1874.

tion, which produce these cramps. In one case he found a chronic periostitis at the external condyle of the humerus. This node was extremely sensitive to pressure, and this pressure evoked spasmodic contractions of the extensor muscles, originating there, of precisely the same character as those suffered from when the patient persisted in writing. The actual cautery was applied over the inflamed spot, and this, with six weeks' entire rest, cured the patient, who was still well twelve months afterwards. In the second case, an ingrowing nail (of the right thumb of the patient) was the original cause of the cramps, for it compelled the patient to alter the mechanism—in other words, the position—of his hand in writing. When this was healed, and the matrix of the nail no longer tender, the cramps all ceased, and the patient was well. *Berlin Klin. Wochenschrift*, No. 21, 1873.

Dr. E. HERTZKA reports a case of cure of *piano-player's cramp* in the *Petersburger medicinisch-chirurgische Zeitung*, 1876, by the use of eight drops of *tinctura gelsemii* three times a day. The treatment lasted three weeks; hydrotherapeutic and electric methods of treatment had proved insufficient; the patient was a musician twenty-two years old.

Dr. G. VIVIAN POORE, of London, has derived better results in *writers' cramp* from *galvanism* than from any other means. (*Lancet*, Jan., 1875.) His words are: "For genuine 'writers' cramp' dependent upon chronic fatigue, I have found the refreshing effects of the galvanic current of the greatest possible service, and I have had four extreme cases of patients who had exhausted all the usual remedies and had suffered for very lengthy periods, in whom rest and the use of the galvanic current, combined with a rhythmical exercise of the affected muscles, was productive of rapid and marked amelioration of the objective and subjective symptoms."

In *hiccough*, *singultus* or *spasm of the diaphragm*, violent mental impressions will often check the nervous action. Hot fomentations, sinapisms, or the electric brush applied to the diaphragmatic region, have the same effect. Internally, a very effectual remedy is snow, pulverized ice, or a plate of ice cream. Either of these will relieve ordinary cases. Of drugs, the most effectual are the narcotics and anti-spasmodics. The following combination will often give immediate relief in obstinate cases:

234. R. Chlorali hydrati,
 Potassii bromidi,
 Potassæ bicarbonatis, āā ʒj
 Liq. morph. sulphatis, f.ʒj
 Aquæ menth., ad. f.ʒvj. M.
- Two tablespoonfuls every three hours.

The internal use of mustard has been highly commended; one teaspoonful of flour of mustard is to be infused in half a pint of boiling water, the infusion filtered, and to be given the patient at one draught.

In chronic hiccough from no assignable cause, the following is useful:

235. R. Tinct. physostigmatis ʒx
 Pot. carb., gr.x
 Mist. acaciæ, ʒj. M.
- Sig.—One dose, ter die.

No vegetables should enter into the diet. The food should be non-stimulant, making use of milk, eggs, etc. In some cases tinct. of Calabar bean alone answers very well. Sometimes a hypodermic injection of morphia cures or relieves.

The following combination has been used with excellent effect by Dr. F. PEYRE PORCHER, of South Carolina, in troublesome hiccough:

236. R. Olei succini, f.ʒj
 Spts. ætheris nitrosi, f.ʒss
 Olei menthæ piper. f.ʒj
 Potassæ bicarbonatis, ʒij
 Spts. ætheris compos., f.ʒijj
 Mucilaginis, f.ʒij. M.
- A tablespoonful every half hour.

The other remedies to which we must have recourse in obstinate cases, are *chloroform* combined with small doses of morphia (RINGER); *morphia* hypodermically, *camphor*, *chloral*, *ether*, *belladonna*, *musk* (which has been extolled as a specific in this affection), and *oil of amber* (which is said to rank next to musk.)

In the condition of tonic muscular contraction, known as *tetany*, which is closely akin to hysterical contractions, Dr. N. B. EMERSON has made successful use of *conium*, which is a powerful relaxant. (*New York Medical Journal*, July, 1876.)

Dr. FREDERICK JAMES BROWN has called attention to the importance in all convulsive disorders of placing the patient in the sinistro-lateral posture (*Practitioner*, May, 1877). He is certain that by

attention to this important results may often be attained. He gives the following example: "Recently a man, aged 56 years, in impaired health from chronic catarrh, was seized with unilateral (right) convulsions. His consciousness and power of speech were intact. He had been convulsed for ten minutes when I entered the house, and he was growing worse. I turned him over upon his left side, and the convulsion ceased in about ten or fifteen seconds."

SPINAL IRRITATION.

PROF. WILLIAM A. HAMMOND, M. D., OF NEW YORK.*

This eminent neurologist believes that that important group of symptoms, which, since the essay of Dr. C. BROWN, of Glasgow (1828), have been subsumed under the term "spinal irritation," are due to anæmia of the posterior column of the spinal cord. The principles of its treatment are four:

1. To remove any manifest cause of irritation.
2. To improve the general tone of the system.
3. To improve the special nutrition of the cord.
4. To set up counter-irritation in the vicinity of the disordered region of the cord.

In regard to improving the general system, Dr. HAMMOND recommends distilled liquors, the oxide of zinc and cod liver oil. The third indication is easily filled by strychnia, phosphorus and opium. Thus

237.	℞.	Strychniæ sulphatis,	gr. ʒi		
		Acidi phosphorici diluti,	f. ʒss		
		Syr. aurant. cort.,			
		Aquæ,	āā	ʒʒij.	M.

This amount several times a day.

Or a pill of the phosphide of zinc (gr. ʒi) and nux vomica (gr. ʒi). Where there is contraction of the limbs, *opium* is very beneficial, as by hypodermic injections of morphia or in the form of suppositories, gr. ʒi of the aqueous extract with sufficient cacao butter. Water, as hot as it can be borne, applied to the spine by one of Chapman's bags, is an admirable adjuvant. But the most efficacious means to summon blood to the cord is the direct *galvanic*

**Diseases of the Nervous System.* New York, 1876.

current. Either pole may be placed above and the other below the seat of pain. The current should not be passed at a séance for more than fifteen minutes, and no one application should last longer than three or four minutes. For the relief of the spinal tenderness, one pole should be applied directly to the painful part, and the other to a point distant laterally from it for a few inches.

The fourth indication is very important. In slight cases counter-irritation alone will effect a cure. Dr. HAMMOND prefers *blisters*, applied immediately over the painful part of the spine. *Tartar emetic ointment* is useful, but painful. *Dry cups* almost always do good. Leeches and local blood-letting are always prejudicial. When patients feel more comfortable lying down, they should be permitted to do so, but at the same time they should be encouraged to take regular gentle exercise daily.

Special attention should be given to the stomach when there is persistent vomiting, and everything is rejected. The diet must then be of the simplest possible character, and only very small quantities taken at a time. The smallest quantity that can be kept down is better than a larger quantity thrown up. Warm liquids are often more apt to be retained than cold ones. Among medicines the best is *valerianate of caffeine*, in doses of from three to five grains as often as it may be required. Its only objection is its great cost. Cerium is inefficacious in the vomiting of spinal irritation.

DR. NATHAN S. DAVIS, OF CHICAGO.

Regarding spinal irritation as simple chronic inflammation, involving the roots of the nerves of sensation or motion, or both, What is the appropriate treatment? Dr. DAVIS answers, that internally, an alterative plan like the following :

238. ℞.	Tincturæ cimicifugæ,	f.ʒij	
	Tincturæ stramonii,	f.ʒss	
	Potassii iodidi,	ʒijss	
	Syrupi simplicis,	f.ʒiiss.	M.

A teaspoonful three or four times a day.

239. ℞.	Hydrargyri chloridi mitis,	gr.j	
	Potassæ nitratiss,		
	Pulv. ipecac. et opii,	ʒiij	gr.viiij.

This amount, in a powder, three times a day until the mercurial is perceptible in the breath or gums, when it should be discontinued.

Externally, dry cupping along the spine (for which purpose

common tumblers are well adapted), followed by belladonna plasters, or hypodermic injections of atropine are required. These means, with rest in the horizontal position, will be likely to remove the disease in from four to six weeks.*

DR. A. ROTHROCK, OF PENNSYLVANIA.

240. R. Zinci chloridi, ʒj
Zinci cyanureti, ʒij
Cerati simplicis, ʒj.

For a plaster. Apply for an hour or two daily. An admirable revulsive.

Picrotoxine, in doses of $\frac{1}{8}$ to $\frac{1}{16}$ of a grain, has been given with advantage by Prof. HAMMOND.

Leeches, said by Dr. HAMMOND to be hurtful, have been employed by others with advantage. Dr. MCCALL ANDERSON orders half a dozen over the painful spot, repeats them if called for, and follows with a blister (*Glasgow Medical Journal*, August, 1870). Dr. ARMAINGAUD, of Paris, also recommends this treatment when there is pain on pressure over one or more of the vertebral spinal processes. (*Chicago Journal of Mental and Nervous Disease*, Jan., 1874.)

TIC DOULOUREUX.

FRANCIS E. ANSTIE, M. D., LONDON.

In the treatment of this terrible kind of facial neuralgia, to which TROUSSEAU gave the name of *epileptiform*, Dr. A. recommends (*Half-Yearly Compendium of Medical Science*, July, 1869,) the following plan in the earlier stages of the malady:

1. *Counter-irritation*, applied, not to the branches of the fifth, but to those of the occipital nerve, at the nape of the neck. A blister in the former situation is often as useful; in the latter, it is sometimes strikingly effective in gaining a short respite.

2. *Nutritive Tonics*. The assiduous use of cod-liver oil, or of some fatty substitute for it, should be insisted on from the first, and is of the highest consequence.

3. *Subcutaneous Injection* of morphia, or of atropia, according to

**Clinical Lectures on Important Diseases*. Phila., 1874.

circumstances. Commence with the use of one-sixth of a grain of morphia twice daily, increasing this, if necessary, to one-fourth and one-half a grain, and in rare cases to one grain. If this produces, along with the other measures, a notable remission of the pain, it should be cautiously and steadily decreased, as circumstances may admit. In cases where morphia fails, atropia may be tried in doses commencing at one-sixth of a grain. The injection of a less quantity than this would probably be useless in severe tic.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

241. R. Liquoris potassii arsenitis, gtt.v
 Syrupi rhei aromatici, f.ʒj. M.
 For one dose, thrice daily, after meals.

At night apply a hot salt bag to the back of the neck, and order the following pill:

242. R. Extracti belladonnæ, gr.ʒ
 Extracti hyoscyami,
 Extracti colocynthis compositi,
 Pulveris zingiberis, āā gr.ʒ. M.

ASHLEY N. DENTON, M. D., TEXAS.

243. R. Olei camphoræ, f.ʒij
 Pulveris opii, ʒj
 Potassii nitratis, gr.xv.

Mix well in a mortar, and apply to a denuded surface. Useful in relieving the intense suffering from facial neuralgia,

Dr. D. also recommends (St. Louis *Medical Reporter*, June 15th, 1867,) chloroform, as advised by Dr. TANNER, as one of the most useful palliatives in his hands.

W. MUNRO, M. D., ENGLAND.

Believing that in tic douloureux the blood vessels of the part affected are in a state of constriction, our author has used *Calabar bean* in several cases (*Medical and Surgical Reporter*, December 5th, 1874,) with exceedingly satisfactory results. He drops into the eye two or three drops of a solution of extract of calabar bean (1 in 40), or applies one of Streatfield's ophthalmic squares to the eye.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

244. R. Extracti hyoscyami,
 Zinci oxidii, āā ʒij. M.

Or, in ointment :

249. R.	Delphiniaë,	gr. xxx
	Olei olivæ,	ʒ. ʒj
	Adipis,	ʒj.

Frigus. The local application of ice has been successfully employed (p. 128.)

Hydrargyri Iodidum Viride is recommended, in ointment, of the strength of forty grains to the ounce of lard.

Opium is applied locally with benefit, but is far inferior to morphia introduced hypodermically.

Physostigma. A solution of the extract of Calabar bean (1 in 40) diluted with water to the eye, has been used successfully.

Veratria is of great service, applied in ointment.

Electro-puncture, employed during the intermission of pain, is a valuable method of treatment.

Hypodermic Injections. Dr. ANSTIE employs injections of morphia and atropia, according to circumstances. Dr. RUPPNER reports a number of cases treated with success by the injection of opii compositus, ℥x. In general, in regard to the use of hypodermic injections, the same is true as in other forms of neuralgia.

Neurotomy. Prof. NIEMEYER quotes BRUNS in support of division of the nerve, or excision of part of it, in proper cases. He shows that after a careful examination of the cases where it had been done, and after excluding those where its want of benefit depended on error of diagnosis or operation, and after excluding the cases where the recurrence of pain was to be regarded as a new attack, as a relapse, there was a considerable number of cases where neurotomy caused either a complete and permanent benefit, or at least a temporary one for a few months or years. The operation is indicated when the pain is very limited, when it is probable that its exciting cause is situated at a point to which the nerve is accessible to the knife, when other treatment has proved fruitless, and when the pain renders the patient unable for business. There is also an indication to operate when it cannot be hoped to divide the nerve between the point of exit from the body and the brain, but when the pain never occurs spontaneously, and being always the result of some external irritation acting on the peripheral terminations of the nerve. In such cases the operation may, to some extent, protect the patients from the causes of their attacks of pain. The temporary compression of the affected nerve, and the artery supplying it, has also sometimes proved an excellent palliative, and deserves a trial in suitable cases.

VERTIGO.

C. HANDFIELD JONES, M. D., LONDON.

ʒʒo.	B.	Hydrargyri chloridi corrosivi,	gr. j
		Glycerinæ,	f. ʒj
		Tincturæ cinchonæ compositæ,	f. ʒij
		Olei menthæ piperitæ.	ʒxxxv. M.

A teaspoonful in a wineglassful of water three times a day, in the *vertigo* of old persons, which occurs sometimes paroxysmally, as a single symptom, unassociated with any special state that can account for it. Dr. THOMAS HAWKES TANNER also recommends this treatment for the attacks of temporary dizziness to which the aged are liable.

DR. S. WEIR MITCHELL, OF PHILA.

This author remarks that in the treatment of vertigo the nearest approach to specific medication lies in the use of vascular tonics, like *digitalis*, moderate doses of *ergot*, and where pallor occurs, in *nitrite of amyl*, as a means of relief for the immediate onsets. Cold douches are also valuable; but above all, the use once in five days of the *actual cautery* on the neck, is the most certain agent. For this he freezes the parts a few moments, with a piece of ice sprinkled with salt, and then presses on the insensible part the point of a gas cautery, until it is just felt, and no more.

The application is painless, and needs no dressing. When the worst of the attacks are over, small doses of the bromides, ten grains, *ter in die*, are of service.

Apart from these means it is, of course, needful to consider the general health, the presence of anæmia or malaria, and to study with care the extra-cranial sources of mischief. Among these the state of the stomach comes first; for although, as to the frequency of gastric vertigo, he thinks TROUSSEAU unaccountably misled the profession, we must all admit that there are gastric vertigoes, and that they are very obstinate. When all other means fail, as fail they may, there is one resource in *milk diet*, thoroughly used, which very seldom fails us.

Ocular vertigoes demand, of course, careful correction by glasses. He says, *careful* correction, because, over and over, he has seen failures owing to want of care on the part of oculists.

The aural vertigoes are most troublesome. Dr. MITCHELL treats them by points of cautery behind and in front of the ear, alternately, and sometimes by free leeching early in the case. Professor CHARCOT showed him a case of the worst sort, in which case had been

obtained by enormous doses of quinine. Careful study of the ear sometimes gives a clue to treatment. He mentions a case in which there was a small, ill-smelling ulcer on the roof of the external meatus. It was cauterized and cured, and at once the attacks ceased, but the condition described as the *status ve* still remained, as it is apt to do in all cases, from whatever cause they may arise, when once this cause has been removed, it is mischievous for a length of time. This hint he cannot too strongly impress.

As to tobacco, a common cause of vertigo, there is, of course, no one plan, total abstinence, and nothing less will answer; and when, then, the disorder will often require long treatment by digitalis, and small doses of bromides.

The vertigo of coarse brain lesions is hopeless, unless it arise from syphilis.

RÉSUMÉ OF REMEDIES.

Ammonii Bromidum has been found, by Dr. RAMSKILL, of great value when given in an effervescing form with cascarilla, in cases of vertigo from overwork in the well-fed, when there is usually associated with it lassitude, insomnia, and depression of spirits, with a sense of impending evil.

Cubeba, in doses of gr. i, three times a day, at meal times, is recommended by Dr. DEBOUT in vertigo occasioned by excessive mental exertion or intellectual labor, and associated with dyspeptic derangement.

**Ferri et Strychniæ Citras* is recommended by Dr. RAMSKILL in cases of vertigo (*i. e.*, that unaccompanied with any other head symptoms). The patient should be placed on a long course of it given in an effervescing form, and alternating, month by month, with the tincture of larch and small doses of digitalis.

**Hydragyri Chloridum Corrosivum* is recommended, in small doses, by Drs. C. HANDFIELD JONES and T. H. TANNER, in temporary vertigo of old persons.

Potassii Bicarbonas is very serviceable in dyspeptic vertigo.

**Potassii Bromidum* is, according to Dr. RUSSELL REYNOLDS, often serviceable in vertigo, especially in cases which occur paroxysmally without the co-existence of obvious spasm or organic disease of the brain.

Valeriana is very serviceable in that form of vertigo, with cardiac palpitation, which is not an unfrequent accompaniment of the menstrual pause, or of the first establishment of the menses, in which the blood seems to rush into the head and then suddenly back to the heart.

Zinci Valerianas, in doses of gr. i-ij, thrice daily, associated with extract of valerian, is recommended by Dr. DELIOUX in the treatment of nervous vertigo.

II. DISEASES OF THE RESPIRATORY SYSTEM.

Aphonia—Asthma—Bronchitis, Acute—Bronchitis, Chronic—Catarrh—Coryza—Emphysema—Empyema—Hæmoptysis—Hay Asthma—Laryngitis—Phthisis Pulmonalis—Pleurisy, Acute—Pleurisy, Chronic—Pneumonia, Acute—Pneumonia, Chronic.

APHONIA.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

251. ℞. Ammonii chloridi, $\frac{3}{4}$ ss
 Syrupi pruni virginianæ, f.ʒij.
 A teaspoonful thrice daily, in intermittent aphonia, together with
252. ℞. Strychniæ sulphatis, gr. $\frac{1}{30}$.
 In granule, thrice daily.

Used in a case of intermittent aphonia in which the voice was lost for an hour at a time several times a week. A catarrhal condition in this woman, a school teacher, led to a weakening of the cords, so that any over-exertion brought about temporary inability to generate distinct voice.

The local application of *sulphate of zinc* to the cords is productive of permanent good in such cases. The following formulæ may be used for inhalation :

253. ℞. Zinci sulphatis, gr. j-vj
 Aquæ destillatæ, f.ʒj. M.
254. ℞. Ferri chloridi, gr. $\frac{1}{3}$ -ij
 Aquæ destillatæ, f.ʒj. M.
- As a weak inhalation in hysterical aphonia.

FREDERICK FIEBER, M. D., VIENNA.

255. ℞. Tincturæ opii, gtt. vj
 Zinci sulphatis, gr. vj
 Aquæ destillatæ, f.ʒj. M.
- For inhalation.

In laryngo-tracheal catarrh, our author reports a case with almost

complete aphonia, in which the voice soon returned under the inhalation of this solution.

In aphonia from paralysis of the vocal cords, local *faradization* should be employed.

N. GALLOIS, M. D., PARIS.

256. \mathcal{R} . Immerse a piece of thick paper in a solution of nitrate of potassium, and dry it; then cover it over with the compound tincture of benzoin, cut it up into pieces $3\frac{1}{2}$ by $1\frac{1}{2}$ inches, and make into cigarettes.

These cigarettes are highly praised in aphonia.

PROF. O. REVEIL, M. D., PARIS.

257. \mathcal{R} . Pulveris benzoini, \mathfrak{zss} .
Place a portion on some live coals, and inhale the vapor, by deep inspirations, in cases of aphonia and hoarseness.

L. WALDENBURG, M. D., BERLIN.

258. \mathcal{R} . Sodii chloridi, gr.ij
Aquæ destillatæ, $\text{f.}\mathfrak{zj}$. M.

Used with benefit in a case of aphonia in a patient affected with laryngitis and tuberculosis.

RÉSUMÉ OF REMEDIES.

CATARRHAL APHONIA.

Alumen. BENATI, formerly physician at l'Opéra Italien, Paris, ordered the following prescription to restore the natural tones of the voice:

259. \mathcal{R} . Aluminis, \mathfrak{zj}
Decocti hordei, $\text{f.}\mathfrak{zjss}$. M.

To be used as a *gargle*, the strength to be gradually increased. The general health should be, at the same time, carefully looked after, and the exercise of the voice regulated. The internal administration of alum (gr. x a day, in divided doses, gradually increased to gr. xlv,) has been also found very beneficial. Alum lozenges are indicated to complete the cure, and alone, in milder cases.

**Ammonia.* The inhalation of ammoniacal vapor, disengaged from a mixture of a solution of chloride of ammonium and carbonate of potassium, has given excellent results in aphonia in consequence of exposure to cold. The utility of inhalations of chloride of ammonium vapor in these cases has been tested by Dr. BEIGEL in a number of cases. (*Practitioner*, August, 1868.) Dr. DA COSTA sometimes prescribes chloride of ammonium internally. (F. 251.)

Benzoinum, in vapor, is recommended by French physicians. (F. 256.)

Chlorinium. Chlorine inhalations are serviceable in aphonia following an ordinary cold, without organic lesion.

Iodium. Iodine inhalations, and the application of the tincture of iodine to the fore part of the neck, are worthy of trial in cases arising from chronic thickening, or from debility and relaxation.

Opium inhalations have been recommended. (F. 255.)

Sodæ Boras. According to Dr. J. W. CORSON (*Medical Record*, Jan., 1873,) relief will often be given when the voice has been suddenly lost by slowly dissolving in the mouth and partially swallowing a piece of borax, grs iv-v.

Sodii Chloridum has been used in inhalation. (F. 258.)

Strychniæ Sulphas has been prescribed by Dr. DA COSTA in intermittent aphonia, together with chloride of ammonium internally. (F. 252.)

Zinci Sulphas is of use, either locally applied, in solution, to the cords, or inhaled. (F. 253.)

Zingiber. A ginger gargle, or a piece of the root employed as a masticatory, is often useful in aphonia from relaxation of the parts.

HYSTERICAL AND NERVOUS APHONIA.

Æther. Some cases have been reported as cured by the inhalation of ether.

Ferri Chloridum, diluted, makes a useful inhalation in hysterical aphonia.

Pyrethrum has been found useful in nervous aphonia.

EXTERNAL REMEDIES.

**Cantharis*. Dr. RUSSELL REYNOLDS mentions an obstinate case of hysterical aphonia which yielded to a strip of blister round the throat.

**Electricity*, according to Dr. G. JOHNSON (*Medical Times*, Jan. 15, 1870), is the best application in nervous and hysterical aphonia. Dr. MORRELL MACKENZIE'S "laryngeal galvanizer" should be used. The shock excites spasm and a scream, and the cure is sometimes very rapid.

FUNCTIONAL APHONIA.

Argentî Nitras, in solution, applied to the larynx, has been found very beneficial in functional aphonia arising from paralysis of the vocal cords.

Emetics of ipecacuanha, sulphate of copper, or sulphate of zinc, are beneficial in aphonia arising from an atonic or paralytic state of the larynx, if followed by tonic and stimulant remedies.

Local Faradization is of service. Dr. MORRELL MACKENZIE points out, however, that a shrill cough or the slightest dyspnea should forbid the use of electricity in aphonia.

Inhalations are of service in almost all the forms of aphonia. Among those recommended are: Ammoniacal vapor (p. 134); vapor of

A teaspoonful in water every half hour during the paroxysm, until some effect is produced on the breathing, and then every hour or two.

Strong coffee is also sometimes of service in averting a paroxysm (Dr. NIEMEYER directs two ounces of mocha to the cup).
The fumes of nitre paper often give relief.

265. Take some ordinary blotting paper, dip it into a concentrated solution of nitrate of potassium, and allow it to dry. When wanted for use, ignite it in an open vessel covered with a newspaper made into a cone, so that the fumes will be inhaled.

In order to prevent the recurrence of the paroxysms, too great **re** cannot be taken to inquire into the state of all the functions. **P**erhaps one-half of the cases, asthma is not a disease of the **ngs**, but a reflected trouble. In cases of stomach origin,

266. \mathcal{R} . Pilulæ hydrargyri, gr.ij.
At night, to be followed by one-half an ounce of Rochelle salts in the morning. Afterwards direct arsenic combined with gentian or belladonna; as,

267. \mathcal{R} . Liquoris potassii arsenitis, f.ʒj.
Tincturæ gentianæ compositæ, f.ʒiij. M.
A dessertspoonful thrice daily.

M. FAURE, FRANCE.

268. \mathcal{R} . Aquæ ammoniæ, f.ʒss.
To be placed in a bowl and the vapor inhaled, taking care, however, to close the nostrils. The inhalation is to be continued for fifteen minutes, and to be repeated four times a day.

N. GALLOIS, M. D., PARIS.

269. \mathcal{R} . Extracti opii, gr.ʒi-iss
Belladonnæ foliæ, ʒj.
Dissolve the extract in a small quantity of water, and then moisten the belladonna leaves with this solution; dry them and roll into cigarettes.

TROUSSEAU substitutes for the belladonna leaves, stramonium leaves.

These cigarettes of opiated belladonna are useful in nervous asthmas and dry coughs.

C. HANDFIELD JONES, M. D., LONDON.

The treatment of asthma is eminently that of neurosis. It consists first in the removal of all causes of irritation, such as catarrhal

inflammation of the bronchi, dyspeptic disorder, unwholesome diet and unsuitable climate, etc., and secondly, in the use of various appropriate tonics and sedatives. *Arsenic* is sometimes of much advantage.

270. ℞. Liquoris potassii arsenitis, ℥iv - v.
For one dose thrice daily, either alone or combined with an ordinary cough mixture.

271. ℞. Extracti cannabis indicæ, gr.v.
For ten pills.

This drug occasionally proves very useful, one pill immediately checking the spasm.

272. ℞. Liquoris opii sedativi (Battley), ℥x.
For one subcutaneous injection into the left front of the chest.

273. ℞. Atropiæ sulphatis, gr. ʒi
Aquæ, ℥x. M.
For one hypodermic injection in the vicinity of the left vagus nerve.

DR. LECLERC, FRANCE.

274. ℞. Extracti belladonnæ, gr.xv
Myrrhæ pulveris, ℥ss
Ipecacuanhæ pulveris, ℥ss ʒss. M.
Divide into thirty-six pills. One thrice a day, in nervous asthma. Nitre paper to be burned in the chamber of the patient, and stramonium leaves to be smoked.

J. S. MONELL, M. D., NEW YORK.

Our author recommends (New York *Medical Record*, August 15th, 1866), *forced expiration and inspiration, for the relief of spasmodic asthma.*

He directs that all the air be expired that it is possible for the patient to do, and not to inspire until it is found absolutely necessary. Then carry inspiration to its fullest capacity, and retain with great effort for many seconds. This act of forced expiration, waiting, thorough inspiration, and again waiting, should be continued for some fifteen minutes, when it will be found that the spasm is relieved. It requires great exertion on the part of the patient to perform this act. The first attempt at retaining the inspired air during the asthmatic attack will cause the patient to think he cannot continue it, but perseverance will soon delight him with relief from the spasm.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

Among medicaments especially in repute for the prevention of new paroxysms, and for the radical cure of asthma, *quinine* stands first. The shorter and more regular the intervals of the attack, so much the more is to be expected from this drug. It is unsuitable when the pauses between the seizures are very long or irregular in their occurrence. In such cases we must have recourse to other remedies from the list of the so-called nervines.

As a rule, the metallic nervines are to be preferred before tincture of valerian, assafetida, castor or camphor. The following may be used :

- | | | | |
|---|---|---------------------|----|
| 275. R. | Ferri carbonatis,
Syrupi, | ʒj
q. s. | M. |
| For twenty pills. One thrice daily. | | | |
| 276. R. | Zinci oxidi,
Syrupi, | gr.xxv.
q. s. | M. |
| For twenty pills. One thrice daily. | | | |
| 277. R. | Argenti nitratis,
Confectionis rosæ, | gr.iiij-iv
q. s. | M. |
| For twenty-four pills. One thrice daily | | | |

DR. J. G. OLIVER, OF LONDON.

This writer has obtained excellent results from the combined use of *atropia* and *morphia* in subcutaneous injection.

- | | | | |
|---|--|-------------------------------|----|
| 278. R. | Morphiæ acetatis,
Atropiæ sulphatis,
Aquæ, | gr. ¼ - ½
gr. ʒss
q. s. | M. |
| For one hypodermic injection in spasmodic asthma. | | | |

The conclusions he reaches, are :

1. Morphia and atropia are superior to morphia alone; the good effect is more speedy and complete, and they produce no depressing gastric disturbance.
2. The very frequent use of the injections does not appear to injure the general health.
3. Speedy relief. The effect is generally declared in five minutes in the form of comfortable sleep and quiet breathing. The most intense attack has given way completely in from fifteen to twenty minutes. (*The Practitioner*, January, 1876.)

DR. PRIDHAM, BIDEFORD, DEVONSHIRE, ENGLAND.

Our author has been very successful in the treatment of asthmatic cases by means of a *duly regulated diet and sedatives* during intervals of the paroxysms. (*British Medical Journal*, June December 29, 1860.)

The secretions from the bowels are, first of all, to be corrected by the following pill, at bedtime, succeeded by a saline aperient the morning:

279. ℞.	Pilulæ aloës cum myrrha,	gr.ijj
	Pilulæ hydrargyri,	gr.j
	Extracti taraxaci,	gr.ij
	Extracti stramonii,	gr.ss

For two pills.

Or, by giving every alternate night, in the form of a pill,

280. ℞.	Pilulæ hydrargyri,	gr.iv
	Pulveris ipecacuanhæ,	gr.j.

For one pill.

And on the following morning,

281. ℞.	Misturæ sennæ compositæ,	f.ʒj
	Magnesiæ bicarbonatis,	gr.x
	Sodii bicarbonatis,	gr.viiij.

For one draught.

During the day small doses of *compound rhubarb powder*, of which the following is the formula (Br. Pharm.):

282. ℞.	Pulveris rhei radices,	ʒij
	Magnesiæ,	ʒvj
	Pulveris zingiberis,	ʒj.

To be mixed thoroughly and passed through a fine sieve. Dose—60 grains.

After having thus attended to the general secretions for about ten days, the strict dietary system is to be commenced:

He restricts his patients at first to two ounces of fresh meat with as much dry bread for dinner, at one P. M., and the same for supper, at seven; allows a cup of tea with cream, and dry bread in the morning; and for drink, weak brandy or whisky and water which is not to be taken till three hours after animal food. Rest is also enjoined for the same period, though air and exercise are recommended. The following sedatives are also to be given:

283. R. Extracti conii, ʒj
 Extracti cannabis indicæ, gr.v. M.

For twenty pills. One to be taken four times a day, at the hours of seven, twelve, five, and ten. Gradually the dose of extract of conium is to be increased to gr. v, and that of Indian hemp to gr. j, five times a day.

HYDE SALTER, M. D., LONDON.

284. R. Potassii nitratis, ʒiv
 Aquæ, Oss. M.

This solution should be used in the making of nitre paper, for which *red blotting paper* should be employed.

Coffee relieves about two-thirds of the cases in which it is tried. The relief is very unequal, often merely temporary, sometimes very slight, sometimes complete and permanent. The following are valuable hints on its administration: 1. It cannot be given too strong. Unless sufficiently strong to produce its characteristic physiological effects it does no good, but rather harm; moreover, if given very strong, it need not be given in much bulk, and quantity is a disadvantage, rendering less rapid the effect, and oppressively disturbing the stomach. 2. It is best given without sugar and milk—pure *café noir*. 3. It should be given on an empty stomach; if given on a full stomach it often does great harm, by putting a stop to the process of digestion; indeed, so much is this the case, that coffee accompanying a meal, especially late in the day, is so peculiarly apt to induce asthma that it deserves to be classed among its special provocatives. 4. It seems to act better if given hot—very hot.

Lobelia is given by Dr. S., in the form of the tincture, in repeated doses, every half hour, increasing the dose ℥v each time, till either the physiological effects (faintness, sickness) are manifested, with or without relief, or that relief is obtained without such symptoms. In either case, the medicine is to be at once discontinued. Generally no relief takes place until symptoms of lobelia poisoning show themselves. Any amount may be given, short of producing the effects, without any relief at all. The quantity required differs in each case—generally ℥l-lx suffices; in others f.ʒiiss fails to produce an effect. When once the necessary dose has been ascertained in this way, the patient should start with it on the next occasion, which generally has the desired effect at once.

Iodide of potassium entirely fails in a great many cases. Sometimes, however, the most striking results attend its use. It often

requires to be continued for some time before it begins to manifest its effects. It should be used in every case in which it has not been tried, because of its occasional great value.

Quinine is the best of all tonics in asthma; next to it is *iron*. The two may be combined with a mineral acid and given with good results.

Stramonium is, in some cases, *the* remedy; in the majority of cases, as ordinarily used, it does some good; and in some few it is positively injurious. Its value in any case can only be ascertained by personal experience. When the leaves and stems fail, substituting the seeds may prove effectual. They appear to be more powerful in their action. The inhalation of the smoke, and swallowing the saliva, may be advantageously combined with the ordinary method of smoking. The earlier in a paroxysm it is had recourse to, the more likely will it be to relieve the spasm; over one that has been long established, it has but little power. As the great thing is to give it in time, an asthmatic should keep his pipe already filled, with the means of lighting it by his bedside, so that, on waking with dyspnoea, he may immediately use it. A good plan is to adopt the habit of smoking a pipe of it the last thing at night, whether a paroxysm is threatened or not. The stramonium seems to leave, for some hours, a state of the nervous system in which the asthma is not likely to come on, and, since the attack is almost always at night, it seems to conduct the patient through the critical time. The *extract* (gr. $\frac{1}{4}$, gradually increased to gr.j) sometimes produces excellent effects, or the tincture (℥x-xx every four hours), may be substituted.

Tobacco smoking affords, in some cases, remarkable ease. The habit of smoking has rendered powerless, in a large number of cases, what may, without any qualification, be called its most potent remedy. A pipe is preferable to a cigar, and "bird's eye" to the stronger forms of tobacco. For women and children a few whiffs of a mild cigarette are quite sufficient.

Chloroform inhalations, *short of anæsthesia*, are often of benefit. The following are the conclusions of Dr. S. in regard to this remedy: 1. It holds a high place among the remedies for asthma, there being probably no agent that relieves in so large a number of cases. 2. It operates with very various completeness in different cases. 3. Where it does not cure, it is of great value by affording a temporary respite. 4. No amount of asthmatic apnoea

or dyspnœa is any bar to its use. 5. If given constantly, however, in large doses, for a long period, a state of things arises which constitutes a bar to its continuance. 6. The sooner it is given in a paroxysm the better, for if the spasm has existed for some time it is apt to recur as soon as the influence of the chloroform passes off. A few drops at the first indication of an attack may act as a preventive.

THOMAS HAWKES TANNER, M. D., LONDON.

285. R. Potassii iodidi, ℥ijss-℥iv
 Spiritus ammoniæ aromatici, f.ʒj
 Tincturæ belladonnæ, ℥l-f.ʒijss
 Tincturæ cinchonæ compositæ, f.ʒij
 Aquæ menthæ piperitæ, f.ʒj. M.
- A dessertspoonful, in water, three times a day.

In some cases of asthma the author has found remarkable benefit from this formula. It requires to be persevered with for some weeks, the patient being watched, lest it impoverish the blood and produce purpura or boils, or even a carbuncle. If there be constipation, order

286. R. Pilulæ rhei compositæ,
 Extracti conii, āā gr.v.
- For two pills. To be taken at bedtime.

PROF. TROUSSEAU, PARIS.

287. R. Potassii iodidi, ℥ijss
 Spiritus vini gallici, f.ʒiiss
 Decocti senegæ, f.ʒiij
 Syrupi papaveris, f.ʒj. M.
- In essential asthma give a tablespoonful, twice a day, an hour before the meals, in a little sweetened water.

During the attack, the tincture of lobelia may be administered, in doses of from twenty to thirty drops, from half-hour to half-hour. The respiration of chloroform is also useful; also stramonium cigarettes.

DR. WISTINGHAUSEN, GERMANY.

288. R. Liquoris potassii arsenitis, gtt.x-xv-xx
 Aquæ destillatæ, f.ʒj. M.
- For inhalation, by means of atomizer, once or twice a day.

RÉSUMÉ OF REMEDIES.

Acetum. As a preventive, bathing the chest every morning with and water has been advised.

Æther by inhalation is sometimes resorted to with benefit in asthma following formulas have been recommended:

289. ℞.	Ætheris sulphurici,	30 parts
	Acidi benzoici,	15 parts
	Balsami peruviani,	8 parts.

Or the following :

290. ℞.	Ætheris sulphurici,	2 parts
	Spiritus terebinthinæ,	15 parts
	Acidi benzoici,	15 parts
	Balsami peruviani,	8 parts.

Place the mixture in a vessel having a large opening; the warmth of the hand is sufficient to volatilize the material; inhalations may be used four or more times a day, as demands.

Ammonii Carbonas has proved (in doses of gr. x–xv) more successful than any other remedy in the hands of Dr. J. HOPE, in cases arising from, or connected with, *disease of the heart*. In an obstinate case the following afforded much relief:

291. ℞.	Ammonii carbonatis,	gr. viij
	Antimonii et potassii tartratis,	gr. ʒ
	Aquæ anisi,	f. ʒiiss.

A draught to be taken every alternate hour.

Ammoniacum is of great service in both *spasmodic* and *hysterical*. In the former case it should be combined with tincture of opium and a small portion of hyoscyamus or conium; in the latter with equal parts of assafetida. Plasters of ammoniacum applied to the chest often prove useful.

Antimonii et Potassii Tartras. Counter-irritation to the chest by emetic ointment is occasionally useful.

Aqua Ammoniacæ (four parts to one of water), applied to the velum has proved of service in simple idiopathic asthma. The operation, which may prove dangerous, is only to be made, with great caution, so as not to touch the back part of the larynx. The inhalation of the vapor of aqua ammoniacæ is

Argenti Nitras is recommended by Dr. NIEMEYER and others.

Arsenicum is recommended by Dr. HANDFIELD JONES and others in admissible in organic disease of the lungs and heart.

Assafætida, in combination with other antispasmodics and with nuxvomica is often very beneficial in spasmodic asthma.

292. ℞.	Tincturæ assafætidæ,	f. ʒss
	Tincturæ opii,	ʒxx
	Spiritus ætheris compositi,	f. ʒss
	Aquæ camphoræ,	f. ʒiiss.

For one draught.

**Belladonna* is a valuable remedy in spasmodic asthma, administered in the manner directed by Dr. HYDE SALTER, viz., in one full dose, sufficiently large to produce the full physiological effects of the drug, every night at bedtime. This plan he regards as infinitely superior to the system of divided doses during the day. It is curative as well as prophylactic, for, by preventing the attack for a series of nights in succession, it breaks through the habit. As there is a marked difference in the tolerance of belladonna in individuals, the proper dose may be ascertained by commencing with small doses and gradually increasing them until the requisite full dose is ascertained.

Atropia is injected hypodermically with excellent results.

Brominium, see Potassii Bromidum.

Camphora is recommended by Dr. COPLAND as one of the most generally beneficial in any of the class of narcotics or antispasmodics. In *nervous* and *spasmodic* forms of asthma it should be given in large doses (gr.iiij-x), and combined with musk, castor, assafetida, etc., or with sedatives.

Cannabis Indica is said to occasionally prove very beneficial, but in the hands of Dr. HYDE SALTER it has been a complete failure in the few cases in which he employed it. Dr. EMIL KOLLER has, however, found it valuable in nocturnal asthma, in doses of gtt.v-vj of the tincture every three or four hours.

Castoreum combined with ipecacuanha (equal parts of the tincture of castor and the wine of ipecac), is recommended by Dr. GRAVES.

Chloral has been employed with benefit.

**Caffea* is a simple, safe, and very efficacious remedy. Asthmatic patients should avoid using it as an ordinary beverage, lest the habit of taking it should impair its efficacy as a medicine. For its administration see Dr. HYDE SALTER's directions (above).

Chloroformum by inhalation is an excellent and prompt remedy for spasmodic asthma.

Cinchona, see Quiniæ Sulphas.

Conium is sometimes given.

Datura Tatula is the new remedy, said to be of great efficacy smoked in cigarettes.

Digitalis has been employed, but is inferior in efficacy and safety to other remedies.

Dracontium sometimes succeeds (in doses of gr.xxx-l of the powdered root during the paroxysm) in obstinate cases of spasmodic asthma.

Ferri Carbonas is recommended by Dr. NIEMEYER.

Galbanum is occasionally useful, but is inferior to ammoniacum.

Grindelia Robusta. The plant and flowers of this native of the Pacific coast have been much lauded of late in spasmodic asthma. One drachm of the fluid extract may be taken when the paroxysm comes on, or half a drachm three times a day as a prophylactic.

Hyoscyamus is, according to Dr. HARLEY, the appropriate remedy in *car-*

diac and *pulmonary* asthma. It is best administered subcutaneously.

Iodinium, see Potassii Iodidum.

**Ipecacuanha*, in full emetic doses (not less than gr.xx), is often efficient in arresting a paroxysm of spasmodic asthma, if given at the outset of the attack. Proportionate doses to children may be given with safety and advantage. Small doses of the (ʒv) repeated every ten to thirty minutes for two or three hours unless relief comes much sooner, in which case the dose may be diminished and taken less frequently, is a method of treatment recommended by Dr. C. D. PHILLIPS (*Practitioner*, Nov., 1871) in *nocturnal spasmodic* asthma, when there is no organic disease of the heart or lungs.

**Lobelia*, although from want of uniformity in its action, and from failure to fulfill the high expectations at one time entertained of it, has fallen into comparative disuse, is, in cases which tolerate it, a valuable remedy. Dr. HYDE SALTER reports favorably of its tincture (above). Dr. RINGER, while regarding it as a remedy of great efficacy, considers that it should be given with caution where heart disease exists, as the pulse may become irregular and very weak. It should also be remembered that some persons exhibit great intolerance of its action, poisonous effects following the smallest doses, and that different specimens vary considerably in strength. It is sometimes given by Prof. COSTA, combined with hyoscyamus, and Hoffman's anodyne.

Moschus, in doses regulated according to the severity of the attack, is often productive of benefit in *purely spasmodic* or *nervous* asthma. It has also been applied endermically (gr.vj-xv) with advantage.

Myrrha is useful in the asthma of old persons, by arresting the exhaustion consequent upon profuse expectoration.

Nitrite of Amyl. Cases have been reported in which the inhalation of five drops of this liquid has arrested very distressing attacks of spasmodic asthma.

Nitrogen. Dr. EDGAR A. HOLDEN recommends nitrogen inhalation (*American Jour. of the Med. Sciences*, Oct., 1872.) The following is the method adopted with the protoxide: The gas, freshly prepared, is passed through a jar containing a fluid extract of conium, Calabar bean, or belladonna, according to the necessities of the case; and from this jar is inhaled by the patient once daily, before retiring, and for four or five consecutive days, the quantity being regulated according to the condition of the patient, but not exceeding five to eight gallons, never to anæsthesia, the sitting occupying at least ten minutes. Relief almost always follows the first inhalation, and produces an uninterrupted night's rest. Upon the disappearance of the nightly paroxysm and the subsidence of the oppression in breathing, the remedy must be discontinued, and must be instantly resorted to upon the first evidence of return.

Opium is of questionable value in asthma. Dr. HYDE SALTER says, "Prefer any other sedative to opium; and unless there is some special complication that indicates it, never give it at all."

Oxygen Inhalations have been tried with reported "wonderful" results in nervous asthma.

Petroleum is a stimulant expectorant, of use in asthma unattended with inflammation.

Potassii Bromidum, in full doses, at night, has been recommended in spasmodic asthma. In the *spasmodic asthma of childhood*, given in syrup, in doses of gr.vj every two hours, it has proved very successful after the failure of other remedies.

Potassii Iodidum is an uncertain remedy, which sometimes, however, proves strikingly successful.

Potassii Nitras. The inhalation of the fumes of paper impregnated with nitre is often of striking benefit. The following formula is given in the *Journal de Pharmacie et de Chemie*:—

293. Take four ounces of white paper, and allow it to macerate in warm water, until reduced to a uniform paste. Then press out the greater portion of water and mix the residue in a mortar with the following powder:

Potassii nitratis,		ʒij
Myrrhæ,		
Olibani,	āā	ʒijss
Belladonnæ,		
Stramonii,		
Digitalis,	āā	gr.x.

When a uniform mass has been formed, roll out into sheets a line or so thick, dry and cut into strips. This paper is said to burn less quickly than the ordinary nitre paper, and to be more effective.

Quinia Sulphas is highly recommended by Dr. NIEMEYER and HYDE SALTER (see above).

Sanguinaria has been prescribed with good effects. Dr. L. B. ANDERSON of Virginia, gives it as in croup, until vomiting occurs. It rarely fails to give prompt and grateful relief. As a preventive, he continues it in doses of twenty drops of the tincture three times a day. (*Southern Medical Record*, Feb., 1876.)

Scilla. Benefit is sometimes derived from squill, combined with hemlock or henbane. The following formula is often useful:

294. R.	Tincturæ scillæ,	gtt.xv	
	Extracti hyoscyami,	gr.ijj	
	Acidi nitrici diluti,	ʒxxx	
	Aquæ,	f.ʒiss.	M.

For one dose.

Spiritus Ætheris Compositus. Hoffmann's anodyne, though favorably spoken of by some writers, has proved entirely useless in the hands of Dr. HYDE SALTER, and in some cases has seemed to increase the spasm.

**Stramonium*, smoked in a pipe, in doses of gr. x to gr. xx, is often of very great service, but not uniformly so. If it produce any ill effects it should be at once discontinued. The extract or the tincture may be given internally.

Sulphur, in doses of about gr. viij daily, to be given while fasting, and persevered in for a long period, has been recommended by French physicians.

Tabacum. The palliative effects of tobacco fumes in nervous asthma are well known. (p. 123.)

Veratrum Viride has been advised in nervous asthma. The following formula is said by Dr. J. L. COOK to give admirable results when other remedies fail :

295. ℞.	Tinct. veratri viridis,	gtt. xxxvi	
	Morphiæ sulphatis,	gr. j	
	Syrupi ipecac.,	f. ʒvj.	M.

A teaspoonful every three hours if necessary. (*Louisville Medical News*, April, 1876.)

Zinci Oxidum is strongly recommended by Dr. SYMONDS (*British Medical Journal*, June 13th, 1868), who states that whether for abating the morbid susceptibility of the respiratory nerves, which engenders the spasmodic paroxysms, or for diminishing the liability to catarrhs, he knows nothing to surpass long courses of the oxide of zinc, with or without extract of conium for the one indication, and quinine for the other. It is also recommended by Dr. NIEMEYER.

Zinci Sulphas has been employed, with the result of diminishing the frequency and force of the attacks.

Zinci Valerianas is sometimes prescribed.

**Cold Bathing*, employed in the intervals of the attacks of spasmodic asthma, is stated to lessen the morbid sensibility to the impression of cold atmospherical changes, and to give tone and vigor to the system. Simply *sponging the body* is preferred by some to immersion; salt (ʒj ad. aquam, Oj) may be added, and a rough towel or flesh-brush employed. The best time is immediately after getting out of bed in the morning. The *shower-bath* is preferred by Sir T. WATSON.

EXTERNAL REMEDIES.

Electricity has been employed in some cases, but Dr. HYDE SALTER condemns altogether its use.

Hypodermic Injections are frequently employed with great advantage. The following are the principal drugs which have been thus administered:—*Atropia*; *Hyoscyamus* (Dr. HARLEY says that in cardiac and pulmonary asthma, the injection of gr. $\frac{1}{8}$ of sulphate of hyoscyamin will often bring immediate relief); *Opium*.

Inhalations are of great benefit. The following are the principal drugs which have been thus administered:—*Aqua Ammoniæ*; *Arsenicum*; **Chloroform*; *Conium*; *Nitro-muriaticum Acidum Dilu-*

tum (f.ʒj ad. aquam f.ʒiv at 150° F., but should be used with great caution during a paroxysm); *Oxygen* (not to be employed when there is heart disease); **Potassii Nitrās in Fumes*; **Stramonium Smoke*; *Sulphurous Acid Spray*; **Tobacco Smoke*.

Forced Inhalation and Expiration has been recommended.

Issues at the nape of the neck are sometimes effectual in mitigating the symptoms.

Local Applications to the Chest are often of service. For this purpose the following may be employed:—*Chloroform and Turpentine Liniments*; *Tincture of Iodine*; *Ointment of Iodide of Potassium*; *Tartar Emetic Ointment*; *Hot Turpentine Stupes* (especially useful in the old and debilitated); *Hot Water Stupes* (flannel wrung out of water as hot as can be borne, applied to the whole chest during the fit, is recommended by Dr. GRAVES).

ACUTE BRONCHITIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

When the symptoms of a "common cold" first express themselves, and even when the trouble has extended to the chest, as indicated by the hoarseness and tendency to cough, the disease may at once be subdued in a healthy person by a full stimulant but not narcotic dose of opium or morphia, *i. e.*,

- | | | |
|---------|-----------------------------|--------|
| 296. ℞. | Pulveris opii, | gr.ʒ. |
| | vel | |
| 297. ℞. | Liquoris morphiæ sulphatis, | f.ʒij. |
| | For one dose, at bedtime. | |

Or by five grains of carbonate of ammonium; or by ten to twenty grains of chloride of ammonium; or by an alcoholic diaphoretic drink; or if the appetite is unimpaired, by a full supper, followed by a moderate amount of some alcoholic stimulant.

If such remedies are delayed too long, the object to be aimed at most is to induce a copious perspiration, and a continued action of the skin and kidneys. From the frequent *inhalation of steam* great benefit is derived.

If the disease shows a disposition to pass into the chronic stage, the following may be administered, and will generally facilitate expectoration and relieve the dyspnoea, *viz.*:

298. ℞. Ammonii carbonatis, gr.v
 Tincturæ benzoini compositæ, f.ʒss
 Tincturæ cinchonæ compositæ, f.ʒiiss. M.
 For one dose.

JAMES COPLAND, M. D., LONDON.

299. ℞. Liquoris ammonii acetatis, f.ʒj
 Spiritus ætheris nitrosi, f.ʒiij
 Vini antimonii, f.ʒiijss
 Misturæ amygdalæ, ad. f.ʒviij. M.
 One or two tablespoonfuls every third or fourth hour, in the treatment of primary or simple bronchitis.

The bowels should be moderately opened by a small dose of calomel or blue pill, with antimonial powder at night, and a gentle aperient in the morning. If the patient be aged, delicate, or vitally depressed, the antimony may be omitted from the prescription, and a portion of the infusion of cinchona, or of the decoction of senega added. The dose of the antimony may, of course, be increased, if indicated. When the fever is considerable, or the patient complains of soreness or pain in the chest, a mustard poultice may be applied over the sternum, or the following terebinthinate embrocation employed:

300. ℞. Linimenti saponis,
 Linimenti terebinthinæ, ℞ā f.ʒiiss
 Olei olivæ, f.ʒviij
 Olei cajuputi, f.ʒj. M.

This embrocation, having been well shaken, should be sprinkled on two or three folds of flannel, or on spongeo-piline, and placed either over the thorax or between the shoulders.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

301. ℞. Vini ipecacuanhæ, f.ʒij
 Liquoris potassii citratis, f.ʒiv
 Tincturæ opii camphoratæ,
 Syrupi acaciæ, āā f.ʒj. M.

A tablespoonful thrice daily, in the first stage of ordinary acute bronchitis.

302. ℞. Morphicæ acetatis, gr.j
 Potassii acetatis, ʒiij
 Liquoris ammonii acetatis, f.ʒiij
 Syrupi tolutani, f.ʒj. M.

A dessertspoonful every third hour. A useful diaphoretic alkaline mixture.

303. ℞. Ammonii carbonatis, gr.xvj
 Spiritus ætheris compositi, f.ʒiiss
 Syrupi tolutani,
 Aquæ, āā f.ʒj. M.

A teaspoonful every two hours; a stimulating expectorant for a child a year old, affected with bronchitis of two weeks' standing.

Counter-irritation to be applied to the chest by means of weak mustard plasters (one part of mustard to four of Indian meal). Also, if the child be much debilitated, 15 gtt. of brandy every four hours. When the child is seen frequently, so that the effect may be watched, there is no better treatment than relieving the lung mechanically by emetics. Hoffman's anodyne, in the above recipe, acts as a diaphoretic and quieting agent, which latter influence would not be obtained from sweet spirits of nitre.

PROF. A. P. DUTCHER, M. D., CLEVELAND, OHIO.

If the patient be robust, and the attack very acute, attended with a frequent and hard pulse, hot and dry skin, costive bowels, laborious breathing, and a troublesome, dry cough, our author recommends (*Philadelphia Medical and Surgical Reporter*, August 17th, 1867,) the taking of twelve or fifteen ounces of blood from the arm. If bleeding has no influence in curing the disease, the wonderful power it has in mitigating the patient's sufferings places it far beyond every other known therapeutical agent.

After the bleeding, if the skin remains hot and dry, the patient may be treated to the alcoholic fumigating bath, and one of the following powders, given every four hours until the bowels are freely moved:

304.	R.	Podophyllin,	gr. j	
		Hydrargyri chloridi mitis,	ʒj	
		Potassii nitratis,	ʒss	
		Pulveris ipecacuanhæ,	gr. viij.	M.

For four powders.

If, after the bowels have been freely moved, the skin should remain hot and dry, the patient may again be subjected to the fumigating bath, and a teaspoonful of the following mixture administered every two hours, until free perspiration and expectoration are produced:

305.	R.	Tincturæ verati viridis,	f.ʒss	
		Syrupi scillæ compositi,	f.ʒiij	
		Spiritus ætheris nitrosi,	f.ʒss	
		Extracti lobeliæ fluidi,	f.ʒij	
		Tincturæ opii camphoratæ,	f.ʒss.	M.

A teaspoonful every two hours.

If this should produce nausea or vomiting after a few doses, it

will commonly prove very beneficial. After free expectoration has been produced, it may be given at longer intervals, or superseded by the following :

306. R.	Tincturæ sanguinariæ, Vini ipecacuanhæ, Morphiæ sulphatis, Syrupi,	f.ʒij f.ʒij gr.ij f.ʒj.	M.
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A teaspoonful every six hours.

To relieve cough and produce rest at night, give the patient eight or ten grains of Dover's powder early in the evening.

If the disease still proves obstinate, and if the dyspnoea and cough still continue, the patient complaining of great weight upon the chest, with a deep, burning pain just under the sternum, apply a *blister* immediately over the seat of the difficulty. It will almost invariably relieve all the symptoms, cut the disease short, and secure a safe and speedy convalescence.

After the disease has passed its climax, very little medical treatment is demanded. If the cough should remain troublesome, and the expectoration scanty and tenacious, our author is in the habit of prescribing the following:—

307. R.	Ammonii bromidi, Ammonii iodidi, Morphiæ sulphatis, Syrupi phellandrii aquatici compositi,	ss ʒij gr.ij f.ʒviij.	M.
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A dessertspoonful every six hours.

In the *treatment of acute bronchitis in the aged*, our author recommends vegetable emetics in small doses, and expectorants, especially those of a stimulating nature, as the most valuable remedies. Senega is the best of the vegetable expectorants, and the decoction the best form.

308. R.	Decocti senegæ,	f.ʒviij.
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Two fluid ounces to be administered every four or six hours.

If the patient be weak, add ammonii carbonatis, gr.v, and quiniæ sulphatis, gr.ij, to each dose. A small glass of ale three or four times a day is a mild stimulant, expectorant and anodyne, much to be preferred to wine and ardent spirits. In bad cases of acute bronchitis, our author never hesitates to blister; in mild cases, he uses turpentine stupe.

After the violence of the disease has passed, tonics and expectorants should be freely used. The following is a useful expectorant:

309. *R.* Syrupi scillæ,
Syrupi senegæ,
Syrupi ipecacuanhæ, $\bar{a}\bar{a}$ $f.\bar{3}ss$
Morphiæ sulphatis, $gr.ij$
Syrupi, $f.\bar{3}iss.$ *M.*
- A teaspoonful every six hours.

J. C. GLONER, M. D., BRUSSELS.

310. *R.* Olei tigllii, $gtt.xv$
Ætheris, $f.\bar{3}iss.$ *M.*
- Rub on the front and back of the chest, in acute bronchitis.
311. *R.* Aquæ laurocerasi, $f.\bar{3}ij$
Syrupi tolutani, $f.\bar{3}iss$
Spiritu Jamaicensis, $f.\bar{3}ij$
Ovi vitelli, ij
Aquæ tepidæ, $f.\bar{3}vjss.$ *M.*

For one draught, to be given at the outset of bronchitis, to provoke perspiration, and quiet the cough.

Repeated sinapisms on the sternal region.

PROF. R. J. GRAVES, M. D., DUBLIN.

312. *R.* Acidi nitro-muriatici, $f.\bar{3}j$
Spiritus terebinthinæ, $f.\bar{3}ij$
Adipis, $\bar{3}j.$ *M.*
- Mix thoroughly, with an ivory spatula, the acid and lard, and then add the spirits of turpentine.

This liniment, which ought to be prepared only in a small quantity at a time, as it alters easily, is to be employed in frictions on the chest, in acute bronchitis.

313. *R.* Acidi acetici, $f.\bar{3}ss$
Spiritus terebinthinæ, $f.\bar{3}ij$
Aquæ rosæ, $f.\bar{3}iss$
Spiritus limonis, $gtt.x$
Ovi vitelli, $q. s.$ to suspend
the turpentine.
- To be applied to the chest by means of a sponge.

This liniment reddens the skin, and after several frictions causes an eruption of fine pustules. A useful rubefacient in bronchitis.

DR. HEIM, GERMANY.

314. *R.* Ipecacuanhæ pulveris,
Digitalis pulveris, $\bar{a}\bar{a}$ $gr.iv$
Extracti opii, $gr.iss$
Extracti hyoscyami, $gr.xv$
Althææ pulveris, $q. s.$
- Divide into twenty pills. One every third hour, to calm the cough of acute bronchitis.

Warm drinks to provoke an abundant transpiration.

- | | | | | |
|---------|--|----|-------------------------------------|----|
| 315. R. | Confectionis rosæ,
Mellis,
Tragacanthæ,
Pulveris ipecacuanhæ,
Syrupi tolutani, | ℥℥ | ℥iss
gr.xxiv
gr.vj
f.℥iij. | M. |
|---------|--|----|-------------------------------------|----|
- A teaspoonful three or four times a day.

PROF. GEORGE JOHNSON, M. D., LONDON.

Acute bronchitis is an exaggerated catarrh; the two diseases are essentially the same, and they require the same principle of treatment, only modified according to the character of the symptoms. (*British Medical Journal*, Oct. 23d, 1869.)

In the early stage of acute bronchitis, when the mucous membrane is dry and swollen, the hot-air bath or the wet packing may be employed once or oftener with advantage. Another very useful remedy in this stage is tartar emetic, in doses of one-sixth of a grain, combined with liquor ammonii acetatis :

- | | | | | |
|---------|---|----|-------------------------|----|
| 316. R. | Antimonii et potassii tartratis,
Liquoris ammonii acetatis,
Syrupi tolutani,
Aquæ, | ℥℥ | gr.j℥
f.℥ij
f.℥j. | M. |
|---------|---|----|-------------------------|----|

A tablespoonful thrice daily. The inhalation of steam, repeated several times in the course of the day, is often very soothing and beneficial. Venesection is very rarely required.

In the second stage, when free secretion has been established, antimony and acetate of ammonium are to be discontinued. At this period a combination of carbonate of ammonium, with spirit of chloroform, is useful as a stimulating expectorant or antispasmodic.

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|---------|--|----|-------------------------------------|----|
| 317. R. | Ammonii carbonatis,
Spiritus chloroformi,
Syrupi acaciæ,
Aquam, | ℥℥ | ℥iss
f.℥v
f.℥ij
ad. f.℥iv. | M. |
|---------|--|----|-------------------------------------|----|
- A dessertspoonful thrice daily.

Brandy or wine in moderate quantities may now also be required to sustain the strength. When in the advanced stage there is a profuse secretion, with copious perspiration, the ammonia mixture may be replaced by the following :

- | | | | | |
|---------|---|----|-----------------------------------|----|
| 318. R. | Quiniæ sulphatis,
Zinci sulphatis,
Acidi sulphurici aromatici,
Aquæ menthæ piperitæ, | ℥℥ | gr.xvj
℥j
f.℥v
f.℥iijss. | M. |
|---------|---|----|-----------------------------------|----|
- A dessertspoonful thrice daily, in water.

This combination often checks very rapidly the excessive secretion from the bronchial mucous membrane. The *stimulating expectorants* are sometimes useful at this stage of the disease—senega, squill, ammoniac, and the compound tincture of benzoin. If, as sometimes happens, the stimulating expectorants suddenly check secretion, tighten the breath, and increase dyspnœa, their employment must at once be discontinued. When the secretions accumulate and threaten suffocation, the patient being blue, and cold and drowsy, and the cough nearly or quite ceasing, an emetic of sulphate of zinc is often wonderfully efficacious in clearing the air-passages.

Our author gives an especial warning with regard to *opium*. Never order an opiate for a bronchitic patient who has the slightest blueness of the lips.

THOMAS HAWKES TANNER, M. D., LONDON.

The patient should be confined to bed in a room of the temperature of from 65° to 70° (F.), with the air kept moist. Beef-tea, milk, arrow-root or gruel, tea with milk, and a mucilaginous drink ought to be allowed, such as—

319. R. Misturæ acaciæ,
Misturæ amygdalæ, āā Oss.

To be mixed with a half a pint of pure milk and sweetened with sugar-candy or honey. Then add one large tablespoonful of any liquor. Allow the whole to be taken during the day.

Or,

320. Boil a large pinch of isinglass with a tumblerful of milk, half a dozen bruised almonds, and two or three lumps of sugar. To be taken warm once or twice in the day.

If there be indications of debility, white wine whey, made according to the following formula, will prove a good restorative:

321. To half a pint of boiling milk add one or two wineglassfuls of Sherry or Madeira. Separate the curd by straining through a fine sieve or piece of muslin. Sweeten the whey with refined sugar.

The following is a useful and agreeable demulcent drink:

322. R. Extracti sarsaparillæ fluidi,
Syrupi scillæ, āā f.ʒiiss. M.

A teaspoonful in a teacupful of barley-water, to be frequently taken during the day.

Then, after a brisk purgative, either of the following may be administered:

323. R.	Syrupi scillæ, Spiritus ætheris nitrosi, Tincturæ hyoscyami, Infusi rosæ compositi,	f.3vj ss f.3iij f.3isa.	M.
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A tablespoonful every six hours.

324. R.	Potassii nitratis, Vini antimonii, Liquoris ammonii acetatis, Aquam camphoræ,	℞ij f.3j f.3ss ad. f.3iij.	M.
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A tablespoonful every four hours.

If there be any depression, stimulating expectorants, such as the following, must be ordered:

325. R.	Ammonii carbonatis, Spiritus ætheris compositi, Tincturæ scillæ, Tincturæ opii camphoratæ, Tincturæ lavendulæ compositæ, Infusum senegæ,	3ss f.3iij f.3iss f.3ij-iv f.3vj ad. f.3vij.	M.
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Two tablespoonfuls every four hours.

326. R.	Spiritus ammoniæ aromatici, Spiritus chloroformi, Tincturæ aconiti, Tincturæ senegæ, Aquam camphoræ,	f.3ss f.3iij f.3ss f.3vj ad. f.3iij.	M.
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A tablespoonful every six hours.

Gentle *counter-irritation* to the front of the chest, by dry cupping, turpentine stupes, or sinapisms, will prove useful. Should the phlegm appear to accumulate in the bronchial tubes, the following emetic will readily remove it:

327. R.	Antimonii et potassii tartratis, Vini ipecacuanhæ,	gr. j-ij f.3ij.
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For one dose, to be added to a wineglassful of water, and its action aided by the free administration of warm water.

DR. ROSS C. RUSS, OF OHIO.

This writer says in the *Cincinnati Lancet and Observer* (February, 1877,) that the medicinal treatment of acute bronchial inflammation should be commenced with wine of ipecacuanha, given with the view to unload the bronchi of the excessive secretion, and to allay the irritability of the vagus nerve—but should only be given

in the first stage. After the subsidence of the acute stage, he has witnessed the best results from the following:

328. R.	Quinæ sulphatis,	ʒiij	
	Acid. phos. diluti,	ʒss	
	Syr. tolutani,	ʒss	
	Aquæ destillatæ,	ʒiiij.	M.

A dessertspoonful every four hours.

The dose should be increased or diminished according to age of the patient. The object which is to be obtained is to produce sedation over the turgid and relaxed capillaries of the mucous tissue of the bronchi: at the same time increasing the tonicity of the part.

When the disease assumes a still more grave form, solidification and ultimately softening of the lobules of the lung tissue are threatened. The following should be then be given:

329. R.	Spts. vini gallici,	ʒvj	
	Glycerinæ,	ʒiij	
	Tinct. hyoscyami,	ʒiiij.	M.

Teaspoonful every four or five hours. The dose to be regulated according to age of the patient.

These medicinal agents soothe the harassing cough, aid digestion, assist assimilation, and prevent undue tissue change.

For the treatment of Acute Bronchitis in Children, see the section on Diseases of Children.

RÉSUMÉ OF REMEDIES.

Ammonii Acetatis Liquor makes a useful diaphoretic alkaline vehicle for antimony, morphia, etc.

Ammonii Carbonas may be given with benefit, combined with ipecacuanha, squills when expectoration is scanty or difficult, or with tincture of lobelia if much spasm be present. Five grains given at bedtime, when the first symptoms of a common cold express themselves, often at once subdues the disease.

Ammonii Bromidum has been recommended.

* *Antimonii et Potassii Tartras* is of service in small doses (gr. $\frac{1}{8}$ - $\frac{1}{4}$) in the earliest stages of acute bronchitis in young, plethoric subjects, and where much febrile action is present. When the phlegm accumulates in the bronchial tubes, an antimonial emetic will readily remove it. The nauseating and depressing effects of antimony should not, however, be long kept up in this disease, as they interfere with proper nutrition, which is of much importance in these cases.

Two tablespoonfuls in gruel, thrice daily.

It is often advantageous to administer astringent remedies, as—

335. R. Acidi tannici, ℞j-℞j.
For twenty pills. One thrice daily.

Or,

336. R. Olei cubebæ, gtt.x.
For one dose, three or four times a day, on a piece of sugar.

In the protracted bronchitic affections of the aged, diuretics are of great service. The following formulæ are recommended by our author, and by Drs. MACLACHLAN and STOKES, as well suited in a variety of cases of *senile chronic catarrh*:

337. R. Potassii nitratis, gr. xxxvj
Tincturæ conii, f. ℥ss
Spiritus ætheris nitrosi, ℞ f. ℥vj
Oxymellis scillæ, ad. f. ℥vj. M.
Decoctum senegæ,

A tablespoonful thrice daily.

338. R. Potassii acetatis, ℥ss
Aceti scillæ, ℞ f. ℥vj
Spiritus ætheris nitrosi, f. ℥ss
Tincturæ opii camphoratæ, f. ℥iijss
Liquoris ammonii acetatis, f. ℥vj. M.
Syrupi aurantii corticis,

A tablespoonful thrice daily.

DR. BEIGEL, LONDON.

339. R. Pulveris aluminis, gr. ij
Tincturæ opii, ℥x
Aquæ destillatæ, f. ℥j. M.

For inhalation by means of atomizer, night and morning, in obstinate cases of chronic bronchitis.

The following inhalation also affords relief in severe cases:

340. R. Acidi tannici, gr. iij
Extracti hyoscyami, gr. ij
Aquæ destillatæ, f. ℥j. M.

To be inhaled night and morning. On account of the taste, sulphate of iron (gr. iv to f. ℥j) may be substituted for the tannic acid.

J. SOLIS COHEN, M. D., PHILADELPHIA.

341. R. Liquoris iodinii compositi, gtt. x-xl
Aquæ destillatæ, f. ℥j. M.

For inhalation by means of atomizer two or three times a day. If there co-exists pain, the narcotics and sedatives may be added to the inhalation, but preferably in minute quantity.

Zinci Sulphas is useful in the advanced stages, when there is profuse secretion.

Blisters are hurtful in the earlier stages, but are often of service in the advanced stages of the disease.

Blood-letting is recommended by Prof. DUTCHER, in very acute attacks, in robust patients. The application of a few leeches to the chest, or moderate wet-cupping, is sometimes indicated.

Counter-irritants to the chest are often of service. For this purpose, dry-cupping, *hot turpentine stupes, or mild sinapisms, may be employed. Turpentine embrocations are also serviceable.

Demulcents are always indicated.

Stimulants are often useful, and sometimes necessary, as in the *bronchitis of the aged*, attended with profuse secretion, threatened apnoea and a weak pulse. At the very outset of a common cold, a full supper, with a moderate alcoholic stimulant, will frequently abort the attack.

Water. The *vapor of hot water* is often of signal benefit. Wet packing is also of service in the early stages.

CHRONIC BRONCHITIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

In chronic cases of bronchitis, especially in patients who have made considerable progress in the journey of life, remedies which tend to invigorate the general system are indicated. Besides the selection of a beneficial climate and the use of nutritious, easily digested food, stimulating embrocations are useful. The following liniment, employed at the Meath Hospital at Dublin, is highly recommended for this purpose:—

333. R.	Spiritus terebinthinæ,	f.ʒiij	
	Acidi acetici,	f.ʒss	
	Vitelli ovi,	j	
	Aquæ rosæ,	f.ʒijss	
	Olei limonis,	ʒj.	M.

To be rubbed, morning and evening, not only over the chest, before and behind, but also along the sides of the neck. It generally reddens the skin and produces small pimples.

Of the fetid gums, ammoniac in particular, is a useful remedy. From the following combination (formula of Prof. EASTON, of Glasgow), decided beneficial results are obtained:—

334. R.	Ammoniacy,	ʒij	
	Acidi nitrici diluti,	ʒʒij.	
	Aquæ,	f.ʒxij.	J

350. R.	Sodii carbonatis,	ʒj
	Ammonii chloridi,	ʒij
	Extracti gentianæ fluidi,	f.ʒvj
	Extracti hyoscyami fluidi,	f.ʒij
	Syrupi tolutani,	f.ʒij.

A dessertspoonful three times a day.

351. R.	Pulveris aluminis,	gr.viiij
	Extracti conii fluidi,	gtt.vj
	Aquæ destillatæ,	f.ʒj.

For atomization. The alum to be gradually increased to gr.xx-

PROF. A. P. DUTCHER, M. D., CLEVELAND, OHIO.

As *local remedies* the inhalation of the vapor of hops, ic chloroform, tar, extract of conium and belladonna are at times useful. (Philadelphia *Medical and Surgical Reporter*, October and 19th, 1867.) The *vapor of iodine* should be watched with greatest attention. If it increases dyspnœa, and produces a usual feeling of heat and distress in the bronchial region, it sh be immediately discontinued, for it will produce congestion i smaller bronchia, which may extend to the air cells and ultim end in pneumonia.

The *constitutional treatment* must vary with the wants of particular case. *Tonics*, such as iron, gentian and quinine, minute doses of mercury, are commonly useful to improve state of the secretions and functions generally. When the ex oration is profuse, with much febrile excitement, the *mineral* and *metallic astringents* are useful. When the urine is loaded the oxalate of lime, and the bronchial trouble appears to de upon indigestion, from some defect in the functions of pri assimilation, the nitro-muriatic acid, administered according to following formula, will sometimes produce a wonderful chang the better, in cases that have resisted every other form of me tion:

352. R.	Acidi nitrici,	f.ʒj
	Acidi muriatici,	f.ʒij
	Morphiæ sulphatis,	gr.ij
	Tincturæ cinchonæ compositæ,	f.ʒiv.

A teaspoonful thrice daily, before each meal.

In mild cases of chronic bronchitis, the *iodide of potassium* most valuable remedy; it seems to restrain low degrees of inf mation affecting the fibrous part of the tubes, and counteracts process of induration to which they tend. In bad cases of the ease, where there is no tendency to tuberculosis, our author i

the habit of prescribing the iodide of potash and corrosive chloride of mercury, thus :

353. R.	Hydrargyri chloridi corrosivi, Potassii iodidi, Extracti lobeliæ fluidi, Syrupi,	gr.j ʒiij f.ʒj f.ʒv.	M.
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A teaspoonful three times a day, after each meal.

Where there is a tendency to tuberculosis, the mercury should be omitted.

The following is a useful combination, where it can be borne by the stomach, to allay cough and restrain expectoration :

354. R.	Copaibæ, Tincturæ cubebæ, Morphiæ sulphatis, Syrupi,	f.ʒij f.ʒj gr.iv f.ʒj.	M.
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A teaspoonful three times a day.

Ipecacuanha as an expectorant, in ordinary cases of chronic bronchitis, may be given in doses of a grain or two of the powder, or twenty to thirty drops of the wine, repeated several times a day, or combined with other agents, according to the following :

355. R.	Vini ipecacuanhæ, Syrupi scillæ, Tincturæ digitalis, Spiritus ætheris nitrosi, Tincturæ opii camphoratæ,	āā f.ʒj āā f.ʒss f.ʒij.	M.
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A teaspoonful three times a day.

In the chronic bronchitis of aged people, where, from alterations in the structure of the tubes, a cure cannot be expected, the disease may often be palliated and the patient rendered very comfortable by the use of the following combination, which is one of our author's favorite prescriptions :

356. R.	Potassii ferrocyanidi, Morphiæ sulphatis, Tincturæ colchici radices, Syrupi scillæ, Aquæ destillatæ,	ʒiv gr.v āā f.ʒss f.ʒiv.	M.
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A teaspoonful three or four times a day.

When expectoration is viscid, alkalies are useful ; and when the vital powers are feeble, Dr. D. is in the habit of prescribing, in connection with other treatment, the following :

Dr. GREENHOW has long been accustomed to prescribe with great advantage the *mineral acids*, especially the nitro-muriatic, in combination with a vegetable bitter, as above. In chronic cases attended by very copious expectoration, he adds to each dose of the above mixture twenty minims of the *tincture of larch*, which has the effect not only of lessening the expectoration, and with it the cough and dyspnœa, but also apparently of restoring the debilitated membrane to a more healthy tone, and of rendering patients less liable to catarrhal attacks at every change of the weather or season.

JOHN FORSYTH MEIGS, M. D., PHILADELPHIA.

364. ℞. Acidi carbolici fluidi, ℥x-xv.
Aquæ, Oss. M.

To be placed in an ordinary inhaling bottle, and used three or four times a day, in bronchial catarrh, offensive secretion from the bronchial tubes, etc.

L. PARISEL, OF PARIS.

365. ℞. Pulveris cinchonæ flavæ,
Sulphuris loti, āā ℥ss
Syrupi althææ, q. s. M.

This solution should be inhaled by means of an atomizer; useful both in the simple form of chronic bronchitis and in that which usually complicates the advanced stages of phthisis. It diminishes the secretion and thereby lessens the waste of substance and the exhaustion occasioned by repeated and urgent coughing.

PROF. ALFRED STILLÉ, M. D., PHILADELPHIA.

366. ℞. Acidi carbolici fluidi, gtt. xv-xx
Tincturæ conii, f. ℥j-ij
Aquæ destillatæ, Oij. M.

For inhalation.

THOMAS HAWKES TANNER, M. D., LONDON.

367. ℞. Syrupi scillæ, f. ℥vj
Acidi nitrici diluti, f. ℥j
Tincturæ hyoscyami, f. ℥iij
Spiritus chloroformi, f. ℥vj
Infusum cinchonæ flavæ, ad. f. ℥vj. M.

Two tablespoonfuls twice or thrice daily, in chronic catarrh, with debility and restlessness.

368. ℞. Syrupi scillæ, f. ℥vj
Spiritus ammoniæ aromatici, f. ℥iij
Morphiæ muriatis, gr. ss
Infusum serpentariæ, ad. f. ℥vj. M

Two tablespoonfuls two or three times a day, in chronic catarrh.

376. R. Antimonii et potassii tartratis, ℥j
 Tincturæ cantharidis, f.ʒiij. M.
 Rub a small quantity of this liquid on the front of the chest and apply a flannel.

In this manner an eruption is developed which acts efficiently in acute bronchial affections. Or, for the same purpose, the following may be used:

377. R. Spiritus camphoræ,
 Tincturæ cantharidis, ℥ss f.ʒiiss. M.
 To be employed as above.

PROF. WILLIAM STOKES, M. D., DUBLIN.

378. R. Potassii iodidi, ʒiij
 Tincturæ opii camphoratæ, f.ʒss
 Decocti senegæ, f.ʒiv
 Syrupi tolutani, f.ʒiiss. M.

Two teaspoonfuls a day, in chronic bronchitis.

379. R. Tincturæ opii camphoratæ, f.ʒss
 Ætheris,
 Tincturæ tolutani, ℥ss f.ʒij. M.

A teaspoonful in a small quantity of a warm drink, to quiet the cough, in bronchitis.

380. R. Tincturæ opii camphoratæ,
 Tincturæ scillæ, ℥ss f.ʒiiss
 Ammonii carbonatis, gr.xviij
 Decocti senegæ, f.ʒiv
 Syrupi tolutani, f.ʒss. M.

Two or three teaspoonfuls a day in chronic bronchitis, after the inflammatory symptoms have lost a little of their intensity.

381. R. Acidi benzoici,
 Ammoniaci, ℥ss ʒss
 Saponis, q. s. M.

Divide into twenty pills. From four to eight in the twenty-four hours, in chronic pulmonary catarrh. Repeated sinapisms to the chest.

SIR THOMAS WATSON, LONDON.

In cases of chronic bronchitis, which are especially remarkable on account of the great abundance of the bronchial secretion, our author has derived great advantage from the administration of the *sulphate of iron* in two or three grain doses, in the *compound infusion of rose*, thrice daily. When there is any fever present, these remedies are apt to augment it; but when the pulse is quiet and the skin cool, they are often of the greatest service.

Our author has also seen the excessive expectoration diminish, and the patient gain strength, under the the use of the balsams, th

compound tincture of benzoin, for example, a form of medicine employed formerly, and too much neglected at present.

JOHN WILLIAMS, M. D., LONDON.

382. R.	Ammoniaci, Ammonii carbonatis, Ipecacuanhæ, Morphiæ muriatis, Mucilaginis acaciæ,	āā	gr.xv gr.iv gr.iss q. s.
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Divide into ten pills, which coat with a solution of balsam of chloroform. One pill, morning and evening, in chronic bronchitis, especially when the secretion is thick and the expectoration difficult.

J. MILNER FOTHERGILL, M. D., LONDON.

383. R.	Sp. chloroform, Hydrobromic acid, Syr. scillæ, Aq. ad ʒj, ter in die.	mxx ʒss ʒj
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The dose, of course, is reduced for children. Any other of this mixture is very agreeable, but the hydrobromic acid, from its effect of bromine upon reflex mechanism, allays the cough or soothes the troublesome. It possesses much the same action as opium in allaying the ill effects upon the digestive organs or on the bronchial secretion.

BELLEVUE HOSPITAL, NEW YORK CITY.

384. R.	Ammon. carb., Ext. fl. senegæ, Ext. fl. scillæ, Tr. opii. camph., Aqua, Syrup. tolut.,	gr. ʒ2 āā	f.ʒj f.ʒvi f.ʒss q. s. ad. f.ʒiv.
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Teaspoonful at a dose.

RÉSUMÉ OF REMEDIES.

Acidum Carbolicum, by atomized inhalation, is of service when the bronchial secretions acquire a repulsive fetor.

Allium. After the febrile stage has passed, syrup of garlic, or the tincture of onion syrup, is a very useful expectorant, particularly in children.

Alumen. Dr. F. L. ANDREWS, of London, recommends alum in a solution as well as in chronic bronchitis, both in children and adults when the expectoration is ropy. To children of three years, ʒ one grain in solution every five or six hours, to adults ʒ eight grains at like intervals.

Ammoniacum is often a decidedly useful remedy.

Ammonii Carbonas is an excellent stimulant expectorant, of benefit in the advanced stages of bronchitis when there is no febrile stage present. The following formula may be employed :

385. R. Ammonii carbonatis, gr.ij
 Spiritus chloroformi, ℥xx
 Aquæ camphoræ, f.ʒx. M.

To be taken every three or four hours.

Infusion of senega may often replace with advantage the camphor water in this recipe. It is of especial benefit in the *asthenic bronchitis of old age*.

**Ammonii Chloridum* is a most valuable remedy in chronic bronchitis, but must be given in ten-grain doses in order to be effective. The following is a useful formula :

386. R. Ammonii chloridi, ʒij
 Spiritus ætheris compositi, f.ʒij
 Extracti glycyrrhizæ, ʒj
 Decoctum senegæ, ad. f.ʒvj.

Tablespoonful every two or three hours. Ipecacuanha or squill may be added, if indicated.

Angelica is useful in the chronic bronchial catarrh of aged and feeble persons, under circumstances when senega is usually prescribed.

Antimonii Oxy-iodidum is of service in subacute bronchitis.

Apomorphia. Dr. WERTNER, of Vienna, has used this substance internally as an expectorant with the most pleasing success. His prescription is :

387. R. Apomorphiæ, gr. ʒ - ʒj
 Aquæ destillatæ, f.ʒxij. M.

Tablespoonful every two hours for an adult. It is an excellent cough sedative, especially useful in bronchial catarrh in the exudation stage. (*Dobell, Reports, 1876.*)

Arsenicum is recommended by Dr. THOROWGOOD (*Lancet*, November 13th, 1869), in chronic bronchitis, where copious expectoration and much emaciation are present. At times he finds it to act quite like a specific in improving the breathing. He gives ℥ij of FOWLER'S solution in alkaline infusion of columbo thrice daily.

Assafœtida is of service when the cough is spasmodic, and the expectoration difficult, on account of general debility. It is, therefore, often useful in the chronic bronchitis of old persons.

Balsamum Peruvianum. The balsams, both of Peru and of Tolu, are useful stimulant expectorants, and vehicles for squill and other remedies of the same kind, in chronic bronchitis. The vapor, obtained by placing them upon a piece of hot iron or hot coals, is also of benefit.

Benzoinum. The compound tincture of benzoin is a useful stimulant expectorant; the tincture of benzoin may often be employed with benefit, by means of a steam atomizer. Benzoin must be used only in cases not injuriously influenced by stimulation.

Calcis Phosphas, in doses of gr. i-ij several times a day, is recommended by Dr. RINGER, as of great value in checking profuse discharges in chronic bronchitis.

- Cetraria* has been highly recommended in chronic bronchitis attended with copious purulent or mucous expectoration.
- Chiretta* has proved useful in chronic bronchitis associated with copious expectoration and exhausted powers of the system.
- Chondrus* has an extended reputation in chronic bronchitis, but is not a very active agent.
- Cimicifuga* is especially useful in the chronic bronchitis and coughs of old age.
- Cinchona*. The acidulated cold infusion of bark is very useful when there is rapid wasting of the system, under the influence of profuse expectoration and night sweats.
- Colchicum* is sometimes prescribed; it is more particularly indicated in gouty bronchitis.
- Conium*, in the form of the compound pill (gr.v-x) is frequently used. Squill increases its efficacy. Vapor coniæ may be inhaled with benefit.
- Copaiba* often restrains and modifies the bronchial secretion in chronic bronchitis attended with profuse expectoration, when there is no fever and not much vascular irritability.
- Creasotum* is sometimes given by inhalation and by the stomach, in the bronchorrhœa of old persons.
- Creta Præparata* is recommended by Dr. COPLAND in chronic bronchitis in the advanced stages, particularly when colligative sweats and diarrhœa are present. He employs the following mixture, which, even when the bowels are regular, is by no means unproductive of constipation:

388. ℞.	Misturæ cretæ,	f.ʒvjss
	Vini ipecacuanhæ,	f.ʒiiss
	Tincturæ opii camphoratæ,	f.ʒvj
	Syrupi tolutani,	f.ʒiij.

Tablespoonful three or four times daily.

- Cubeba*, in small and often repeated doses, is of service in the chronic bronchitis of old age, attended with profuse secretion and marked debility of constitution.
- Cuprum Ammoniatum* is said to be serviceable in severe chronic bronchitis accompanied with spasmodic cough.
- Digitalis*. The tincture is occasionally useful as a sedative adjunct to expectorants.
- Dulcamara* is frequently a useful sedative for the cough.
- Ferri Mistura Aromatica* is highly praised, as calculated to improve general health and check superabundant secretion, by GRAVES. He orders

389. ℞.	Misturæ ferri aromaticæ,	f.ʒiiss-iiij
	Aquæ menthæ piperitæ,	f.ʒvj.

Tablespoonful thrice daily.

- Ferri Nitratis Liquor* is of service in doses of gtt.x-xv, thrice daily, when tonics and astringents are indicated.

Ferri Sulphas is recommended by Sir THOMAS WATSON, when there is excessive bronchial secretion. (p. 167).

Ipecacuanha is a useful expectorant, usually given combined with other remedies. Dr. WILLIAM MURRELL, of London, uses ipecacuanha spray in winter cough. The spray has proved most successful in those cases of winter cough in which the dyspnoea is the prominent symptom. In true neurotic asthma, however, little or no benefit is derived from its employment, and it may even increase the frequency and duration of the paroxysmal attacks. The method of giving the inhalation was by Richardson's double-balled spray-producer, or Siegle's steam spray-inhaler. The ipecacuanha wine was used either pure or variously diluted, the most usual strength being one part of the wine to one or two of water. The use of undiluted wine occasionally produces dryness of the throat and nausea, the latter symptom most frequently occurring in those cases in which the patient is not careful to expectorate the mixture of saliva and condensed spray which accumulates in the mouth. The quantity of wine used at each inhalation varied from a half to two drachms; in a few cases as much as an ounce was given, but with no advantage over the smaller quantity.

Larix Europæa is recommended by Dr. GREENHOW, to check profuse passive expectoration in chronic bronchitis. (p. 165.)

Lobelia is a serviceable sedative, allaying spasm and facilitating expectoration. It is usually given in combination with other remedies.

Marrubium. The expressed juice of the fresh plant, taken with milk, has been strongly recommended.

Myrrha, when there is no fever or irritability present, is a valuable medicine in long-standing chronic bronchitis, particularly after a course of expectorants.

Nitro-muriaticum Acidum is of service when tonics are indicated.

Oleum Morrhuæ is often of signal service in chronic bronchitis.

Opium, though often of much service in allaying bronchitic cough, may prove dangerous if there is much accumulation in the bronchi.

Pix Liquida is of some value in bronchial catarrh. The following formula was recommended by the late Prof. DUNGLISON:

390.	℞.	Picis liquidæ,	ʒj	
		Aquæ destillatæ,	Oij.	℞.

Digest for eight days and decant. Dose, from eight to twelve tablespoonfuls daily, in milk.

Dr. SYDNEY RINGER gives tar in two grain doses, every three or four hours, in winter cough.

Plumbi Acetas frequently proves useful when there is profuse mucous secretion. (F. 348.)

Potassii Carbonas is of service in thinning the secretion.

Potassii Chloras is recommended by Prof. DA COSTA in both acute and chronic bronchitis, to thin the secretion and promote expectoration. (F. 346.)

- **Potassæ Liquor*, ℥x-xv, added to an ordinary expectorant mixture, is often attended with good results when the sputa is scanty, and viscid.
- Potassii Ferrocyanidum* is recommended by Prof. DUTCHER. (F. 35)
- **Potassii Iodidum* acts beneficially in the advanced stages of chronic bronchitis, in restraining inflammatory action and promoting absorption.
- Sanguinaria* is sometimes employed alone, but is usually associated with other remedies.
- Scilla* is of service after all active inflammation has subsided, in mild cases unattended with purulent expectoration. It is best combined with an alkali and a small quantity of opium. (F. 383, 384)
- **Senega* is a highly serviceable remedy, particularly when combined with the carbonate of ammonium. (F. 380, 384, 386.)
- **Sodii Hypophosphis*, or *potassii hypophosphis*, is useful in very chronic cases, with thick fetid expectoration. Camphor water is a good vehicle.
- Stramonium* is recommended, combined with expectorants, by Dr. HILL, in the form of the tincture (℥x), in the chronic bronchitis of the aged, where there is great dyspnoea, accompanied by a dry state of the tubes.
- Strychnia* or *nux vomica*, in small doses, with iron, is advocated by Dr. THOROWGOOD, especially when there is constant dyspnoea and prolonged expiration. (*Lancet*, Nov. 13, 1869.)
- Sulphur* combined with acid tartrate of potassium is recommended by Dr. GRAVES.
- Tannicum Acidum* is useful when an astringent is indicated.
- Uva Ursi* has proved of benefit when there was purulent expectoration and hectic fever.
- Zinci Sulphas* is recommended by Dr. BARLOW. He employs the following combination for moderating the cough and expectorations

391.	R.	Zinci sulphatis,	gr. j.	
		Extracti conii,	gr. iv.	M
		One pill thrice daily.		

- Zingiber*. The infusion is sometimes useful in the bronchial catarrh in advanced life.
- Alkalies* are useful in chronic bronchitis, when the expectoration is thick and viscid.
- Diuretics* are of benefit in the protracted bronchitic affections of the aged.
- Emetics* are recommended in chronic bronchitis, by Dr. GRAVES, when there is no fever, no remarkable dyspnoea nor acceleration of the pulse, but when the secretion is very copious. In such cases, an emetic every night for two or three nights is productive of great advantage, freeing the stomach and lungs from a large amount of mucus, rendering the expectoration easier, clearing the tongue and improving the appetite.

Inhalations are frequently employed in the treatment of chronic bronchitis. The following are the principal drugs used:—*Alum*; *Balsams of Peru and Tolu*; *Carbolic Acid*; *Chlorine*; *Chloroform*, a few whiffs, $\eta\upsilon\upsilon\iota$ -l often of signal but only temporary benefit; *Conium Vapor*; *Creasote*; *Iodine*; *Olibanum Fumigations*; (the gum rosin placed on burning coals); *Tar Vapor* (generated by heating tar over a spirit lamp, with the addition of a small quantity of potash to neutralize the irritant fumes); *Nitre Paper Fumes*; *Sulphurous Acid Spray or Fumigation*; *Tannic Acid*; *Turpentine*; *Hot-water Vapor*; *Sulphate of Zinc*.

Stimulants are frequently indicated in the bronchitis of the aged.

EXTERNAL REMEDIES.

Baths. An alkaline bath sometimes proves useful.

Counter-irritants. The following combination of *aqua ammoniæ* applied to the chest is an efficient counter-irritant:

392. R.	Aquæ ammoniæ,	f.ʒss-j	
	Olei amygdalæ,	f.ʒss	
	Olei rosmarini,	f.ʒj	
	Aquæ,	f.ʒij.	M.

*Tartar-emeti*c ointment is occasionally employed as an irritant to the chest, but other irritants are generally preferred. *Croton oil* liniment is sometimes very useful. *Turpentine* liniments are highly serviceable. The following combination, supposed to be an imitation of that used by ST. JOHN LONG, is recommended by Dr. GRAVES:

393. R.	Olei terebinthinæ,	f.ʒiij	
	Acidi acetici,	f.ʒss	
	Ovi vitelli,	j	
	Olei limonis,	f.ʒj	
	Aquæ rosmarini,	f.ʒijss.	M.

To be well rubbed in over the chest, the nape of the neck, the epigastrium, and the course of the cervico-spinal and pneumogastric nerves generally. *Sinapisms* to the chest are sometimes of service.

Electricity. A fine primary induction current, of low intensity, passed through the chest from the back and neck, stimulating the sympathetic and spinal nerves, has been found productive of great benefit.

Nitro-muriatic Acid lotions sponged over the chest are recommended for checking profuse expectoration, and mitigating the severity of the symptoms.

Flasters. A *Burgundy pitch* plaster often proves of service as a protective against atmospheric changes, and as a rubefacient. An *opiate* plaster is sometimes of benefit.

**Poultices.* Large, light, soft linseed-meal poultices, made to cover the whole of the chest, often afford great relief in chronic bronchitis. If it be desirable to stimulate the skin, *Mustard* (1 part to 4)

may be added; if there be much pain, *Laudanum* may be sprinkled over the surface.

Issues at the nape of the neck sometimes remove or mitigate the symptoms.

CATARRH.

HORACE DOBELL, M. D., LONDON.

Catarrh steals, in an insidious way, its marches on its victims. However simple in character and short in duration the first attacks may be, they dispose the mucous membrane to fresh attacks; each attack involves a larger extent of surface than its predecessor; when once the complaint has reached the finer ramifications of the bronchi, it lurks there still—even after the larger tubes have been restored to temporary health—every fresh attack of catarrh in the larger passages supplying the lurking enemy with reinforcements, and enabling it to advance from its fastnesses, and to encroach further and further upon the respiratory tract, until, at last, it needs but a breath of wind upon the lining of the nose or fauces to raise a storm of rebellion throughout the length and breadth of the naso-pulmonary mucous membrane.

If we could nip every catarrh in the bud, what a catalogue of ills we should prevent! And yet this is not a very difficult thing to do, when there is a chance of trying it. But, unfortunately, colds are thought so lightly of by patients, that they seldom try to stop them till they have become severe, have lasted an unusual time, or have produced some complication. Nevertheless, it is our author's opinion, they would do better in this respect if they had more faith in the possibility of stopping colds; if their doctors would impress upon them more the importance of stopping them; and especially if they knew that *colds can be stopped without lying in bed, staying at home, or in any way interfering with business.*

Our author's plan of stopping a cold, while it will not answer if the cold be thoroughly established, is almost infallible if begun directly the first signs of catarrh show themselves in the nose, eyes, throat or chest—in fact, before any considerable amount of secretion has taken place. The plan is as follows: 1. Order.—

When a catarrh is commencing, a few drops are placed on or four layers of blotting-paper; the patient holding this hand, and closing his eyes, inhales deeply from it as long as smell is perceptible. The remedy should be applied every few hours.

The following powder is highly recommended by the editor of the *Archives of Neurology*, 1876.

397. R.	Camphoræ,	3v
	Ætheris sulphurici,	q. s.
	Dissolve to the consistence of cream, and add :	
	Ammonizæ carbonatis,	3iv
	Opii pulveris,	3j.
	Keep in a tightly-corked bottle.	

The dose is regulated by the opium, and ranges from gr. This much may be taken in a little water just before retiring any hour of the day when there is a suspicion of having a cold; and the dose may be repeated if necessary. The taste is disagreeable, and the effect is "singularly and inexplicably efficacious." It is well and safe to keep it on hand and take a pinch as much as one can lay on the finger nail, whenever one becomes badly chilled.

DR. BEVERLY ROBINSON, NEW YORK.

According to this writer, (New York *Medical Journal*, 1875,) no method of treatment in post-nasal catarrh is applicable in every case, and this results in great part from the fact that it is impossible to apply remedies to every portion of the nasal membrane. The results of his observation are to the effect that constitutional treatment proves a most important element in every case. If the patient is anæmic, *iron, quinine, and cod-liver oil* are of decided advantage; and if there is malaria present, it has to be combated by a sufficient amount of quinine. Of the agents which have a local effect on the naso-pharyngeal and pharyngeal membranes, he has experimented with balsam-copaiba, guaiacum, ammoniacum, and sulphur, and is led to the conclusion that the three most important are *cubebs, sulphur, and copaiba*. Of these he is in favor of *cubebs*. At first he used the oleo-cubebs, but found that it did not possess the virtues of itself. A form that has proved satisfactory, is:

398. R. Cubebæ, ℥ij
 Syr. aurantii, ʒ.ʒiij
 Aquæ menth. piper., ʒ.ʒviij. M.
 Half a teaspoonful every three hours.

It is necessary to continue the cubebs for one or two months, and by its use the sensation of stuffiness in the head and hawking mucus may be relieved.

Diarrhœa or an herpetic eruption may appear during the use of the cubebs, and, if so, it is judicious to interrupt its administration for a few days.

RÉSUMÉ OF REMEDIES.

Acetum. Bathing the chest every morning with vinegar and water, often diminishes the liability to an attack in persons subject to repeated catarrhs.

Aconitum is highly recommended by Dr. RINGER, at the outset of febrile catarrh:

399. R. Tincturæ aconiti radice, ℥.viij-xvj
 Aquæ, ʒ.ʒij. M.

A teaspoonful every ten or fifteen minutes, for two hours, and afterwards repeated every hour. If there be much prostration and the pulse be feeble and weak, the dose should be diminished. So soon as the sensation of "pins and needles" be produced, the aconite, which has then been pushed to its full extent, should be stopped.

Ammonii Acetatis Liquor is often of great service.

Ammonii Carbonas is a very useful remedy in this affection. For Dr. DOBELL'S method of employing it to stop a cold, see above.

Arsenicum is of benefit, when the affection is of a local character, and when there is an absence of inflammatory action and febrile disturbance, which states contra-indicate its use.

Ipecacuanha. A full dose of Dover's powder (gr.x), taken at bedtime and at the very outset of the attack, often arrests it.

Lini Infusum is an excellent demulcent.

* *Opium.* A full opiate at bedtime, followed by a laxative in the morning will, if given at the outset, frequently cut short a common attack of catarrh.

Potassa chloras. Dr. L. SEDGWICK (*British Medical Journal*, 1873,) speaks of the value of potassium chlorate in catarrh. If taken early and frequently, it will stop many a cold. The best form is the lozenge, eight or ten or more of which may be taken in the twenty-four hours. These should be sucked very slowly, for its action is chiefly if not altogether local. It always quickly relieves the stuffing of the nose, the rawness of the throat, the thickness of the voice, and if begun soon enough, speedily cures the cold.

Scilla is useful after all active inflammation has subsided, before which time it should never be employed. It unloads the air passages

and relieves congestion and dyspnoea. Dr. C. J. B. WILLIAMS states that squill is principally useful in mild cases, unattended with purulent expectoration. He combines it with an alkali and a small portion of opium, to prevent its too rapid passage by the kidneys.

Spiritus Ætheris Nitrosi is a popular and efficacious remedy.

Baths. A Turkish bath is often beneficial.

Inhalations. Conium inhalations are recommended by Dr. DOBEL. Turpentine inhalations are recommended by Dr. BEIGEL. frequently repeated inhalations of the vapor of hot water, most instances, afford a remarkable amount of relief.

CHRONIC CATARRH.

Ammoniacum is a useful remedy in the chronic catarrh of old age.

400. ℞.	Ammoniaci,	ʒij	
	Acidi nitrici diluti,	f.ʒij	
	Misturæ acaciæ,	f.ʒviiij.	M.

Two tablespoonfuls, in any bland fluid, every two hours.

Cannabis Indica is highly praised by Dr. WARING CURRAN (*Medical Press*, - September 9, 1868,) as a sedative and expectorant. He orders the following mixture :

401. ℞.	Tincturæ cannabis indicæ,	f.ʒij	
	Pulveris tragacanthæ compositi,	ʒj	
	Ætheris chlorici,	f.ʒiiss	
	Aquæ anisi,	f.ʒvj.	M.

Two tablespoonfuls every second hour.

Galbanum is frequently serviceable.

Sanguinaria. The regular employment of small doses of the tincture of this root often affords relief in protracted catarrhal affections, assuming the character of incipient phthisis. It should be persevered in for several weeks.

Senega is a very useful remedy in chronic catarrh.

Fumigations. Prof. TROUSSEAU highly recommends *benzoin* fumigations in chronic catarrh. The air of the patient's apartment should be impregnated with the vapor of benzoin, the drug being thrown upon burning coals; or it may be inhaled from a common inhaler, the balsam being placed in barley water.

Inhalations. *Oxygen* inhalations have been advised in catarrh complicated with emphysema. *Sulphurous acid* fumigation (sprinkle from time to time, on a few red hot cinders, a small portion of sulphur, so as to fill the room not inconveniently with the fumes), or spray, is highly recommended.

CORYZA.

J. SOLIS COHEN, M. D., PHILADELPHIA.

402. R. Pulveris aluminis, gr.v-xxx
 Aquæ, f.ʒj. M.

The nebulized spray to be drawn into the nostrils three or four times a day, to diminish the profuse secretion of coryza and destroy fetor when present.

DR. LOMBARD, GENEVA.

403. B. Pulveris opii,
 Pulveris benzoini,
 Sacchari, ʒʒ gr.ij. M.

For one powder. To be used in *catarrhal neuralgia complicating coryza*, in the following manner: Heat in the fire a thin plate of iron—a shovel—and throw upon it this powder, holding the head over it, so as to breathe the fumes through both nose and mouth. To be repeated two or three times a day, or oftener. It acts like a charm, frequently giving immediate relief.

M. LUC, SURGEON, FRENCH ARMY.

Our author recommends the inhalation of *iodine vapor* in this affection, effected by placing a bottle of the tincture under the nose, the hand supplying warmth enough to vaporize the iodine. The inhalations, each lasting a minute, are to be repeated every three minutes during an hour.

J. FORSYTH MEIGS, M. D., PHILADELPHIA.

404. B. Unguenti hydrargyri nitratis, ʒss
 Extracti belladonnæ, gr.x
 Adipis, ʒss. M.

Useful in chronic coryza of children; to be completely softened by gentle heat, and applied at night on a camel's hair pencil, to the surface of the mucous membrane itself, and not merely to the outside of the hardened scabs. Injections should be employed during the day.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

In the treatment of *acute* nasal catarrh, the production of active diaphoresis is the only procedure worthy of confidence. A Russian bath should be advised where practicable. In most cases, all that is necessary is to direct the patient to confine himself to his room for a few days; to keep the head and feet warm; to swallow some hot drinks frequently during the day; to use linen pocket-handkerchiefs, not silken or cotton, and to change them frequently; and to smear the upper lip with salve, to protect it from the acrid

secretion. In the latter stages, a long walk in the open air, or an occasional pinch of snuff, hastens the cure. In infants at breast, the nostrils should be cleared by syringing them with water, and they should be fed by the spoon or bottle so long as the obstacle to sucking continues.

In the treatment of *chronic* nasal catarrh, the cachexia, what it may be, should be attended to. Local remedies are also of utmost importance. The most effective is penciling the swollen mucous membrane with the following solution:

405. ℞. Argenti nitratis, gr. iv-xxx
Aquæ destillatæ, f. ʒj.

Or cauterizing with the lunar caustic in substance. The following, to be used as a snuff, is in great repute:

406. ℞. Hydrargyri chloridi mitis, ʒss gr. xij
Hydrargyri oxidi rubri, ʒss
Sacchari, ʒss
For one powder.

When the discharge is offensive, and the above treatment fails, the following may be tried:

407. ℞. Iodinii, gr. ij-iv
Potassii iodidi, gr. iv-viiij
Aquæ, f. ʒvj. ℞

To be used as an injection into the nostrils.

L. WALDENBURG, M. D., BERLIN.

408. ℞. Ammonii chloridi, gr. iv
Aquæ destillatæ, f. ʒj. ℞

For inhalation by atomizer, in that form of coryza known as snuffles. When the mouth is closed and the proper inclination given to the head, the nebulized spray can readily be inspired into the nostrils.

Solutions of common salt may also be employed in the same manner.

For the treatment of the coryza of children, see Section on Diseases of Children.

RÉSUMÉ OF REMEDIES.

Acidum Aceticum. The emanations of acetic acid are useful in arresting the development of coryza.

Acidum Tannicum. Prof. TROUSSEAU recommended, in chronic coryza, a snuff of finely pulverized tannin. Prof. STILLÉ also recommends a snuff containing tannic acid and white sugar, reduced to a very fine powder and forcibly inspired twice a day or oftener, according to the exigencies of the case; or, a glycerite of tannin, applied with a brush, after the parts have been cleaned by the usual douche or otherwise.

Ammonii Acetatis Liquor is often very useful in coryza.

Ammonii Chloridum, in powder, is a very effective errhine, in coryza.

Arsenicum may often be ordered with benefit, in chronic coryza.

Ætheris Nitrosi Spiritus is a popular and efficacious remedy, in doses of f.ʒj-iss, in a cupful of a convenient vehicle.

Camphora. Snuffing the emanations from a piece of camphor often arrests, it is said, commencing coryza.

Iodinium and its compounds, aided by local iodine applications, are of service in scrofulous coryza.

* *Ipecacuanha.* A full dose of Dover's powder, taken at bedtime, at the very outset of the attack of coryza, will often arrest it.

* *Opium.* A full opiate at bedtime, followed by a laxative in the morning, will often cut short an attack of coryza, if given at the outset.

Sanguinaria. The powdered root, conjoined with cloves and camphor, and employed as snuff, has been recommended.

Inhalations. *Alum* will diminish profuse secretion and destroy fetor.

Benzoin and Opium fumes are of service in cases complicated with catarrhal neuralgia; *iodine vapor* is useful. (p. 179.)

EXTERNAL REMEDIES.

Argentii Nitras. Penciling the swollen mucous membrane with a solution of nitrate of silver is recommended by Prof. NIEMEYER. (F. 405.)

Baths. A Russian bath, when practicable, is of service.

Curcuma. Inhaling the fumes of burning tumeric is a common East Indian remedy. A small piece of burning tumeric should be placed under a small funnel, and the vapor, as it passes through the small aperture, drawn up into the nostrils.

Electricity. In the acute stage a constant current from six to eight cups, applied by means of a nasal bath, produces good effects. In chronic coryza nearly all cases, it is asserted, may be cured by galvanic and faradic stimulation.

Glycerina may be employed to good effect to soften the plugs of hardened mucus which obstruct the nasal passages, in some forms of chronic coryza.

Hydrargyri Chloridum Mite. A mixture of calomel, red oxide of mercury, and white sugar, is recommended as a snuff, by Professor NIEMEYER. (F. 406.)

Iodine injections into the nostrils are efficacious when the discharge is offensive.

Liquor Sodæ Chlorinatæ. A diluted solution (℥xv-xxx ad. aquæ, f.ʒj),

is useful as an injection, when the discharge is fetid. strength of the solution should never be such as to cause pain.

Snuffs of chloride of ammonium, camphor, sanguinaria and calomel, have all been employed.

Zinci Oxidum. The ointment or glycerine introduced into the nasal cavity, by a camel-hair brush, night and morning, is highly serviceable. The patient should be subjected at the same time to a course of iodine, quinine or iron, and the bowels kept soluble.

EMPHYSEMA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

Little can be done, apart from the treatment of the bronchial congestion. If bronchial spasm prevail, the following may give relief:

409. ℞. Spiritus ætheris compositi, f.ʒiv-viiij
 Aquæ camphoræ, f.ʒiv. M
 A tablespoonful thrice daily.

THOMAS KING CHAMBERS, M. D., LONDON.

410. ℞. Tincturæ ferri chloridi, f.ʒijss
 Tincturæ lobeliæ æthereæ, f.ʒij
 Aquæ camphoræ, f.ʒiv. M
 A tablespoonful, in water, thrice daily.

The object of the iron is to try and restore its full vital power to the creative arterial blood, so that it may renew the pulmonary membrane, that it may form healthy elastic tissue, instead of the imperfectly elastic degenerated tissue. The lobelia is ordered as a substitute for a more powerful medicinal agent, *tobacco*. Nothing calms the distressing asthma so well as a few whiffs of strong Virginia. Like tobacco, lobelia is a very variable article; there seems to be as much difference between one specimen and another as between the mildest cigarette and strongest shag. The strongest sort should be used, paying for it the best price at the best shop, so that it may be given in moderate and graduated doses.

MEREDITH CLYMER, M. D., NEW YORK.

For the relief of the asthmatic fits of emphysema, nothing is so sure as a full dose of opium with sulphuric or chloric ether.

411. ℞. Tincturæ opii, f.ʒj.
 Ætheris, f.ʒij. M.
 Sixty drops every twenty minutes.

To each dose may be added,

Tincturæ lobeliæ æthereæ, gtt.xx.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

412. ℞. Potassii chloratis, ʒiiss
 Tincturæ belladonnæ, f.ʒiiss
 Extracti pruni virginianæ fluidi,
 Tincturæ cinchonæ compositæ, ʒʒ f.ʒij. M.

A dessertspoonful four times a day, in emphysema with chronic bronchitis and loss of appetite. Also, dry cups applied to the chest morning and evening.

In the treatment of emphysema, strychnia and nux vomica are of no benefit. Chlorate of potassium in large doses is of service, so also is the iodide of potassium. Care should be taken to prevent the emphysematous patient from having attacks of bronchitis, which aggravate the affection.

In the bronchial complications of emphysema, the following formulæ will be found useful :

413. ℞. Tincturæ lobeliæ, f.ʒj
 Syrupi scillæ,
 Syrupi tolutani, ʒʒ f.ʒiiss
 Misturæ glycyrrhizæ compositæ, f.ʒiv. M.

A dessertspoonful every three hours; with counter-irritation to the chest, with the following :

414. ℞. Acidi acetici,
 Olei terebinthinæ,
 Linimenti saponis, ʒʒ f.ʒij. M.

To be rubbed on night and morning.

415. ℞. Potassii iodidi, ʒij
 Syrupi ipecacuanhæ,
 Tincturæ scillæ, ʒʒ f.ʒiiss
 Syrupi, f.ʒij. M.

A tablespoonful thrice daily.

Together with counter-irritation to the chest.

416. ℞. Chloroformi, f.ʒiiss
 Linimenti ammoniæ,
 Linimenti saponis, ʒʒ f.ʒiiss. M

To be rubbed on morning and evening, and to be placed on flannel and allowed to remain against the skin for fifteen minutes.

417. ℞. Potassii iodidi, ʒij
 Extracti senegæ fluidi, f.ʒj
 Syrupi pruni virginianæ, f.ʒij.

A teaspoonful thrice daily.

418. R. Tincturæ lobeliæ, f.ʒss
 Extracti valerianæ fluidi, f.ʒj
 Spiritûs atheris compositi, f.ʒj
 Potassii chloratis, Div
 Syrupi tolutani, f.ʒj
 Aquæ, f.ʒss. M.

A dessertspoonful, in water, four times a day, or oftener if the oppression be great.

Also the following:

419. R. Chloroformi, f.ʒss
 Olei terebinthinæ, f.ʒj
 Spiritûs rosmarini, f.ʒiiss. M.

To be rubbed on morning and evening.

420. R. Atropiæ sulphatis, gr. ʒb
 In granules thrice daily.

The treatment in cases of emphysema should be a double one, to modify the bronchial trouble which keeps up the affection, and to alleviate the difficulty of breathing, which may at times rise into paroxysms of attacks of asthma. In point of radical treatment, there are no means which will cause the distended air-vessels to resume their natural size. As a matter of absolute experience our author has thought that he has seen, in cases of pure emphysema, not associated with bronchial symptoms, a long course of *iodide of potassium* (three to five grains, thrice daily, for several months), favorably influence the disease, the respiratory murmur becoming fuller and freer, and the prominence of the chest walls less visible. Good results are also obtained from persistent *counter-irritation*. Small flying blisters at various portions of the chest are serviceable. A number of cases are reported in which the constant employment of the continuous *galvanic current* has led to a diminution in the size of the chest.

E. HEADLAM GREENHOW, M. D., LONDON.

421. R. Potassii iodidi, gr xxxvj
 Ammonii carbonatis, ʒj
 Tincturæ scillæ,
 Tincturæ hyoseyami, ũū f.ʒss
 Aquæ camphoræ, f.ʒv. M.

A tablespoonful thrice daily. Also, direct the patient to smoke a stramonium cigarette so soon as he feels the commencement of an asthmatic attack.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

The symptomatic indications in emphysema (our author consid-

ers we are totally unable to fulfill the indications of the disease itself, the nutritive alterations upon which it depends being irreparable,) are first, the proper treatment of the bronchial catarrh, which almost always accompanies this affection, and greatly adds to the distress of the patient. Habitual wearing of flannel next the skin, stimulants to the chest, warm baths of water or vapor, and the alkaline muriatic mineral springs (especially the thermal springs of Ems), are often of signal benefit.

The next symptomatic indication is to moderate the habitual shortness of breath and the attacks of severe dyspnoea. Sending the patient during the summer to the pine-wood region, and particularly to places where there is a heavy fall of dew, will allay the persistent oppression of the chest. The inhalation of compressed air, for the same reason, is an excellent palliative. To avert the asthmatic attacks, a strict diet, the avoidance of food likely to induce flatulence, light suppers, and the keeping of the bowels open, are required.

During the attacks of emphysematous asthma, the narcotics should be used with caution, unless called for by bronchial spasm. The more suitable remedies (beside the emetics, which are very appropriate,) are the stimulants, camphor, musk, benzine, and

422. B. Vini portensis, f.ʒj-iss.
Every three hours.

When these fail, use

423. B. Olei terebinthinæ, f.ʒj-iv
Aquæ menthæ piperitæ, f.ʒiv
Sacchari,
Pulveris acaciæ, ℥i ʒj. M.
A tablespoonful every three hours.

For the dropsy complicating the affection, vigorous diaphoresis will give excellent results whenever it depends upon a capillary bronchitis. Later in the disease, when it arises from failure of the heart to compensate for the circulatory derangement of the lungs, it may be relieved for a time, by

424. B. Pulveris digitalis, ʒss-j
Aquæ, f.ʒvj. M.
For an infusion. A tablespoonful thrice daily.

Where digitalis fails, squills may be employed.

425. ℞. Aceti scillæ, f.ʒj
 Aquæ destillatæ, f.ʒvj
 Potassii carbonas, ad saturationem. M.
 A tablespoonful every two hours.

THOMAS HAWKES TANNER, M. D., LONDON.

426. ℞. Spiritûs ætheris compositi, f.ʒiiss
 Spiritûs ammoniæ aromatiçi, f.ʒij
 Tincturæ opii camphoratæ, f.ʒiiss
 Aquæ camphoræ, q. s. ad. f.ʒiv. M.
 Two tablespoonfuls every half hour until the spasm is relieved.
427. ℞. Sumbuli radicis, ʒss
 Spiritûs ætheris compositi, f.ʒiv. M.
 Macerate in a stoppered bottle for seven days, and then filter. Dose,
 ℥xx-xxx.
428. ℞. Ammoniaci pulveris, gr.xv
 Ipecacuanhæ pulveris, gr.ij
 Morphiæ acetatis, gr.iss
 Ammonii carbonatis, gr.xv
 Mucilaginis acaciæ, q. s. M.
 Divide into twenty pills. Two to six a day in emphysema. Ipecacu-
 anha troches to facilitate the expectoration, revulsives on the chest.

For the most part, all that can be done is to give relief by an invigorating diet, rest, warm clothing, attention to the digestive organs, and by the occasional use of tonics and antispasmodics. Amongst the former, *quinine* and *iron* are the most useful. *Strychnia* has failed to be of any service. *Cod-liver oil* ought also to be administered. Amongst the latter remedies, ammonia, ether, hydrocyanic acid, sumbul, etc., are the most promising. Occasionally the vapor of chloroform is of great temporary service. A warm climate is often very beneficial to sufferers from this affection, the dyspnœa being always most urgent in cold weather.

RÉSUMÉ OF REMEDIES.

Ammoniacum has been recommended. (F. 428.)

Ammonii Carbonas is often employed in combination with other agents. (F. 421.)

Arsenicum, according to Dr. RINGER, often gives great relief to a class of emphysematous persons who, on catching cold, are troubled with slight wheezing at the chest, difficulty of breathing, especially on exertion, or at night time, and are obliged to be partially propped up in bed. It also generally relieves the wheezing with oppressed breathing, which affects some children for months, and even years.

- Atropia and Belladonna* are useful. (F. 412.)
- Digitalis* is of benefit in the dropsy complicating the affection.
- Ferrum*. Iron is highly recommended by Dr. CHAMBERS.
- Hyoscyamus* is employed by Dr. GREENHOW.
- Ipecacuanha* troches facilitate the expectoration.
- Lobelia*, when a good article can be procured, relieves the asthmatic breathing.
- Oleum Terebinthinæ* is advised by PROF. NIEMEYER, during the attacks of emphysematous asthma.
- Opium*, in full doses, affords relief to the asthmatic fits of emphysema. It may be combined with advantage with ether.
- Potassii Chloras*, in large doses, is of service.
- Potassii Iodidum* is often useful.
- Scilla* is of benefit in the bronchial complicatins of emphysema.
- Senega* is useful in the same class of cases as squills.
- Spiritus Ætheris Compositus* gives relief when bronchial spasm is present.
- Strychnia and Nux Vomica* are, according to Prof. DA COSTA, of no benefit in this disease.
- Tabacum*. Nothing, according to Dr. CHAMBERS, calms the distressing asthma so well as a few whiffs of strong Virginia.
- Stimulants* are recommended by Prof. NIEMEYER, during the attacks of emphysematous asthma.

EXTERNAL REMEDIES.

Counter-irritants to the chest are often useful.

Respirators. Various attempts have been made to devise means to facilitate expiration. A method suggested by Dr. BERKART to effect this purpose consists in adjusting an apparatus to the mouth and nose, from which a tube proceeds to a suction-pump, which is worked with each expiration, so as to rarefy the air. Dr. GERHARDT has adopted, with some advantage, an old method, consisting in making pressure, during expiration, on the chest-walls and on the abdomen. The results of this method are favorable in proportion to the youth of the patient and the flexibility of the cartilages of the ribs. It is very serviceable in cases in which some of the air-passages are blocked up by viscid secretion. While Dr. GERHARDT has found very advantageous results from this expedient, methodically applied, he has recognized two dangers in its application, neither of which has, however, had any untoward result. These, are, firstly, hæmoptysis, which, no doubt, was the result of the increased pressure of the blood, brought about by the external compression; and, secondly, that muscular twitching which was observed to supervene during the process.

EMPHYEMA.

DR. JOHN G. BLAKE, OF BOSTON.*

This writer states that the treatment of empyema is now chiefly surgical. His method of operating is to make an incision from one to two inches long, parallel with the ribs, between the seventh and eighth, a little inside the scapula, and toward the axillary line. This point possesses the advantage of being the most dependent position easiest to the patient, and of allowing perfect drainage. Usually, a catheter or tube has to be maintained in the incision to keep it open. No general anæsthetic should be administered, as experience shows that patients requiring this operation bear even ether badly.

The after treatment depends a good deal on the character of the pus. When it is free from odor, it is not desirable to begin syringing the cavity at once. Such a procedure cannot fail to be irritating, and sudden deaths have been attributed to it. It is time to begin washing out the cavity when the pus becomes offensive. It may then be done once or several times a day, with a solution of carbolic acid of appropriate strength, as:

429. R.	Acidi carbolici, Glycerinæ, Aquæ,	gr. j - iij f. ℥j f. ℥j.	M.
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For an injection.

Or salicylic acid may be used.

430. R.	Acidi salicylici, Sodæ phosphatis, Aquæ,	℥j ℥iij f. ℥viiij.	M.
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Dilute with an equal quantity of water, and use for a dressing and injection.

Or iodine may be employed, as

431. R.	Potassii iodidi, Iodinii, Aquæ,	gr. xxx gr. x f. ℥viiij.	M.
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In reference to the class of cases in which the operation is indicated, Dr. BLAKE adopts the conclusions laid down by Dr. HENRY I. BOWDITCH, as follows:

* *Medical and Surgical Reports of the Boston City Hospital.* Second Series. 1877.

First. Children with empyema are more likely to recover than adults; nearly all recover.

Second. Adults with recent trouble are in a more favorable condition than those in whom the disease has lasted many months. When the disease is recent, the lung expands rapidly, and improvement begins from the time of operation; when chronic, expansion is slower, may be only partial, or, possibly, may not occur at all.

A permanent opening may be made in two ways, either by a large trocar and canula, and the insertion of a drainage tube afterwards, or by making an incision one or two inches long between the ribs, and keeping it open. The latter is more painful, but it is the better operation.

Do not make a permanent opening in cases where there is well-marked phthisis.

If the pus is sweet, injections are not required. If there are signs of purulent absorption, use carbolic-acid solution (one or two grains to the ounce of warm water is generally sufficient), wash out the chest twice a day, or oftener, if necessary, *and be sure you have constant drainage.*

DR. BEVERLY ROBINSON, NEW YORK.

This writer has carefully examined the statistics of death after *aspiration* for fluids in the pleural cavity, and maintains, as the result of his researches, that one of the most positive advances of our day, in the therapeutics of pleurisy with effusion, is thoracocentesis by means of the pneumatic aspirator. Inasmuch as it is proved that puncture of the chest-walls, with a capillary needle attached to the improved aspirator, whenever performed with due precautions against the entrance of air into the pleura, is a perfectly simple and harmless operation; and, further, that any appreciable amount of liquid, irrespective of its nature, is by its presence pernicious, and may become dangerous: therefore he holds that, *in all cases of pleuritis, in which fluid is present, we should, without hesitation, make use of the aspirator to withdraw the morbid effusion.*

To this law he only affixes *one* limitation and *one* exception.

The limitation is: Whenever very large or excessive quantities of fluid are present, it is wiser to puncture the chest on two successive occasions, so that all risk of acute cedema of the lung on the affected side shall be avoided.

The exception is: If the patient be very much enfeebled and the effusion be small or moderate, we may with advantage delay

the operation, during a brief period, until his forces have been somewhat re-established.

By proceeding after this manner, all danger of *fatal syncope* may be obviated. (*New York Medical Record*, No. 325, 326.)

Meanwhile, of course, if the effusion from small, or moderate, rapidly becomes large or excessive, the formal and imperative indication is to operate so soon as possible.

DR. HENRY W. FULLER, OF LONDON.

This experienced physician thinks there is a tendency to have recourse toappings or incisions too early in pleuritic effusion (*British Medical Journal*, Jan., 1872.) When called to a patient whose chest is full of fluid, we should use an aspirator, or small grooved needle, to ascertain the character of the fluid. If it is simply serum, other measures should precede tapping. Diuretics, diaphoretics and mercury are generally of no value. In many instances *blisters* prove very beneficial; so also, the constant application of a weak solution of iodine.

432. B.	Tinct. iodinii compos.,	f.ʒj	
	Glycerinæ,	f.ʒij	
	Aquæ,	f.ʒv.	M

For external use.

This weak solution has the advantage of possessing all the absorbent properties of iodine, without damaging the cuticle and thus destroying the absorbing surface. In addition to these, the *dry method* of treatment may be employed. This is denying the patient all fluid food; it is useful where the pleural membrane is not yet much diseased. If after a month of treatment, marked improvement is not visible, tapping should be resorted to. The fear of bad results from the admission of air into the pleural sac is unfounded.

DR. BALTHAZAR FOSTER, OF LONDON.

The respective indications for aspiration, tapping and incision, in cases of pleuritic effusion, have recently been considered by the writer. Experience having shown that both the expectant and the active medicinal treatment are alike untrustworthy, the surgical is our only resource. Dr. FOSTER divides cases of pleuritic effusion into several classes: 1. *Acute cases*. In these, the use of the aspirator is forced upon us by certain urgent symptoms, especially dyspnoea. Here, the operation is a means of saving life, not of

treatment; for a chest full of fluid, dyspnoea being absent, is not an indication for aspiration. Certain adynamic cases, however, occur where the fluid soon becomes purulent; here, a preliminary opening should be made, and, if pus be present, aspiration is the most appropriate treatment. 2. *Cases of over three weeks' duration where fever has abated.* Here, the operation should be performed to relieve the morbid condition and expedite recovery. In such cases, the lung becomes covered with a fibrinous deposit, and absorption of fluid is impeded. No dependence, therefore, can be placed upon the use of diuretics, blisters, and other general remedies. 3. *Chronic pleurisy, with exacerbations.* Here, if the chest be from one-half to two-thirds full of fluid, and the disease have lasted over two months, aspiration is decidedly indicated. 4. *Empyema.* Pus being present, the rule should be evacuation. Dr. FOSTER compares the various methods employed for emptying the pleural cavity. He recommends in children repeated aspirations, with, in some cases, washing out the pleural cavity with carbolized fluid. In other cases, and especially in adults, he prefers two incisions through the chest-wall and the use of drainage-tubes; and, if this is not sufficient, a free opening and a thorough washing out of the pleural cavity. Some cautions are necessary in aspirating. First, the operation must not be too rapidly performed; second, the quantity of fluid allowed to escape must be carefully watched, and must depend upon the condition of the lung and the state of the patient.

MOUNT SINAI HOSPITAL, NEW YORK CITY.

The method employed in a large number of cases in this hospital with good success, is to make two openings in the chest, one anterior, and the other lateral and slightly posterior. The pus is entirely removed, and *warm water*, of a temperature of 100°, either plain or very slightly medicated with carbolic or salicylic acid, or iodine, is carried in at the upper opening and out at the lower one, until all trace of pus has disappeared from the discharge. Pieces of oil silk are placed over the lower opening, and so fastened with collodion that the bed-clothes are not soiled. In order to secure a free circulation for the water, the catheter conducting it in should be inserted well into the anterior opening. In some cases, where a counter-opening may seem to be contra-indicated, it becomes necessary to carry a gum-elastic catheter in for its full length, and

even then all trace of pus may not be removed. It has been found by experiment that, when a double canula is introduced for the entrance and exit of the fluid, a current is caused between the two openings of the canula, and only an ounce or two of pus is removed, and, as before suggested, the next best plan to that of counter-openings is to make use of a long catheter and allow discharge to take place at the opening made in the chest. (*New York Medical Journal*, August, 1876.)

HÆMOPTYSIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

433. R. Potassii bitartratis, ℥j
 Pulveris opii, gr.ij-iv. M.
 For eight powders. One every four or six hours.
434. R. Plumbi acetatis, ℥j-℥j
 Pulveris opii, gr.x. M.
 For twenty pills. One every four or six hours.

When hæmoptysis is connected with amenorrhæa, preparation of iron often succeed when the above remedies fail. Thus:

435. R. Ferri sulphatis, ℥ij
 Magnesi sulphatis, ℥ijss. M.
 For twenty powders. One thrice daily.

This will often restore the menstrual secretion and cure the hæmoptysis. Indeed, it is in this form of amenorrhœa that iron is most successful.

436. R. Spiritus terebinthinæ, ℥ss.
 For one dose, if the bleeding is attended with vascular excitement.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

437. R. Acidi gallici, gr.xx.
 For one powder. In acute hæmoptysis. To be repeated every ten minutes until hemorrhage ceases.
438. R. Cupri sulphatis, gr.ʒ
 Ferri sulphatis, gr.ij
 Extracti hyoseyami, gr.j. M.
 For one pill, thrice daily.

In persistent slight pulmonary hemorrhage. Sulphate of copper

in such cases seems to control the circulation within the lungs, and to arrest a tendency to bleeding. This action is not due to its nauseating effect, for, in this dose, it does not nauseate. The administration of cod-liver oil should be postponed until the hæmoptysis is gotten rid of.

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|---------|---|------------------|----|
| 439. ℞. | Ferri chloridi,
Aquæ destillatæ,
For inhalation by atomizer. | gr.ij-x
f.ʒj. | M. |
| 440. ℞. | Liquoris ferri subsulphatis,
Aquæ destillatæ,
For inhalation by atomizer. | ʒx-xl
f.ʒj. | M. |
| 441. ℞. | Acidi tannici,
Aquæ destillatæ,
For inhalation by atomizer. | gr.x-xx
f.ʒj. | M. |
| 442. ℞. | Pulveris aluminis,
Aquæ destillatæ,
For inhalation by atomizer. | gr.xxx
f.ʒj. | M. |

HORACE DOBELL, M. D., LONDON.

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|---------|---|--|----|
| 443. ℞. | Extracti ergotæ fluidi,
Tincturæ digitalis,
Acidi gallici,
Magnesii sulphatis,
Acidi sulphurici diluti,
Infusi rosæ compositi, | f.ʒij
f.ʒij
ʒj
ʒv
f.ʒj
f.ʒvj. | M. |
|---------|---|--|----|

Two tablespoonfuls every three hours until the hemorrhage is arrested.

In spite of the fashionable outcry against complicated prescriptions, Dr. DOBELL recommends the above as the most efficacious and the most rational combination of remedies for a case of profuse tubercular pulmonary hemorrhage. In any given case, either of the ingredients may be omitted, if the symptoms indicate that it is not required, or that it has already done its duty. The object of the ergot is to contract the vessels; of the digitalis, to steady the heart; of the gallic acid, to clot the blood; of the epsom salts, to relieve the congestion; and of the dilute sulphuric acid, to assist the rest.

DR. GUÉNEAU DE MUSSY, FRANCE.

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|---------|---|-------------------------------|----|
| 444. ℞. | Extracti krameriæ pulveris,
Ergotæ pulveris,
Digitalis pulveris,
Extracti hyoscyami, | ʒj
ʒij
gr.vij
gr.iv. | M. |
|---------|---|-------------------------------|----|

Divide into twenty pills. From five to six a day, in the spitting of blood so frequent in pulmonary consumption. Absolute rest; ice by the mouth; sinapisms to the upper and lower limbs successively.

445. ℞. Acidi sulphurici diluti, f.ʒj
 Aquæ menthæ piperitæ, f.ʒvj
 Syrupi rubi, f.ʒj.
 A tablespoonful to be given every hour, in hæmoptysis or pa
 hemorrhages.
446. ℞. Extracti krameriaë, gr.xv-ʒj
 Aluminii et potassii sulphatis, gr.iss
 Infusi rosæ compositi, f.ʒiv
 Syrupi acidi citrici, f.ʒj.
 A tablespoonful every half hour, in hæmoptysis. Energetic cou
 irritation to the skin.
447. ℞. Ergotæ pulveris, Div
 Acidi tannici, Div.
 Divide into ten powders. One morning and evening, in hæmop
 If there exists a disease of the heart at the same time, give digi
 and apply counter-irritation to the lower limbs.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

448. ℞. Copaibæ,
 Syrupi,
 Aquæ menthæ piperitæ,
 Alcoholis, āā f.ʒj
 Spiritûs ætheris nitrosi, f.ʒss.
 A desertspoonful every two to four hours.

A formula much in use in very obstinate hæmoptysis :

449. ℞. Aluminii et potassii sulphatis, ʒj
 Morphiæ muriatis, gr.ʒ
 Sacchari, ʒj.
 Divide into twelve powders. One every hour, in hæmoptysis. (
 compresses to the chest, absolute rest and silence.

In the first place, the physician should seek to calm the sp
 of the patient, which are always much excited ; and, inasmuc
 the attacks are almost always repeated several times, it is wel
 save him from further agitation, by straightway informing
 that there is more blood to come, while, at the same time,
 should absolutely deny the possibility of his bleeding to de
 Indeed, we are certainly warranted here in deceiving the pati
 by affecting to make light of the affair, and even to represent
 hemorrhage as a salutary process. With a little tact the physi
 may leave his patient in a state of comfort and peace of mind
 success of no slight importance. The chamber must be kept c
 all hot drinks forbidden, and all food eaten cold. Conversa
 should be interdicted, and the patient urged to resist stoutly
 provocation to cough. Coughing in hæmoptysis is quite as h
 ful as is snuffing and wiping the nose in epistaxis.

PROF. WALTER HAYLE WALSHE, M. D., LONDON.

The treatment resolves itself into (a) means for removing the conditions causing the flow, and (b) into means for stopping it, in spite of the continuance of these conditions.

(a) To fulfill the first indication: *bleeding from the arm* is useful when there is active congestion, febrile excitement, and strong cardiac action; *ligature of the limbs*, to prevent the free return of the blood through the veins, is a timely adjuvant, occasionally; *free circulation of cool air*, light bed clothes; a hard bed, quietude and silence, are essential aids; mouthfuls of ice, and the cautious application of ice-bags to the spine, or over the heart, will sometimes instantaneously arrest the flow, heat being at the same time applied to the extremities; *digitalis* is valuable in cases of irritable heart and moderate hæmoptysis; refrigerants, such as *nitrate of potassium*, sulphuric and other acids, are useful adjuvants.

(b) To fulfill the second indication: *acetate of lead*, in doses of two to four grains, with dilute acetic acid and laudanum, every half hour, hour, or two hours; *alum*; *ergot*; *matico*; and *gallic acid*. Dr. W.'s experience leads him to place greater trust in gallic acid than in any other agent of the class, in doses of 20 to 30 grains, every half hour at first. Drachm doses of kitchen salt, either in powder or dissolved in water, sometimes even when they produce emesis, promptly arrest the hemorrhage. *Hypodermic injections of ergotine* are deserving of trial.

RÉSUMÉ OF REMEDIES.

Aceticum Acidum Dilutum is employed both externally and internally, but is a remedy of minor importance.

Alumen is serviceable in purely atonic hæmoptysis. It may be given in solution, by inhalation, or be allowed to dissolve slowly in the mouth, in substance or in lozenge. In moderate but persistent tubercular hæmoptysis Dr. SYMONDS recommends (*British Medical Journal*, June 13th, 1868,) the following:

450.	R.	Aluminis,	ʒij	
		Acidi sulphurici diluti,	f.ʒijss-iv	
		Magnesii sulphatis,	ʒiv	
		Aquæ,	f.ʒiv.	M.

A tablespoonful in water, every three hours, or oftener, as required.

Ammonii Chloridum is recommended by Dr. COPLAND, in combination with muriatic acid, in passive cases of hæmoptysis, when the vital powers are depressed. The following is his formula:

451. R. Ammonii chloridi, ʒiiss
 Acidi muriatici, f.ʒss
 Decocti hordei compositi, Oj.

A small wineglassful every two or three hours.

Argenti Oxidum, in doses of gr.ss-j, thrice daily, has been recommended in atonic hæmoptysis.

Chloroformum. Several cases are reported by Dr. A. M. WEIR, of Edinburgh, (*Lancet*, Jan., 1877,) in which the hæmoptysis promptly checked, after other remedies had failed, by applying a flannel pad soaked in chloroform, over the lung from which blood flows. The pad should be covered with towels or silk. Its effect is said to be immediate and lasting.

Copaiba is much employed by Prof. NIEMEYER.

Creasotum fails to give satisfactory results.

Cupri Sulphas is highly recommended, by Prof. DA COSTA, in cases of persistent slight hemorrhage.

**Digitalis* is advised by Dr. WALSHÉ when there is irritable heart and moderate hæmoptysis. By some it is regarded as the best remedy for hemorrhage from cavities in the advanced stages of phthisis.

Ergota is strongly recommended by Dr. DOBELL, who, however, usually associates it with other remedies. (F. 443.)

Ferrum is particularly of service in hæmoptysis connected with anæmia. The preparations most employed are the tincture of iron chloride, the solution of the nitrate (in large doses, ℥xxx-℥lxx) and the sulphate.

***Gallicum Acidum* is highly recommended by Prof. DA COSTA, WALSHÉ and others, as one of the best remedies in hæmoptysis, and it must be given in large doses gr.x-xxx, repeated as necessary.

Hydrocyanicum Acidum seems to possess some power in controlling hæmoptysis when the system is irritable and spasmodic symptoms are present.

**Ipecacuanha* is recommended by Prof. GRAVES and other practitioners as a remedy of considerable value. From one to two grains given every fifteen or thirty minutes until nausea is felt, with the benefit is generally evident, and the medicine is discontinued. Many cases are reported attesting the efficacy of this treatment in arresting the hemorrhage and restoring heat and life to patients who were in a state of collapse from excessive loss of blood. Although it is better to avoid vomiting, no ill effects, it is said, are produced by it. The hæmoptysis of the early stage of phthisis may often be readily arrested by this remedy.

Matico is sometimes employed. In slight cases the infusion alone is often sufficient.

Phosphoricum Acidum Dilutum, in doses of gtt.x-xxx in mucilage, the daily, is reported upon favorably by M. HOFFMAN (*The Practitioner*, August, 1868), who considers it superior to other mineral acids in hæmoptysis.

**Plumbi Acetas*, in combination with morphia and acetic acid, or with opium, is a remedy much used. Dr. PEREIRA considers that the action of sugar of lead and opium in hæmoptysis is rendered more certain and speedy, by being given with a draught containing nitric acid, nitrate of lead being thus formed in the stomach.

Potassii Nitras is useful when there is much excitement and fever, but is not to be relied upon alone. It may be given in doses of gr.viij-x, several times daily, largely diluted, or combined with tartar emetic or digitalis.

Sodii Chloridum is recommended, by Prof. WALSHE, in drachm doses, either in powder or dissolved in water. It is sometimes promptly successful, even when it produces emesis.

Sulphuricum Acidum Dilutum is a useful remedy, though less certain in its action than gallic acid, and is a valuable adjunct to other treatment.

Tannicum Acidum, in combination with opium and ipecacuanha, has been highly recommended.

Terebinthinæ Oleum deserves a trial, if other less nauseous remedies fail.

Refrigerants are useful adjuncts to treatment. Nitrate of potassium, sulphuric acid, or cream of tartar may be employed.

Hypodermic Injections of Ergotine are recommended, by Prof. WALSHE, as deserving of trial.

Frigus. Ice cautiously applied to the spine, or over the heart, will sometimes instantaneously arrest the flow, heat being also applied to the extremities.

Inhalations. The following have been advised: alumen; ferri chloridum; ferri subsulphas; tannicum acidum.

HAY FEVER—HAY ASTHMA—ROSE COLD.

DR. GEORGE M. BEARD, OF NEW YORK.*

According to this writer, there is no specific for hay fever in general, but individuals may be able to find a specific for their own cases. Many measures afford great relief in all cases. A sea voyage rarely fails, as well as a residence in elevated regions, and in certain localities.

The medical treatment he divides into general and local. Of internal remedies he considers *quinine* the most efficient. When given to prevent the disease, gr. j-ij, two or three times a day, for several weeks before the time of the attack, is the proper dose. *Arsenic*, especially when combined with belladonna, is efficient.

* *Hay Fever or Summer Catarrh*, N. Y., 1876.

452. R. Liq. potassæ arsenitis, f.ʒj
 Tinct. belladonnæ, f.ʒij.
 From five to ten drops after meals.

Phosphide of zinc, gr. $\frac{1}{16}$ – $\frac{1}{4}$, acts well in many cases. *Opium* any form will palliate the symptoms. One of the best prepar for the purpose, is the "cold powder," as follows:

453. R. Camphoræ, ʒv
 Ether sulphuric., q. s.
 Dissolve to the consistency of cream, and add
 Ammonia carbonatis, ʒiv
 Pulveris opii, ʒj.
 Keep tightly corked.

The dose is to be regulated by the quantity of opium borne. Locally, many substances can be applied by means of an atomizer. Solutions of quinine are perhaps the most effective of all. The following is commended by Dr. R. P. LINCOLN, of New York:

454. R. Quiniæ sulphatis, gr. vj
 Aquæ camphoræ, f.ʒvj
 Sodii chloridi, ʒss
 Aquæ, f.ʒiv.
 Use in an atomizer or snuff from the hand.

The *Pinus Canadensis* has been used in the same way.

455. R. Fld. extr. Pinus Canadensis, f.ʒj
 Aquæ, Oj.

The following is well spoken of:

456. R. Potassæ chloratis, ʒj
 Morphia sulphatis, gr. xij
 Aquæ, f.ʒvj.
 Use with the atomizer.

Inhalation of aqua ammonia relieves some cases.

Smoking stramonium leaves, nitre paper, etc., benefits. Dr. MORRILL WYMAN recommends

457. R. Belladonnæ fol., gr. ix
 Hyoscyami fol.,
 Stramonii fol., āā gr. ivss
 Phillandrii aquatici fol., gr. iss
 Opii, gr. ʒ.
 Make two cigarettes by rolling in paper. Only two to be used on an attack.

DR. E. C. SEGUIN, OF NEW YORK.

458. ℞. Ammonii bromidi, ʒi-ij
 Aquæ, f.ʒj. M.
 Use as a gargle frequently.
459. ℞. Ammonii bromidi, gr.x-xxx
 Aquæ, f.ʒj.
 Use by an atomizer, or inhale into the nostrils.

This has given marked relief to patients. (New York *Medical Record*, November, 1876.)

DR. J. S. HOLDEN, OF ENGLAND.

460. ℞. Quiniæ sulphatis, gr.xij
 Acidi hydrochlorici diluti, ℥xxx
 Aquæ, f.ʒvj. M.
 Add
 Sodæ bicarbonatis, q. s.
 To make a neutral solution.

Add one ounce of hot water to two ounces of this lotion, and **d**ouche the nasal passages three times a day for a few days at the **b**eginning of the attack. (*Lancet*, May, 1876.)

The *grindelia robusta* is said to give prompt relief.

461. ℞. Fld. extracti grindeliæ, f.ʒiv
 Fld. extracti rhei,
 Fld. extracti sennæ. āā f.ʒj. M.
 A dessertspoonful every half hour during the spasm, and afterwards at intervals of three hours.

DR. HORACE DOBELL, OF LONDON.

462. ℞. Chloral hydratis,
 Camphoræ pulv., āā gr.xvj
 Acidi carbolic, ʒj
 Morphiæ, gr.xij
 Acidi oleici, gr.vij
 Olei ricini, f.ʒvij. M.
 Rub well together to make a lotion. Apply by means of a little ivory or hard-wood club to the interior of the nostril.

This author states the tincture of *eucalyptus globulus* is valuable in hay fever where there is much prostration.

DR. EDWARD R. MAYER, OF PENNSYLVANIA.

463. ℞. Quiniæ sulphatis, gr.iv
 Tinct. gelsemii concent., gtt.vi.

This amount in water every four waking hours. Regarded by

Dr. EDWARD R. MAYER as the best remedy for and preventive of this disease. Cures in forty-eight hours. (*Hints on Specific Medication*, p. 21.)

DR. ROBERTS BARTHOLOW, OF OHIO.

464. ℞. Potassii iodidi, ℥j
 Liq. potassæ arsenitis, f.℥j
 Aquæ, f.℥iv. M.
 A teaspoonful every four or six hours.

In addition to this internal medication, apply locally the following with a post-nasal syringe:

465. ℞. Tinct. iodinii, f.℥j
 Acidi carbolici, gtt. x
 Aquæ destillatæ, f.℥iv. M.

Arsenical cigarettes, as recommended by TROUSSEAU, may be used with advantage.

466. ℞. Potassæ arsenitis, gr. xv
 Aquæ, f.℥j. M.
 Moisten unsized white paper with this solution, cut and roll into cigarettes. Two or three may be smoked daily.

RÉSUMÉ OF REMEDIES.

Acidum Sulphurosum. According to Dr. JAMES DEWAR, of Ireland, the symptoms of hay fever are often checked at once by inhaling sulphurous acid in the form of the fumes of burning sulphur. (*Dublin Medical Press*, Sept., 1866.)

Aconitum has been recommended by Dr. RINGER.

Ammoniæ Murias, taken internally, is suggested by Dr. BEARD.

Anthemis Nobilis. Chamomile flowers smoked, or their fumes inhaled, often act very well.

Arsenicum is an important auxiliary.

Belladonna, either the leaves smoked or in doses of the tincture, is occasionally efficient.

Camphora is a useful local application. It may be placed dry on the pillow at night.

Chloroform by inhalation will quickly relieve the spasm.

Creasotum. Dr. WALSHE recommends a trial of creasote inhalations once or twice daily, having seen remarkably satisfactory effects from them in two instances.

Guarana is useful in relieving the headache.

Grindelia Robusta is praised by California physicians in this disease. (F. 461.)

Hum, in inhalation, benefits some cases.

Mica and strychnia occasionally act well.

Opium is a valued palliative. The hypodermic injection of morphia gives great relief. But there is danger of inducing the opium habit by a resort to these palliatives.

* *Quinia sulphas* is the most generally useful remedy yet found (see above.)

Stramonium leaves, smoked, are efficient to allay the paroxysm.

Tannin in solution may be used with the atomizer.

Zinci Sulphas. Dr. FULLER reports ten cases effectually cured by means of sulphate of zinc administered internally in gradually increasing doses, whilst zinc lotion was applied to the eyes, and a lotion composed of eight grains of sulphate of zinc and an ounce of glycerine to the lining membrane of the nostrils.

LARYNGITIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

If there be time, in a case of acute laryngitis, commence by the inhalation of the steam of boiling water, as much by the nostrils as possible. Leeches, followed by hot fomentations, may be applied to the throat.

If benefit do not follow these remedial measures, tracheotomy ought not to be delayed. The air for respiration ought to be warm and moist, and plenty of it, through a large-sized canula, the orifice of which must be kept clear of secretion.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

467. R. Ammonii chloridi, gr. x-xx
 Aquæ destillatæ, f. ʒj. M.

Use with any form of steam atomizer, throwing a fine spray. In *laryngeal catarrh*, acute as well as chronic. The dose best borne is not above ten grains to the ounce, although as much as two drachms to the ounce have been employed.

THOMAS HAWKES TANNER, M. D., LONDON.

468. R. Acidi hydrocyanici diluti, ℥ xv
 Spiritus chloroformi, f. ʒiij
 Aquæ bullientis, f. ʒviij. M.

For inhalation.

The patient should frequently inhale the steam from medicated boiling water, and in the interval it will prove advantageous for him to wear a respirator. He is to be closely watched, kept very quiet, and not allowed to talk. The air of the room must be made warm and moist.

L. WALDENBURGH, M. D., BERLIN.

469. R. Sodii chloridi, gr. iv-x
 Aquæ destillatæ, f. ʒi. M.
 For inhalation in acute laryngeal catarrh by means of nebulizer.

LONDON HOSPITAL.

470. R. Tincturæ benzoini compositæ, f. ʒj
 Aquæ bullientis, f. ʒx. M.
 Let the vapor be inhaled frequently.
471. R. Tincturæ iodinii, ℥xl
 Aquæ bullientis, f. ʒx. M.
 To be inhaled frequently.

RÉSUMÉ OF REMEDIES.

Acidum Carbolicum. The inhalation of pulverized solutions of carbolic acid (gtt. j-v to f. ʒj. aq., with a few drops of glycerine added) frequently of service.

Alumen, as an emetic (teaspoonful doses mixed with honey or syrup, and repeated every ten or fifteen minutes until it operates,) is an excellent remedy in pseudo-membranous laryngitis. *See* Croup.

Antimonii et Potassii Tartras is sometimes employed in pseudo-membranous laryngitis as an emetic, but is inferior to sulphate of copper or alum. *See* Croup.

Argenti Nitras, in solution, is a very useful local application.

Balsamum Peruvianum. The recommendation originally made by HOFMANN, in chronic inflammation of the larynx, of diffusing the vapors of the balsam of Peru, or of benzoin or tolu, throughout the air of the patient's room, by throwing the drug upon hot coals, is an excellent one. Or, the vapor may be inhaled through an inhaler.

Benzoinum is of service in strumous laryngitis. The following formula may be ordered:

472. R. Tincturæ benzoini compositæ,
 Mucilaginis acaciæ,
 Syrupi papaveris, āā f. ʒj
 Aquæ cinnamomi, f. ʒvj. M.

For one dose.

Bismuthi Subnitras has been found highly efficacious, applied by means of insufflation.

Calx. Lime water has been successfully employed in pseudo-membranous laryngitis. *See* Croup.

Catechu is an excellent ingredient for lozenges to be held in the mouth.

Glycerina is often a beneficial topical application.

Hydrargyrum. For the use of mercury in pseudo-membranous laryngitis, *see* Croup.

Inhalations are frequently employed with great benefit in this disease.

The following are the principal preparations used: *Ammonii Chloridum*; *Balsams of Peru and Tolu* (vapor generated by placing them upon hot iron); *Benzoinum* (vapor generated by throwing the drug upon hot coals, and thus impregnating the patient's apartment, or from a common inhaler); *Hydrocyanicum Acidum Dilutum*; *Iodinium*; *Olibanum* (vapor generated by placing the gum-rosin on burning coals); *Sodii Chloridum*; *Sulphurosum Acidum* (spray or fumigation); *Vapor of Hot Vinegar*; *Steam of Boiling Water* (as much as possible by the nostrils).

Iodinium. Iodine inhalations, and the application of tincture of iodine to the fore part of the neck, are advantageous forms of treatment in chronic laryngitis.

Ipecacuanha is an excellent remedy in simple catarrhal laryngitis, of the spasmodic form.

Potassii Chloras, in doses of gr. vj-xvij, two or three times a day, has been used with success in pseudo-membranous laryngitis. See Croup.

EXTERNAL REMEDIES.

Baths of hot water are often of great value.

Blood-letting, to be advantageous, must be employed early and copiously; when the powers of the patient are beginning to sink, it will hasten the fatal result. Leeches to the throat are advised by Dr. AITKEN and others, but wet-cupping at the nape of the neck is preferred by some practitioners.

Cantharis. Blisters are injurious in the acute, but often beneficial in the chronic form.

Counter-irritants are of benefit in chronic laryngitis. The following may be employed: *Tartar-emetic ointment* (not much used); *Sub-clavicular Setons* (three or four silk threads); pustulations of the skin of the throat by *Croton oil*.

PHTHISIS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

473. R.	Olei morrhuae,	f.ʒiiss	
	Olei creasoti,	gtt.iiiv	
	Pulveris tragacanthæ,		
	Pulveris acaciæ,		
	Pulveris amyli,	ʒi	ʒj
	Sacchari,	ʒi	ʒj
	Aquæ anisi,	f.ʒiivss.	M.

Take two tablespoonfuls three times a day.

This is recommended as making a palatable mixture. The creasote is said to render the stomach more tolerant of the remedy.

Besides cod-liver oil, other animal fats and oils, where they can

be taken and assimilated, are sure to be followed with benefit. Hence milk rich in fatty matters, such as asses' milk, and milk drawn from cows at a short interval after the greater part of their milk has been withdrawn, are found to be followed by improvement, where they are persevered in and are assimilated. So, also, with cream and butter. Dr. BENNETT instances the partial success occasionally of caviar, bacon, pork, mutton chops, and the marrow of bones of oxen; while Dr. THOMPSON instances the good effects he has obtained from the use of oil from the foot of the young heifer (neat's foot oil).

But medicine is utterly powerless and useless, unless hygienic means are carried out to the uttermost. They may be enumerated as follows:

- I. A constant supply of pure and fresh air for respiration.
- II. Active exercise in the open air. *The risk is in staying in the house, and not in going out of it.*
- III. It is important to secure for the patient a uniform, sheltered, temperate, and mild climate to live in, with a temperature about 60°, and a range of not more than 10° or 15°; where, also, the soil is dry and the drinking-water pure and not hard.
- IV. The dress of the scrofulous patient ought to be of such a kind as to equalize and retain the temperature of the body. Waterproof coats, boots and shoes are to be condemned. Flannel ought to be invariably worn next the skin in all seasons.
- V. The hours of rest should extend from sunset to sunrise.
- VI. In-door or sedentary occupation should be suspended; but out-door employment in the fresh air, even in the midst of snow, has been and may be advantageous.
- VII. Cleanliness of body is a special point to be attended to.
- VIII. Marriage of consumptive females, for the sake of arresting the disease by pregnancy, is morally wrong and physically mischievous.
- IX. The medicinal treatment must be adapted to the site of the local deposits and the general nature of the particular case.

To promote and preserve an appetite for food should be constantly kept in view as one of the great objects of treatment. The following chalybeate very rarely disagrees:

474. ℞. Vini ferri,
A teaspoonful thrice daily.

f.3ij.

475. R. Pilulæ saponis compositæ,
 Pilulæ scillæ compositæ, āā Ėj. M.
 For eight pills. One at bedtime, to procure sleep. Two may be given
 if the cough is troublesome.

Or,

476. R. Pulveris ipecacuanhæ compositæ, Ėiv
 Tincturæ, scillæ
 Tincturæ tolutanæ, āā f. ʒij
 Misturæ acaciæ, f. ʒiiss
 Aquam, ad. f. ʒiij. M.

A dessertspoonful at night, to quiet the cough.

CARL BOTH, M. D., NEW YORK.

This physician claims to have effected cures in phtthisis by bringing about *calcification* of the diseased structure. To effect this, he advises the regular practice of deep inspiration, thus forcing air into the bronchioles and vesicles by suction, and a constitutional treatment. The latter consists at the commencement of attention to the liver and intestinal tract. Should the former be engorged and the bowels irregular, the use of citric and pomic acids, in the form of lemons and apples, with regulated diet, will usually efficiently correct them. In the diet, he forbids any and all stimulants. The patients are required to take moderate exercise out of doors in all seasons and without regard to the weather.

The peculiarity of the medical treatment is the use of extracts of plants containing lime and silica. These substances are introduced in an easily digestible form, which is the organic; any mineral given in any other form cannot become assimilated. It is well known that certain plants grow in certain places, and contain certain minerals which are found in those places; such plants disappear the moment these minerals are deficient in the ground. For instance, witchgrass destroys the fertility of the land, by absorbing from it the phosphates and sulphates of lime and silica; for this reason the juice of witchgrass is one of the medicines used to supply the organism with these minerals; and if we consult the history of therapeutics, we shall find that *extract. graminis* is one of the oldest popular remedies for consumption.

Another lime-containing plant is *Achillea millefolium*, also an old popular remedy. Thistles contain silica; plants growing in swamps, sulphates. Dr. BOTH uses the extracts of them in their crude state, as alcohol excludes the albumen, which contains the salts wanted. The following is an average formula as he uses these extracts:

477. R.	Extr. graminis,		
	" trifolii fibr.,		
	" millefol.,		
	" card. benedicti,	ññ	3j
	Sodæ tartratis,		3j
	Aquæ,		ʒiiss
	Tinct. amaræ,		ʒiiss.
	Dose: one to three tablespoonfuls daily.		M

There are many other plants which might be used for the same purpose, but he prefers these on account of their bitter extractive matter, which seems to act somewhat as a substitute for bile on the intestines. The length of time to effect a cure is from six to twelve months. As for the cases adapted to this treatment, he says

1. No case of chronic affection of the lung is curable unless we are able to re-establish vesicular breathing, or, at least, to force air into and between the affected portions, so as to again induce, at least, *partial* circulation of blood and air.

2. No case is curable in which a nidus of pus exists *outside the lung-tissue proper*, and within the reach of the general circulation, but beyond the reach of the knife or trocar; whether this be a lymphatic gland, or an abscess in the brain, pleura, liver, etc.

He considers all other cases curable by the employment of the above described method of both local and constitutional treatment. If it fails, it is either due to one of the above causes, or else to an imperfect execution of the method. For this latter reason it is not adapted to hospital or dispensary practice, unless special arrangements are made for such purpose.

J. F. CHURCHILL, M. D., PARIS.

The treatment of phthisis by the *hypophosphites* prepared by Dr. CHURCHILL, has been highly vaunted.

The author claims that from the first day of their use there is frequently observed a remarkable increase of nervous power, with a feeling of vigor, strength, and comfort, to which the patient has been long unaccustomed. The digestion is invigorated and the appetite increased. The bowels become regular and the evacuations more copious and less frequent. The cough is relieved, the sleep becomes calmer and more profound, whilst the night sweat diminish or cease altogether. The face becomes fuller, the lips red, the eyes brighter.

If these results be not produced, either the salts are impure, or they are not administered in accordance with the rules laid down

by Dr. CHURCHILL, or the patient is suffering from a complication of some other disease, independently of consumption, or the extent of lung structure involved is too great to hope for much benefit.

It is especially as a *prophylactic*, that the hypophosphites are recommended by the author, who states that if, without any apparent cause, or under the influence of any cause which induces weakness and exhaustion, such as want, grief, over-fatigue, excess, pregnancy, child-bearing, nursing, rapid growth, or slow recovery from illness, a person begins to lose strength, flesh, or appetite; if he suffer from pain in the chest or back, or from shortness of breath; if he complain of sleeplessness, and experiences a general feeling of languor and depression, there is reason to believe that he is predisposed to consumption, or is even already laboring under the general disease. If to the above symptoms be added cough, however slight, especially if it should have come on slowly and during the fine-weather season, the probability is greater still. If, with all this, there is feverishness towards evening, sweating, or clamminess at night, particularly about the head or neck, if spitting of blood should occur, it is probable that the complaint has already arrived at the stage of local manifestation in the lungs. Now if, on the earliest appearance of these signs, particularly those first enumerated, the patient takes daily one or two tablespoonfuls of syrup of hypophosphite of lime or soda, he will usually find all the symptoms disappear, and by continuing the remedy prevent their return. When all the symptoms shall have disappeared, through the use of the hypophosphites, it will be necessary to continue the treatment for a few months, gradually diminishing the doses, ceasing altogether for a week or two, then beginning again. In this way the disease may be completely eradicated.

Dr. CHURCHILL's usual method of treatment is to give a tablespoonful of the syrup of hypophosphite of soda or lime (of the strength of six grains of the salt to the fluidounce), once or twice a day, in the absence of any inflammatory symptoms—sometimes a teaspoonful of syrup of hypophosphite of lime in the morning, and the same dose of syrup of hypophosphite of soda at night. For females, particularly persons of nervous temperament or delicate constitution, leading a sedentary life, and unused to physical exertion, the dose should be decreased one-half. For children from seven to fifteen, the dose is the same as for females. From two to seven years of age, one or two teaspoonfuls daily, of the

syrups, are sufficient. For infants of a more tender age, the dose should seldom exceed a quarter or half a teaspoonful in twenty-four hours.

The syrups may be taken alone or in a wineglass of water, and should, in general, be exhibited at meal time, either before or after. They have no medicinal taste whatever.

Contra-indications. 1. The use of the hypophosphites ought not to be commenced during an acute inflammatory state. Their employment should be temporarily suspended, if, during the course of the treatment, the patient be attacked by any inflammatory complication; but resumed as soon as the acute complication shall have disappeared. 3. They should not be given during an active hæmoptysis, but may, however, be administered boldly and without fear, in chronic hæmoptysis of a passive form. Their effects should be carefully watched, in the case of patients affected with disease of the heart. 5. The dose should not be too high nor the administration too prolonged. Great mischief may result from incautiously pressing the remedy. Among the signs which indicate that the hypophosphites have been given in excessive doses, are lassitude, wandering pains, headache, buzzing in the ears, vertigo, sudden loss of appetite and strength, and above all, bleeding at the nose, however slight the loss of blood may be.

MEREDITH CLYMER, M. D., NEW YORK.

Counter-irritation to the chest walls, in the earlier stages, before there is much loss of strength, is undoubtedly beneficial; but later it is weakening and annoying. Croton oil liniment is chiefly used for this purpose. A prompt and not too severe application is the following ointment (recommended by Dr. FULLER):

478. R.	Hydrargyri chloridi mitis,	gr.viij	
	Iodini,	ʒss	
	Alcoholis,	f.ʒiiss	
	Unguenti,	ʒj.	M.

Rub in a portion over the affected lung, morning and evening, until pustular eruption comes out.

DR. CORBEL-LAGNEAU, FRANCE.

479. R.	Iodini,	ʒiv	
	Althææ pulveris,	ʒx	
	Potassii nitratis,	ʒj	
	Alcoholis,	q. s.	
	Aquæ,	q. s.	M.

Triturate the iodine with the alcohol, to obtain a minute division, add the nitrate of potassium and the marshmallow, make a fine mixture, and by means of the water, a firm paste, which divide into ten equal cones. One or two to be burned, morning and evening, in the chamber of persons affected with phthisis.

J. WARING CURRAN, M. D., DUBLIN.

480. ℞. Zinci oxidi, gr.ij
 Extracti conii, gr.j. M.

For one pill, to be taken three times a day. The quantity of the oxide of zinc is gradually to be increased.

In the latter stages of phthisis, where profuse sweating and colliquative diarrhoea harass the patient and rapidly lower the vital capacity, this combination is very effective. It is of great value also in the earlier stages of the disease. It seems to steady the nervous system and act as a sedative to the wandering pains.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

481. ℞. Morphiæ acetatis, gr.ij
 Potassii cyanidi, gr.j
 Acidi acetici, f.ʒj
 Extracti pruni virginianæ fluidi,
 Misturæ acaciæ, ʒā f.ʒij. M.

A teaspoonful four or six times a day, as a sedative mixture, for the cough of phthisis.

482. ℞. Liquoris morphiæ sulphatis, f.ʒj
 Extracti pruni virginianæ fluidi, f.ʒij
 Acidi sulphurici diluti, f.ʒij. M.

A teaspoonful three or four times a day, when night sweats and cough are troublesome.

483. ℞. Syrupi hypophosphitis, f.ʒiij.

A teaspoonful thrice daily, after meals.

484. ℞. Extracti opii, gr.ss
 Aquæ, f.ʒj. M.

For one inhalation, twice a day, by means of any form of steam atomizer throwing a fine spray. In the irritative cough of phthisis, causing gastric irritability.

485. ℞. Tincturæ iodinii compositæ, ʒx
 Aquæ, f.ʒj. M.

For atomization.

486. ℞. Tincturæ ferri chloridi, f.ʒj
 Acidi muriatici diluti, f.ʒij. M.

Twenty-five drops in sweetened water drawn through a tube before meals. In the treatment of tubercles in the lungs, complicated with tubercular diarrhoea and impairment of digestion.

Also the following:

487. ℞. Extracti opii, ℥j.
 Plumbi acetatis, ℥ij.
 Make into twenty suppositories. One to be introduced mor-
 evening.

488. ℞. Syrupi hypophosphitis,
 Extracti pruni virginianæ fluidi, āā f.ʒij.
 A dessertspoonful thrice daily.

489. ℞. Olei morrhuæ, f.ʒj
 Aquæ menthæ piperitæ, f.ʒss
 Tincturæ aurantii, f.ʒss
 Misturæ acaciæ, f.ʒijss
 Olei gaultheriæ, ℥x.
 A dessertspoonful three times a day. This formula disgui-
 what the taste of the cod-liver oil.

Or,

490. ℞. Olei morrhuæ, f.ʒss.
 For one dose; to be taken three times a day in *carbonic ac-*

Place in a tumbler a small amount of any preferred syrup
 or sarsaparilla is the best adapted to disguise the taste of
 and fill up with carbonic acid water, from a bottle furnishe
 syphon for table use; then, while it is still foaming, put in
 spoonful of the oil. It is astonishing how perfectly the
 concealed in this manner. Other modes of taking the
 floating on ice water, in lemon juice, and in the froth of
 Less than a tablespoonful is not worth taking. The best
 its administration is between meals, after the process of c
 is pretty well finished. Persons are exceptionally met w
 take it in preference just before meals, and thus avoid the c
 able eructations. Nobody likes to take it the instant afte

491. ℞. Acidi arseniosi, gr.j
 Ferri lactatis, ʒss
 Syrupi, q. s.
 For thirty pills. One thrice daily.

Arsenic is an agent which may frequently be employ
 advantage in cases of slow consumption.

It may be given as above, or as follows:—

492. ℞. Liquoris potassii arsenitis, f.ʒij
 Extracti pruni virginianæ fluidi, f.ʒij.
 A teaspoonful thrice daily.

493. ℞. Calcis hypophosphitis, ℥ss
 Sodii hypophosphitis, ℥ij
 Misturæ acaciæ, f. ℥ij. M.
 A teaspoonful thrice daily, with plenty of cream, eggs, etc., about three ounces of whisky daily, and F. 420 for the irritative cough. In a case in which cavities had formed in the lungs.
494. ℞. Quiniæ sulphatis, ℥ij
 Acidi tannici, ℥j
 Extracti gentianæ, q. s. M.
 For twenty pills. One thrice daily, to reduce night sweats.

HORACE DOBELL, M. D., LONDON.

Our author, after a long series of observations, and a process of **inductive** reasoning, arrived at the conclusion that in tubercular **li**sease there is a defective action of the pancreas on fats, and particularly on solid fats, and thus was led to study the action of the **se**cretion; first, with the view to determine its exact character and **na**ture; and secondly, to find some means of obtaining and **pre**serving the active principles of the pancreas in a form suitable for **ad**ministration as a remedial agent. He was thus led to the **in**vention and use of the "Pancreatic Emulsion of Fat" and "Pancrea-**ti**ne."

It is the best to give the *Pancreatic Emulsion* from one to two hours after a full meal, such as breakfast or dinner, particularly avoiding a longer interval, and also avoiding warm drinks for two or three hours afterwards. When cod-liver oil agrees, give a tablespoonful of oil directly after breakfast, to supply olein to the blood through the portal system, and a tablespoonful of emulsion, in a cup of milk or water, two hours after dinner, to supply the blood with panacreatized solid fats through the lacteal system. If cod-liver oil cannot be taken, give the emulsion two hours after breakfast, and two hours after dinner.

In the very few cases in which the stomach does not easily tolerate the emulsion, it is due, almost as a rule, to excessive acidity of the digestive fluids; and an alkaline powder of soda and columbo, or an effervescing draught of citrate of sodium and potassium, given before the meal which precedes the dose of emulsion, generally overcomes the difficulty. It must be borne in mind that some adults cannot digest milk, and in these cases the emulsion should be mixed with water instead. Brandy or rum may be added in any case, if preferred, and a small plain biscuit should be taken after the dose. (*Lancet*, November 17, 1866.)

Pancreatine is given in doses of three to five grains, in wine or water, or on bread and butter, directly after food, or immediately after each dose of cod-liver oil.

Dr. DOBELL has prescribed the "Pancreatic Emulsion" in about 2500 hospital cases, and in 187 cases in private practice. Of the latter careful notes were taken and published in the London *Lancet*. In the 187 published cases, emulsion agreed in 180; disagreed in 7. Cod-liver oil agreed in 75; disagreed in 98; was not tried in 14. In these 187 cases no cod-liver oil was given during treatment with emulsion, so as not to confuse the effects of the two remedies. But in daily practice, Dr. DOBELL recommends both oil and emulsion to be taken, if the stomach will bear them. The proportion of cases in which emulsion agrees will not be as large as here stated, unless care is taken to correct obvious defects in digestion by other remedies. In the true first stage, our author's experience is derived principally from private practice, such cases not often appearing at hospitals. Of the 2500 hospital cases who have taken the emulsion, many have been in an extremely advanced stage of disease; and in some of these the emulsion has appeared to prolong life in a remarkable manner, being retained on the stomach long after all other kinds of food had ceased to be tolerated.

The experience of the effects of the Pancreatic Emulsion of Fat, as referred to in several journals by a number of independent observers, corresponds in a remarkable degree with the result of DR. DOBELL'S investigations and experiments.

PROF. BALTHAZAR W. FOSTER, M. D., LONDON.

495.	R.	Ætheris,	f.ʒijss;	
		Olei morrhuae,	f.ʒiv.	M.

Dessertspoonful thrice daily, before meals.

This is a new physiological attempt to introduce cod-liver oil into the system, by overcoming the difficulty of assimilating fat, which is developed to the greatest extent at the very stages of the disease in which perfect assimilation is most needed. To pour oil into a patient's stomach, without at the same time taking measures to insure its digestion, is a crude kind of therapeutics. Experimental physiology has taught us that the only fluids in the body which have the power of acting upon fat, so as to render it fit for absorption, are the secretions of the pancreas and the duodenal

ands. Æther has the power of stimulating the glands to renew their healthy action, and places the fatty matter in a state of fine division with their abundant secretion. It also masks the unpleasant taste of the oil.

PROF. FURTER, MONTPELLIER.

Our author reported some time ago, before the Paris Academy, the treatment of phthisis, as employed with good results at the Hôtel-Dieu in Montpellier, under his charge. It consists in the use of mutton or beef, given in conjunction with strongly diluted alcohol, in small doses.

496. Take some finely minced raw mutton or beef, and roll it up in sugar or in a saccharine electuary. Give in teaspoonful doses to the amount of $\frac{1}{6}$ of an ounce per day.

497. R. Alcoholis, f.ʒj
Syrupi, f.ʒij. M.

A teaspoonful dose every hour. The dose and frequency of administration are to be modified by the patient's individuality.

PROF. R. J. GRAVES, M. D., DUBLIN.

498. R. Quinæ sulphatis, gr.iss
Acidi sulphurici diluti, f.ʒss
Tincturæ hyoscyami, ℥xxv
Infusi cascarillæ, f.ʒij. M.

To be given during the day, in three doses, to combat the night sweats in beginning tubercular phthisis.

499. R. Antimonii et potassii tartratis, gr. xxx
Ipecacuanhæ pulveris, ʒj
Olei tigllii, gtt. xx
Unguenti rosæ, ʒj. M.

A useful ointment to produce slight counter-irritation in delicate women and children.

DR. GUÉNEAU DE MUSSY, FRANCE.

500. R. Belladonnæ radidis pulveris, gr. xv
Acaciæ pulveris, ʒvij. M.

To be used as a snuff, ten or twelve times a day, by consumptive patients with tickling sensations in larynx, and attacks of dry and painful coughing.

501. R. Sodii bicarbonatis, ʒijss
Sulphuris loti, ʒij
Bismuthi subnitratris, ʒij. M.

Divide into twenty powders. Give one every two hours. Four or five days of treatment suffice to suspend or notably lessen the night sweats of the consumptive patient, of whom the condition is greatly improved at the end of several weeks.

PROF. JACCOUD, PARIS.

On the Administration of Arsenic in Phthisis.—In chronic phthisis, so soon as the phenomena attributable to anæmia have been relieved by iron, or in the absence of amelioration after a delay of a couple of months, the author abandons ferruginous preparations and has recourse to arsenical medication. He employs exclusively granules of arsenious acid, of gr. $\frac{1}{10}$ each, and administers them at the commencement of each of the two principal meals. He commences with two a day, and every week increases two a day, until eight or ten a day are given. When this maximum dose is attained, he maintains it indefinitely, unless phenomena of intolerance manifest their appearance, such as cramps, inflammation of the eyes, cutaneous eruptions, vomitings, diarrhœa. Then, however, he does not stop the medicine, but diminishes, temporarily, the dose, and returns, as soon as possible, to the maximum of toleration.

Arsenic acts powerfully upon the nutritive processes in chronic pulmonary phthisis. It quiets the nervous excitement, and possesses an anti-febrile action sufficiently marked effectually to combat the evening intermittent fever.

So long as the disease remains chronic, and does not develop acute attacks of pseudo-continuous fever, the arsenical medication ought to be maintained at the maximum of toleration, conjointly with the special regimen, cod-liver oil, cinchona and alcoholic raw meat.

On the Administration of Cod-liver Oil in Phthisis.—When cod-liver oil is badly supported alone, in chronic pulmonary phthisis, the author adds to it brandy, rum, kirsch or whisky, the proportion of two parts of the oil to one of the spirit, and commends the patient to close the nostrils at the moment of swallowing it. He commences by small doses of the oil and spirit mixture; then two tablespoonfuls a day, and advances to five or six fluid ounces a day.

On the Administration of Iron in Phthisis.—The author reserves the employment of ferruginous preparations for those cases where the patients present the certain signs of globular anæmia. He gives, in preference, the syrup of the iodide of iron to young children, and the pills of the iodide of iron in other cases. From four to eight of these pills are to be taken a day, at the commencement of the meals. He advises not to administer the iron where there has been recent hæmoptysis.

On the Administration of Raw Meat in Phthisis.—In the treatment of patients with whom the physician is obliged to dissimulate, he may order the pulp of raw filet of beef, well deprived of all fibrous matter, in some unleavened bread, under the pretext of administering medicinal boluses. When he can act openly, the author prefers to mix the pulp of the raw meat, properly prepared, with brandy, rum or whisky, in such a manner as to obtain a dough-like mass, which the patient takes with sugar or salt, according to taste, in tablespoonful doses, during the day. This mixture is very palatable, and does not produce that rapid intolerance which is often observed with other meat preparations.

On the Employment of Counter-irritation in Phthisis.—The author, in acute phthisis, attacks the pulmonary disorder by means of large flying blisters, renewed without interruption. Instead of the ordinary dressing, he covers the vesicated surface, and envelops it in every direction, a finger's breadth, by diachylon plaster. On removing the protecting plaster at the end of four days, the cicatrization is found complete.

In commencing chronic phthisis, the author applies, under the clavicle of one or both sides, cauteries of Vienna paste, of the size of a sixpence at the maximum, and repeats these punctiform cauterizations as long as any favorable influence is noticed.

502. R.	Extracti cinchonæ, Tincturæ canellæ, Syrupi aurantii corticis, Vini rubri, Spiritus vini gallici,	ʒss-j f.ʒij f.ʒj f.ʒiv f.ʒj-ij.	M.
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A tablespoonful every couple of hours, in the exhaustion and delirium of acute phthisis. The patient should also take meat broth or beef essence several times a day.

503. R.	Vini cinchonæ, Tincturæ canellæ, Syrupi aurantii corticis, Spiritus vini gallici,	f.ʒiv f.ʒij f.ʒj f.ʒj-ij.	M.
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To be used in the same manner as the above formula, the wine of cinchona replacing the extract and making a mixture not so thick.

504. R.	Digitalis, Aquæ bullientis,	gr.v-vij f.ʒj.
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Make an infusion, filter and add

505. R.	Extracti cinchonæ, Tincturæ canellæ, Syrupi aurantii corticis, Vini rubri, Spiritus vini gallici,	ʒss-j f.ʒij f.ʒj f.ʒiv f.ʒj-ij.	M.
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are the patient's chances of benefit. It is stated that cases in which hæmoptysis is the first, or at least a very early symptom, do especially well. Cases are unsuitable for a voyage, in which there are signs of extensive progressive excavation, and all in which there is great muscular weakness. When we have evidence of the disease being general, as shown by glandular, bowel or laryngeal disease, our recommendation should certainly be withheld. The bowels in particular should be in good trim, for the sedentary life and peculiar diet of a ship are apt, in healthy people, to produce intestinal disturbance (constipation and subsequent diarrhoea, or either of these alone). In a case which persistently grows worse under favorable circumstances of habitation, etc., on shore, the prospect of benefit would be small. A phlegmatic habit of body should also be looked upon, to a considerable extent, as a counter-indication for this remedy. While speaking on this part of the subject, it is to be borne in mind that during its early stage phthisis is a curable, perhaps a very curable disease, under proper treatment. In its later stages it is cured with difficulty, and a sea voyage does not seem in any degree to lessen this difficulty.

A. MALET, M. D., RIO DE JANEIRO.

Our author gives (*Bulletin Generale de Therapeutique*, August 30th, 1868), in the therapeutics of pulmonary phthisis, the preference to the *iodide of calcium* in all cases not of syphilitic origin. He does not claim it as a specific, but says it awakens the appetite, regulates the digestion, renders the respiration freer and deeper, diminishes the cough and modifies the expectoration, increases the strength and lessens the perspiration. If constipation ensue in consequence of its long use, it will often disappear of itself; otherwise the dose may be diminished, or the remedy temporarily stopped. He gives the iodide of calcium in a simple aqueous solution, to be taken at meal-times. Not more than eight grains of the salt should be given, in divided doses, during the day. A larger amount than this does harm.

DRS. MONTARD MARTIN AND HÉRARD, PARIS.

508. R. Acidi arseniosi,

gr.j.

For 60 granules. Seven or eight a day, of these granules, to be taken at first, the dose to be speedily carried up to ten or fifteen. Never more than two should be given at a time, and they should be administered as often as possible before meals. The treatment should be suspended from time to time.

Researches have shown the entire harmlessness of arsenic, when properly employed, as well as its undeniable efficacy in certain forms of tubercular phthisis. Almost all the patients, after a few days' treatment, exhibited a marked improvement in their general condition. The appetite improves, the strength returns, the complexion is clearer, and the eye is more animated; and at the end of three weeks or a month flesh begins to be gained. The local remedy undergoes less change; but even this is sometimes sensibly modified. The most favorable cases are those in which there is no acute fever or serious digestive disturbance. M. LOLLOIT, the most recent observer, finds that the daily administration of one-tenth of a grain produces a diminution of temperature, and a very notable diminution in the amount of urea.

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

Cod-liver oil has a special and well-merited reputation. On the other hand, perhaps, no remedy has ever been so much abused as this one. Whoever supposes that the mere presence of a thin nose, a sore upper lip, or a bunch of enlarged cervical glands affords sufficient grounds for the prescription of this medicine, will often fail to benefit his patient, and sometimes will do him harm. Daily experience teaches, however, that such is the general belief, and that he who seeks to combat it does not merely fight a windmill. A most serviceable means of distinction between the cases in which cod-liver oil is indicated and those in which nothing is to be expected from it, is afforded by the symptoms of the torpid and arethritic forms of scrofula. When the patient's slender frame, lack of fat beneath his skin, and his accelerated pulse, warrant belief that his nervous system is in a state of over-activity, cod-liver oil is generally of most signal benefit. Under its use the plumpness of the body increases, while the general susceptibility of the system, and the diseases consequent upon it, subside. These are the cases to which this article owes its name as an anti-scrofulous remedy. But if the patient be clumsy and thickset; if the nose and upper lip be enlarged, and the adipose layer over the rest of the body strongly developed; if the action of the heart be retarded rather than accelerated; if the irritability of the nervous system seem unusually obtuse; in short, should there be reason to suppose that the waste of the system is diminished rather than increased, we cannot hope to relieve the disease by means of

oil. Nevertheless, it is precisely this class of patients who in vain have taken such enormous quantities of it in the course of their lives. Besides the oil, and as a corroborant of its effects, so to speak, articles containing a little tannin, such as parched acorns, "*acorn coffee*," and home-made infusion of *walnut leaves*, are very often prescribed. Such a practice is greatly to be commended whenever there is a chronic catarrh of the intestines, embracing the digestion, and the absorption of chyle, and where apprehensions are entertained that the oil may aggravate the intestinal disorder. In order to make children take the acorn coffee as willingly as real coffee, it is sufficient to add a few coffee beans to the acorns before roasting them.

In the treatment of phthisis, fever is the symptom which principally demands attention whenever it persists at all severely, in spite of the remedies directed against the main disease. Digitalis and quinia have a well-merited reputation as means of arresting the abnormal calorification, and reducing the animal heat, in spite of the continuation of the disease.

509. R.	Pulveris digitalis,	gr. x	
	Pulveris ipecacuanhæ,		
	Pulveris opii,	ʒss	gr. v
	Extract helenii, -		q. s.
			M.

For twenty pills. One three times a day.

Add quiniæ sulphatis, ℞j, to the above prescription when the type assumed by the fever becomes periodical, the evening exacerbations severe, and the chills by which they are ushered in pronounced.

Our author is so much in the habit of using this (known as Heim's) pill, with or without quinine, in consumption, when the fever proves refractory to other remedies, that it has become a very common prescription at his clinic. The exhibition is suspended whenever a distinct reduction of the temperature and of the frequency of the pulse becomes apparent, and is resumed so soon as the effect subsides. Patients pretty soon learn to judge for themselves when it is time to stop the pills, and when to resume them.

DOUGLASS POWELL, M. D., BROMPTON.

510. R.	Potassii chloratis,	℞ij-ijj	
	Morphiæ muriatis,	grs. iiss-ij	
	Glycerinæ,	f. ʒss	
	Syrupum,	ad. f. ʒiv.	M.

A teaspoonful, to be swallowed slowly, in the rawness of the tongue and painful deglutition of advanced phthisis.

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It acts locally on the parts affected, relieving at the same time the cough. Of course, in the latest stages of the disease, this will but render the remaining hours of life more comfortable; but there are some cases where this condition of the tongue and throat will come on earlier, and by rendering the taking of nutrients or stimulants almost impossible, cause death from exhaustion. In such instances, the above combination relieves pain, cleanses the tongue and enables the patient to take nourishment and remedies which greatly prolong life. (*Lancet*, December 19, 1868.)

DR. SUNDERLIN.

511. ℞. Ammonii chloridi, gr. xxx
 Opii pulveris, gr. ix
 Digitalis pulveris,
 Scillæ pulveris, ʒā gr. xv. M.

Divide into thirty pills. One every six hours, to quiet the cough and facilitate the expectoration in the early stage of phthisis.

512. ℞. Morphiæ sulphatis, gr. j
 Syrupi ferri iodidi, f. ʒss
 Glycerinæ, f. ʒijss. M.

A teaspoonful two or three times a day, to quiet the cough and retard the emaciation in phthisis.

THOMAS HAWKES TANNER, M. D., LONDON.

513. ℞. Ferri iodidi, gr. vj-xviiij
 Glycerinæ, f. ʒij
 Infusum calumbæ, ad. f. ʒvj. M.

Two tablespoonfuls three times a day.

In strumous ulcers, etc., where the stomach will not tolerate cod-liver oil, the above is useful.

514. ℞. Ammonii iodidi, gr. j-vj
 Infusi cinchonæ flavæ, f. ʒss. M.

For one dose, to be taken twice or thrice daily, before food. Very valuable in strumous enlargement of the absorbent glands. The dose is to be graduated according to the patient's age. At the time the medicine is given internally, the following ointment should be rubbed into the swelling night and morning :

515. ℞. Ammonii iodidi, ʒj
 Adipis, ʒj. M.

In cases of phthisis where the stomach will not tolerate any form of cod-liver oil, resort may be had to *cod-liver oil embrocations* :

516. R. Olei morrhuæ, f.ʒijss
 Spiritus ammoniæ aromatici, f.ʒj
 Tincturæ opii, f.ʒss
 Olei lavandulæ, ℥xxx. M.

One-half to be rubbed over the chest and abdomen, night and morning.

Or,

517. R. Olei morrhuæ, f.ʒj
 Olei cajuputi, f.ʒj. M.

To be rubbed over the chest at bedtime, and applied by means of lint well saturated with it. The cajuput oil well disguises the smell of the embrocation.

518. R. Ferri ammonio-sulphatis, ʒss-ʒj
 Aquæ destillatæ, f.ʒvj. M.

Two table-spoonfuls every six or eight hours, in cases where, on account of hæmoptysis, an astringent preparation of iron is indicated.

519. R. Liquoris potassæ, f.ʒiij
 Tincturæ cinchonæ compositæ, f.ʒj
 Decoctum cinchonæ flavæ, ad. f.ʒvj. M.

Two table-spoonfuls twice or thrice daily.

Often beneficial in the early periods of the disease. But it is a less favorite remedy with our author than

520. R. Spiritus ammoniæ aromatici, ʒss f.ʒvij
 Spiritus chloroformi, gr.j
 Morphiæ muriatis, f.ʒss
 Extracti cinchonæ fluidi, ad. f.ʒiij. M.
 Tincturam cinchonæ,

One teaspoonful in a wineglass of port wine, three times a day.

In certain cases of phthisis this mixture is very useful, especially in conjunction with cod-liver oil and a liberal diet.

If the *night sweats* weaken and annoy the patient, they may be treated with

521. R. Acidi gallici, ʒij
 Extracti cannabis indicæ, gr.v
 Confectionis rosæ, gr.x. M.

For 10 pills. One to be taken every night at bed time.

Or,

522. R. Zinci oxidi, gr.xij
 Extracti conii
 vel,
 Extracti hyoscyami, gr.xviiij. M.

For 6 pills. One to be taken every night at bedtime.

For the relief of night sweats in phthisis and other exhausting diseases, there are few remedies more serviceable than the foregoing.

SYMES THOMPSON, M. D.,

The *tincture of the chloride of iron* is far superior to other chalybeates. The improvement of appetite, diminution of flatulence, etc., which occur under its administration, are often remarkable, cod-liver oil and other fats, refused previously, being digested without discomfort. It both checks diarrhœa and relieves constipation, by giving tone to the feeble muscular fibres of the bowels; it lessens night sweats, though these often call for oxide of zinc in addition, and is a valuable remedy in hæmoptysis (*Practitioner*, September, 1868).

JOHN C. THOROWGOOD, M. D., LONDON.

523. R.	Sodii hypophosphitis,	gr.v
	Glycerinæ,	
	Aquæ,	ññ f.ʒss.

For one dose, thrice daily.

In addition to Dr. THOROWGOOD, Drs. C. J. B. WILLIAMS, and C. J. WILLIAMS (the latter one of the physicians at the Brompton Hospital), speak of the value, in phthisis, of the *hypophosphite*, which, at first so highly lauded by Dr. CHURCHILL, of Paris, has of late fallen somewhat into disrepute.

WALTER HYDE WALSHE, M. D., F. R. C. P., LONDON, EMERITUS PROFESSOR UNIVERSITY COLLEGE HOSPITAL, LONDON, ETC.

Among the conclusions at which our author has arrived in regard to the treatment of chronic consumption by *cod-liver oil* are as follows:

- (1) That it more rapidly and effectually induces improvement than any other known agent.
- (2) That its power of *curing* the disease is undetermined.
- (3) That it relatively produces more marked results in the third than in the previous stages.
- (4) That it increases weight, in favorable cases, with singular speed, and out of all proportion with the actual quantity taken.
- (5) That it sometimes fails to increase weight.
- (6) That in the great majority of cases when it fails to increase weight it does little good in other ways.
- (7) That the effects traceable to the oil, in the most favorable cases, are: increase of weight, suspension of colliquative sweats, improved appetite, diminished cough and expectoration, cessation of sickness with cough, and gradual disappearance of active physical signs.
- (8) That in some cases it cannot be taken, either because it disagrees with the stomach, impairing the appe-

tite (without itself obviously nourishing) and causing nausea, or because it produces diarrhœa. (9) That in the former case it may be made palatable by associating it with a mineral acid; and in the latter prevented from affecting the bowels, by combination with astringents. (10) That intra-thoracic inflammations and hæmoptysis are contra-indications to its use, but only temporarily so. (11) Diarrhœa, if depending on chronic peritonitis, or secretive change, or ulceration in the ileum, affords no contra-indication to the use of the oil; even the profuse diarrhœa caused by extensive ulceration of the large bowel is not necessarily made worse by it. (12) That the beneficial operation of the oil diminishes, *cæteris paribus*, directly as the age of those using it increases. (13) That the effects of the oil are more strikingly beneficial when a small extent of lung is implicated to an advanced degree, than where a relatively large area is diseased in an incipient stage. (14) That when chronic pleurisy or chronic pneumonia exists on a large scale, the oil often fails to relieve the pectoral symptoms. (15) That it often disagrees when the liver is enlarged, and probably fatty. (16) That the weight may be increased by it and yet the local disease go on. (17) That weight may increase, the cough and expectoration diminish, night sweating cease, the strength which had been failing remain stationary, under the use of the oil, and yet the local disease be all the while advancing. (18) That of the three kinds of oil, the brown, light brown, and pale, the brown is the most efficacious. (19) That the dose of the oil at the outset should never exceed, often fall short of, a drachm; it may be taken immediately before, immediately after, or midway between meals, the idiosyncrasy of the patient being the best guide as to the fittest time. (20) That the vehicle may be water, milk, orange, wine, infusion of quassia or chiretta, weak brandy and water, or any aromatic water agreeable to the patient. (21) That the dose may be gradually increased to half an ounce, twice, or at most thrice in the twenty-four hours. (22) That if there be disposition to regurgitation of the oil, the whole daily quantity may be taken with advantage at bedtime. (23) That if the stomach reject the oil absolutely, it may be administered in enemata, combined with an astringent, or by inunctions; the rectum, however, ordinarily grows irritated too soon to allow of sufficient continuation of the enemata; through the skin, the oil acts more efficaciously; often an inunction of simple olive oil after the warm bath

improves the flesh, and diminishes the cough and chest irritation. (24) That ozone, if combined with the oil, slackens the pulse some ten or fifteen beats per minute. (25) That the attempts to procure almond oil, cocoonut oil, and neat's foot oil as efficacious as the oleum morrhuæ, have failed. (26) That some patients to whom the oil is unbearable, digest cream well; a pint to a pint and a half has been taken daily without gastric disturbance, and with manifest increase of flesh. (27) That glycerine often agrees well where the cod-liver oil is unbearable, and then, especially in children, decidedly increases the weight. (28) That the pancreatic emulsion of solid fat, recommended by Dr. DOBELL (see page 211), is certainly well borne by some persons unable to digest or even retain cod-liver oil in their stomachs.

Our author, without daring to endorse the statement of BERTIN, of Montpellier, France, that the *compressed air-bath* will, unaided, occasionally cure phthisis, can, however, bear witness to the great relief of dyspnœa, cough, expectoration, and constitutional erethism, which may be effected by its cautious employment.

Inhalation of dry iodine vapor certainly controls excessive secretion from the tubes, and has occasionally appeared to improve the constitutional state. The inhalation of warm water, impregnated with emollient herbs, such as *althœa officinalis*, or with narcotic extracts, palliates cough, dryness of throat, and laryngeal irritation. Inhalations of *tar*, *creasote*, and *carbolic acid*, simple, or in association with sedative extracts, have occasionally produced remarkable improvement in the local and constitutional state.

A palliative influence appears to be exercised in the early stages by the *mineral waters* of Ems, Oeynhausén, Eaux-Bonnes, St. Sauveur, and Caüterets. But Eaux-Bonnes should be avoided when there is hæmoptoic tendency.

A *sea-voyage*, more especially in the case of young adult males, will occasionally work more effectual change in the phthical organism than any other single influence, or any combination of influences. Not only is the local disease in some cases stayed, and the damaged lung restored to the maximum of possible repair, but the whole constitution undergoes such remodeling, as to render a fresh outbreak of the tuberculizing process an unlikelihood.

C. J. B. WILLIAMS, M. D., LONDON.

The following directions for the administration of *cod-liver oil* in phthisis are useful (*Lancet*, July 4th and August 15th, 1868): 1. The *best time* for administering it is immediately after, or to those who prefer it, at or before a solid meal. 2. In cases of *peculiar weakness of stomach*, with tendency to retching or vomiting, strychnia (gr. $\frac{1}{2}$ – $\frac{1}{4}$) proves a most valuable adjunct. So does salicine. Neither of these, though a powerful tonic, has any of the heating properties of quinine or iron. If their bitter taste is objected to, they may be given in the form of pill, after or before the oil. 3. It may be advantageously *combined with a mineral acid*. Nitric acid is best in inflammatory cases, and in those attended with much lithic deposit in the urine, but its tendency to injure the teeth is an objection to its long-continued use. Sulphuric acid is more eligible where there is liability to hæmoptysis, profuse sweats, or diarrhœa. But in most cases, for long continuance, diluted phosphoric acid is preferable to either. 4. The *bulk of the whole dose* of the oil and vehicle should be so small that it may be swallowed at a single draught; therefore, the vehicle should not exceed a tablespoonful, with at first a teaspoonful of the oil, to be gradually increased to a tablespoonful. 5. The *dose* of the oil should rarely exceed a tablespoonful, twice or thrice daily. Larger quantities either derange the stomach or liver, or some of it passes unabsorbed by the bowels. 5. The *diet* requires attention. With some persons the oil agrees so well, and so much improves their digestive powers, that they require few or no restrictions in diet, but this is not the case with the majority. The richness of the oil proves more or less a trial, sooner or later, to some persons; therefore, it becomes proper to omit or reduce all other rich and greasy articles of food. All pastry, fat meat, rich stuffing, etc., should be avoided, and great moderation observed in the use of butter, cream, and very sweet things. Even new milk in any quantity is not generally well borne during a course of oil, and many find malt liquor too heavy, increasing the tendency to bilious attacks. A plain, nutritious diet of bread, fresh meat, poultry, game, with a fair proportion of vegetables, and a little fruit, and only a moderate quantity of liquid at the earlier meals, commonly agrees best. 7. Should a bilious *attack* come on, indicated by nausea, headache, furred tongue, offensive eructations, high-colored urine, etc., it is necessary to suspend the oil, lighten the diet, and give blue pill or

calomel, with an aperient on alternate nights, and an effervescing saline twice or thrice during the day. In a few days, when the attack has passed off, the oil may be resumed, beginning with small doses, as at first. 8. In all cases, during the use of the oil, the bowels should be kept regular in action, and if this cannot be done by regularity of habit and diet, it should be effected by the use of a mild daily pill of rhubarb and aloes. 9. According to Dr. RINGER, the taste of the oil is removed, and nausea often prevented, by a little salt taken immediately before and after the oil.

DR. L. BURNEY YEO, M. D., M. R. C. P., ASSISTANT PHYSICIAN TO THE BROMPTON HOSPITAL FOR DISEASES OF THE CHEST, ENGLAND.

This writer, whose opportunities for the study of phthisis are unusually large, has lately given his experience on some modern remedial measures in this disease, to wit:

- a. The use of the *alkaline hypophosphites*.
- b. The use of antiseptic inhalations, and of the sulpho-carbolates internally.
- c. The treatment of phthisis by rest (local rest).
- d. The removal to mountain climates.

In regard to the *hypophosphites* he believes they have *no claim whatever* to be regarded as specific remedies for tubercular disease; but they are of considerable value in a certain limited class of cases.

In advanced phthisis, with both lungs involved, the hypophosphites are of no use. Nor are they of use in less advanced cases which are obviously running a rapid course, and are attended with much fever and cachexia. In short, in those cases which we have always been accustomed to regard as hopeless and beyond the reach of all remedies, the hypophosphites are of no avail. They are less successful with dark persons of sanguine or bilious temperament than with fair persons of phlegmatic temperament. They are much more useful in young than in older persons. The greatest benefit arises from their use, in the first place, in children in all forms of chronic lung-disease; and, in the second place, in young adults of fair complexion, not very cachectic or emaciated, and with disease limited to the upper part of one lung. In the cases in which they do good, their beneficial effect is generally noticed almost immediately. The patients usually say they

feel very much better "in themselves;" they feel stronger, in better spirits, are more active, eat better, and sleep better. The night-sweats disappear, the cough sometimes disappears also; but it will often be observed that, while there is this general amelioration and a subjective feeling of improvement, the cough will continue unrelied, and even occasionally become more troublesome. Notwithstanding the evident improvement in general health, the physical signs often remain the same, and even may increase in extent, while the patient has been feeling so much better that he has resumed his occupation, and declared that he felt "as well as ever he did in his life." The improvement which follows the use of the hypophosphites is frequently only of temporary duration; this is especially the case with hospital out-patients. It is much less so with private patients, who can be more carefully watched and more thoroughly protected from adverse circumstances.

Sometimes all the symptoms of phthisis disappear during the use of the hypophosphites, and the general condition as well as the physical signs undergo rapid amelioration. The patient has been, apparently, quite well, but an imprudent visit to a theatre has resulted in a fresh catarrh, and the disease has again advanced with unusual rapidity; the former remedies are now quite useless, and, in a few months, the case ends fatally. It has, indeed, seemed that, in some of these cases where the hypophosphites led to temporary arrest of the disease, the subsequent advance has been unusually rapid and quickly fatal. Patients who are mending under the influence of these remedies should be protected with more than usual care against all those conditions which may possibly lead to a relapse.

Of the *antiseptic inhalations*. LEMAIRE's observations on the inhalation of carbolic acid may be briefly summarized as follows. It must be remembered that he gave it also internally in aqueous solution. He found, he says, very remarkable effects follow its use.

There was diminution of cough after twenty-four hours, and, in some cases, almost a complete disappearance after a few days. The expectoration was diminished or almost suppressed, and, if the sputa were offensive, their fœtor disappeared. In many the physical condition of the respiratory organs was ameliorated. Two were cured; in others, there was a subsidence or disappearance of *râles*, and parts became pervious to air which had previously been impervious. In cases in the second stage, he had noticed increase

CONSUMPTION HOSPITAL, LONDON.

524. R.	Morphiæ muriatis,	gr. ss.	
	Acidi hydrocyanici diluti,	ʒxv	
	Acidi muriatici diluti,	ʒijss	
	Oxymellis scillæ,	f. ʒss	
	Aquæ,	q. s. ad. f. ʒj.	M.

Dose—One to two drachms.

RÉSUMÉ OF REMEDIES.

- Carbolicum.* The inhalation of pulverized solutions of carbolic acid are of frequent benefit in the advanced stages of phthisis, by diminishing the secretion and lessening the cough and exhaustion, and by correcting fetor of the expectorations. A solution of drops xv–xx, in two pints of water, with the addition of one or two ounces of tincture of conium, or of alcohol, may be used.
- Tannicum.* Prof. STILLÉ says that this medicine appears sometimes to remove the crepitating rhonchi so generally observed around crude tubercles at the apex of the lung during the first stage of phthisis, while it diminishes the dyspnœa, cough and expectoration. At a late period, it sometimes so manifestly palliates all the symptoms as to inspire a belief that a cure has been accomplished, converting moist rhonchi, or gurgling, into signs of solidification merely, or of a dry cavity. The value of such an influence should not be underrated, for it is in the highest degree probable that the extension of tuberculous deposits is preceded by a congested state of the pulmonary parenchyma, and that by restoring the latter we may prevent the former. The more nearly the disease resembles the acute form of phthisis, the less appropriate will the medicine become.
- has been recommended to promote the assimilation of cod-liver oil, by Dr. FOSTER. The objections to his preparation are its disagreeable taste, and the eructations it occasions.
- ol.* Dr. ANSTIE says that there is a variety of pulmonary phthisis, especially common in persons with delicate skin and slight frame, with marked tendency to colliquative sweating, and a notable inability to assimilate either ordinary food or fatty matter of any kind, in which the tolerance for large and long-continued doses of alcohol is very remarkable, and the benefit produced by such treatment very great. Prof. FLINT also recommends strongly the alcoholic treatment in cases in which stimulants are well borne. M. FÜRTER recommends strongly diluted alcohol with raw mutton or beef. Wine may be given in the form of enema; it should be diluted with water, and care taken not to overload the bowels.
- iii Iodidum* is recommended in incipient phthisis, by Dr. RICHARDSON. It is also advised by Dr. TANNER, in cases in which cod-liver oil is not tolerated.
- icum* is often a remedy of great value, but it is frequently badly borne by the stomach. Prof. DA COSTA recommends it as often beneficial in slow consumption. It is highly advocated by a number of French physicians (pp. 210, 214.)

Calcii Iodidum has been recommended.

Calcis Aqua and milk is highly spoken of, by Dr. T. K. CHAMBERS and others, as an ordinary beverage in phthisis.

Cetraria has been much praised, not only as a nutrient, but as an expectorant, in consumption.

Cimicifuga has considerable reputation in the treatment of phthisis, but Prof. STILLÉ considers the cases reported as benefited as probably chronic bronchial affections.

Cinchona. The acidulated cold infusion of bark is an excellent remedy for the profuse perspiration, night sweat and hectic fever.

Digitalin has been recommended, but no decided results have been reported.

Digitalis enjoyed formerly a higher reputation than it now possesses, although it is still highly spoken of. Dr. NIEMEYER considers it, in combination with quinine, as an admirable agent for arresting the abnormal calorification. It is often very useful in hæmoptysis, especially in the advanced stages of the disease.

Ferri Ammonio-sulphas is useful where, on account of hæmoptysis, an astringent chalybeate is indicated.

Ferri Bromidum is sometimes prescribed.

**Ferri Chloridi Tinctura* is regarded by many as decidedly the best form of iron in phthisis. (Dr. SYMES THOMPSON, p. 222.)

**Ferri Iodidum*, alone or with cod-liver oil, is an excellent remedy, especially in the early stages of the disease.

Ferri Mistura Composita is much used in England, in phthisis, especially when much debility and anæmia exist. If, however, it induce headache, nausea, and heat of skin, it must be discontinued.

Ferri et Potassii Tartras is often a useful chalybeate in phthisis, as it is easily assimilated, non-astringent, and may be prescribed with alkalies, which are so frequently indicated in this disease, on account of undue acidity of the stomach.

Ferri Vinum is highly recommended, especially for children and young persons, given with, or immediately after meals.

**Gallicum Acidum* is useful for checking the diarrhœa, excessive expectoration, hemorrhage and profuse perspirations in this disease.

Glycerine is said, by Dr. WALSHE, to often agree well when cod-liver oil is unbearable, and then, especially in children, to decidedly increase the weight. It may be given in combination with the syrup of the iodide of iron.

Hydrogenii Peroxidum is said to greatly improve digestion in the first stage of phthisis, and aid the action of iron; in the last stage, it unquestionably affords relief to the breathlessness and oppression, acting like an opiate without producing narcotism.

**Hypophosphites*. (The principal "alkaline hypophosphites," are those of soda, potash and lime.) These remedies were introduced by Dr. J. F. CHURCHILL, of Paris, as *curative* in every stage, but the word *palliative* better designates their action. They are of late less employed, but are still highly recommended by a num-

ber of authorities. In some cases, when tubercular softening has commenced, they are alleged, by several practitioners, to act prejudicially. (See Dr. YEO'S remarks above.)

Iodinium as an internal remedy, has been almost entirely displaced by cod-liver oil, though the action of the latter has been attributed, in part, to the small quantity of iodine it contains.

* *Morrhæa Oleum* is deserving of the highest confidence. The earlier it is employed in the disease the better. In regard to its mode of action and method of administration, see opinions of Dr. AITKEN, of Prof. DA COSTA, of Dr. FOSTER, of Prof. JACCOUD, of Dr. NIEMEYER, of Dr. WALSHE, and of Dr. C. J. B. WILLIAMS (above). For manner of disguising its taste, see Index of Remedies.

Muriaticum Acidum, alone or in combination with other mineral or vegetable tonics, is an important auxiliary to treatment.

Nitrogen Gas. Inhalations of this gas have been recommended by Prof. STEINBRUCK, of Vienna. In the first and second stages, especially in young persons, they give great relief and sometimes cure; but in the third stage they are injurious. Their immediate effect is to allay nervous irritability and lower the circulation. (DOBELL'S *Reports*, 1876.)

Opium, by the mouth or enema, is often a valuable palliative in advanced stages of phthisis, to relieve the cough, lessen the expectoration, check diarrhœa, and afford comfort to the patient.

Oxygen inhalations seem to possess the power of promoting the digestion of cod-liver oil, and, therefore, often of great service (see Inhalations).

* *Pancreatic Emulsion*, introduced by Dr. HORACE DOBELL, is an excellent remedy, either with or without cod-liver oil, and is well borne by persons unable to retain the oil. (For method of administration, see p. 211.)

* *Pancreatine*, introduced by Dr. HORACE DOBELL, is highly recommended.

Phosphorus has been employed, but possesses no special value.

Plumbi Acetas is very useful in diminishing expectoration, checking hemorrhage and diarrhœa, and to a less extent, the profuse perspirations of phthisis; but its administration is objectionable, because of the anorexia which often speedily results.

Potassii Chloras is recommended in the painful deglutition of advanced phthisis.

Potassa Liquor is sometimes prescribed.

Potassii Iodidum is of value, given with iron and cod-liver oil, when there is a syphilitic taint.

Prunus Virginiana improves the appetite and palliates the cough.

Quiniæ Sulphas is a valuable tonic in phthisis, given in conjunction with iron and cod-liver oil.

Saccharum. Dr. SYMONDS recommends (*British Medical Journal*, June 13, 1868,) sugar as an article of diet in phthisis, taken to the extent of a quarter of a pound or more daily. He regards it, with eggs, a succedaneum for cod-liver oil, when the latter disagrees.

Sanguinaria has been advised in protracted catarrhal affections assuming the character of incipient phthisis. Small doses of the tincture should be given for several weeks.

Serum Præparatum. *Suet* is a popular and useful remedy, boiled in milk and taken in the morning.

Sodii Chloridum has been recommended, but has probably no direct influence on the disease when fully developed. It is useful in hæmoptysis.

Sodii Sulpho-carbolas has been recommended by Dr. SANSOM. (*Practitioner*, July, 1869.)

Sulphur is useful in the costiveness of phthisis, and may also be employed against profuse perspirations.

Taraxacum is often serviceable, from its power of diminishing abdominal plethora.

Zinci Oxidum is strongly recommended, by Dr. WARING CURRAN, for steadying the nervous system and acting as a general sedative.

INHALATIONS.

Arsenicum. TROUSSEAU and others have recommended arsenious fumigation by means of cigarettes—a mode of treatment which should be conducted with caution.

Carbolicum Acidum. Dr. MARCET recommends (*Practitioner*, November 1868) the atomization of the following solution:

525. ℞. Acidi carbolicæ, gr.ss-iss
Aquæ, f.ʒj. M.

This inhaled in the form of spray acts beneficially in the first stages of the disease, by improving the circulation in the lung; but in the advanced stages it should be withheld.

Chloroformum. A few whiffs (ʒvj-x) are often useful in the cough and dyspnoea of phthisis, but the effect is only temporary.

**Iodinium*. In cases of troublesome cough and abundant expectoration benefit sometimes results from employing, night and morning, vapor iodine.

526. ℞. Tincturæ iodinii, f.ʒj
Aquæ, f.ʒj. M.

Apply gentle heat, and let the vapor that arises be inhaled. Carefully the dilute compound tincture of iodine may be atomized.

Iodoformum. The inhalation of the dilute vapor obtained by mixing iodoform with starch, spreading it on paper and allowing it to volatilize, has been recommended.

**Opium*, by inhalation, is an excellent means of soothing irritative cough.

Oxygen inhalations can only be looked upon as palliative, and seem, in some cases, after affording immediate relief, to invite fresh and more intense exacerbations.

**Pix Liquida*. Tar vapor is now little used, having lost the reputation once enjoyed in phthisis.

EXTERNAL REMEDIES.

Aceticum Acidum Dilutum. The application of diluted vinegar to the chest and upper part of the body, to allay the profuse perspirations of phthisis, is recommended by Dr. WALSHE, Sir C. SCUDAMORE, and others, as a measure greatly conducing to the comfort and well-being of the patient. The mixture of one part of vinegar, one of eau de cologne, and two of water, is employed by Sir C. SCUDAMORE.

**Ammonii Iodidum*, in ointment, is recommended by Dr. TANNER.

**Baths.* The *Turkish Bath* is sometimes of service in incipient phthisis. The *Compressed Air Bath* may often be employed with great advantage.

Cod-liver Oil embrocations may be employed when the stomach will not tolerate the oil.

**Counter-irritation.* The counter-irritants most frequently resorted to in phthisis are the following: *Aqua Ammoniacæ*; *Tartar Emetic Ointment*; *Calomel and Iodine Ointment*; *Croton-oil Liniment*.

**Tincture of Iodine* (painted over the chest every night) also does good, by the iodine which is inhaled, from the air around the patient being slightly impregnated by the evaporation of the tincture; *Burgundy Pitch Plaster*; the following plaster is recommended by Dr. BARLOW, in the first stage of phthisis:

527.	℞. Emplastri picis com.,	ʒiiss	
	Antimonii et potassæ tartratis,	gr.x.	M.
	Make a plaster.		

Setons (in the early stages a sub-clavicular seton of three or four silk threads sometimes retards the progress of the disease).

THE ANÆMIA OF.

Ferri Iodidum is one of the best chalybeate tonics which can be employed in the anæmia of phthisis, if it do not prove too stimulating. The syrup (℥xx-f.ʒj, thrice daily) is the best form.

THE APHTHÆ OF.

Catechu. The infusion makes an excellent gargle in aphthæ occurring in the advanced stages of phthisis.

Potassii Chloras, with morphia, glycerin, and syrup, is recommended for redness of the tongue, etc.

**Sodii Biboras.* Sir T. WATSON recommends the mel boracis.

THE CONSTIPATION OF.

Ferri Chloridi Tinctura sometimes relieves constipation in phthisis, by giving tone to the feeble muscular fibres of the bowels.

**Pozæphyllin* often gives better results than any other purgative.

THE COUGH AND EXPECTORATION OF.

Anisæted. The infusion of aniseed (ʒiij-iv of the bruised seeds in Oss of

water, at 120°, to stand until cool) has considerable power allaying the irritation on which the cough of phthisis depends. Sir T. WATSON recommends it as a vehicle for paregoric.

Codeia has been given with benefit.

Conium Inhalations often greatly relieve the cough.

**Gallicum Acidum* is frequently useful for arresting excessive expectoration.

**Hydrocyanicum Acidum Dilutum* is a valuable addition to cough mixtures, particularly when there is much irritation.

Hyoscyamus. Inhalation of the vapor of henbane (gr. iv-vj of the extract in Oj of boiling water) often affords great relief to the cough and dyspnoea.

Lactuca. The extract has been employed as a sedative.

Morphia and Opium are frequent additions to cough mixtures in phthisis.

Plumbi Acetas is of service in diminishing excessive expectoration.

Potassii Bromidi. The following prescription is in use for the cough in chronic pulmonary affections, in the Charity Hospital, New York:

528.	℞.	Potassii bromidi,			
		Potassæ chloratis,			
		Ammonizæ muriatis,	āā	ʒiiss	
		Syrupi tolutani,		f.ʒiv.	M.

A tablespoonful every few hours.

Potassii Cyanidum is frequently prescribed for the cough of phthisis, by Prof. DA COSTA.

Prunus Virginiana is an admirable calment.

Tannicum Acidum. Dr. RINGER strongly recommends the application of the glycerine of tannin, with a small quantity of morphia added to the throat; when the cough is troublesome, a good night rest may often be obtained by applying it at bedtime.

Dry Cupping on the chest, under the clavicles, often gives great relief in distressing dyspnoea and cough.

THE DIARRHŒA OF.

Argenti Nitras, in doses of gr. j three or four times daily, is regarded by Dr. GRAVES as one of the best remedies in the diarrhœa of phthisis.

Bismuthi Subnitras, in doses of gr. v three or four times daily, has been recommended.

Calcis Carbolas, in doses of gr. j, combined with hyoscyamus, is recommended by Dr. HABERSHON (*Lancet*, January 4th, 1868), when there is evidence of fermentive changes in the colon.

**Cupri Sulphas* is recommended by Sir T. WATSON, combined as follows

529.	℞.	Cupri sulphatis,			
		Pulveris opii,		āā	gr ¼.

For one pill.

Ferri Chloridi Tinctura is often very useful.

* *Gallicum Acidum* is an excellent remedy, alone or combined with sulphuric acid.

* *Hæmatoxyli Lignum* is recommended by Dr. F. W. PARRY, in the following combination :

530. R.	Extracti hæmatoxyli,	ʒij	
	Misturæ cretæ,	ʒxij	
	Vini ipecacuanhæ,	f.ʒij	
	Vini opii,	f.ʒj.	M.

A tablespoonful twice, thrice, or oftener daily.

Hydrargyrum cum Cretâ, in half-grain doses, is sometimes effectual in checking the discharge.

Nitricum Acidum is recommended by Dr. BARLOW, in the following formula :

531. R.	Acidi nitrici diluti,	ʒxij	
	Tincturæ opii,	ʒv-x	
	Syrupi,	f.ʒj	
	Aquæ cinnamomi,	f.ʒx.	M.

Make a draught, to be taken every fourth or sixth hour.

* *Opium*, alone or in combination with acetate of lead, with sulphuric acid, etc., is a most valuable remedy in the diarrhœa of phthisis.

* *Plumbi Acetas*, in combination with opium, sometimes succeeds after the failure of stronger direct astringents.

* *Rheum* is sometimes useful. Its astringency is said to be increased, and its purgative power diminished, by *roasting* (in an iron crucible, until it loses two-thirds of its weight); then, given in doses of gr.v-x, it is highly recommended as giving better results than chalk or opium.

Oleum Ricini is serviceable in those cases in which the diarrhœa seems to be excited by irritating matters in the intestinal canal. Dr. BARLOW, in such cases, prescribes the following :

532. R.	Olei ricini,	ʒā	f.ʒij	
	Tincturæ rhei,		ʒiv	
	Tincturæ opii,		f.ʒiv	M.
	Aquæ cinnamomi,			

To be taken at a draught.

* *Sulphuricum Acidum Dilutum* is often very useful. It may be combined with opium (ʒxv-xx), with tincture opii ʒx-xx), or, as advised by Dr. GRAVES, with henbane.

Tormentillæ Radix is said to be particularly useful in the diarrhœa of phthisis.

Zinci Oxidum is highly praised by Dr. WARING CURRAN, in combination with conium.

THE DYSPEPSIA OF.

**Hydrocyanicum Acidum* is found by Dr. WILSON FOX, to be, in the irritable dyspepsia of phthisis, the most efficacious remedy, in combination with carbonate of potash or soda, and infusion of columbo, two or three times a day, between meals.

THE DYSPNŒA OF.

**Chloroformum*. A few whiffs often afford signal relief.

Croton Oil liniment to the chest is frequently useful in distressing dyspnœa.

Hyoscyamus, in vapor (gr. iv-vj of extract, to Oj of boiling water), is sometimes prescribed with benefit.

Stramonium gives great relief (gr $\frac{1}{4}$ -j daily, of the extract), when the dyspnœa is constant.

Dry Cupping under the clavicles is frequently useful.

THE HEMMORHAGE OF.

See Hæmoptysis.

THE NEURALGIA OF.

Ammonii Chloridum is highly recommended by Dr. ANSTIE, in the intercostal neuralgia of phthisical patients.

Zinci Oxidum is said by Dr. WARING CURRAN, to act, in combination with conium, as a sedative to the wandering pains of phthisis.

THE PROFUSE PERSPIRATIONS OF.

Aceticum Acidum Dilutum, alone, or with cologne water (1 part of vinegar, 1 of eau de cologne, and 2 of water), affords great comfort, sponged over the chest and upper part of the body.

Apiol has been recommended in the night sweats of phthisis.

Atropia. Perhaps the most efficient of all remedies in arresting the night sweats of phthisis, is atropia or belladonna. The former, as more readily taken, should be preferred. The average dose is gr. $\frac{1}{8}$, taken at bedtime, either in pill form or in solution; or it may be administered by hypodermic injection. It also seems to act beneficially on the general course of the disease.

Ferri Chloridi Tinctura often lessens the night sweats of phthisis, particularly if the oxide of zinc be also given.

Gallicum Acidum, alone or with sulphuric acid, proves very effectual.

Ipecacuanha. DR. GRAVES says that a few grains of Dover's powder at bed-time will often put a stop to the profuse perspirations. He observes, it is hard to account for this, but it is a fact.

**Kino*. Sir T. WATSON recommends pulv. kino co. as having much power over the perspirations. It has the further advantage that (containing opium) it tends to control the diarrhœa and check the cough.

umbri Acetas has a certain influence over the profuse perspirations, but less than it possesses over the diarrhœa and hemorrhage of phthisis.

Sphæricum Acidum Dilutum has, according to Dr. R. CHRISTISON, no equal in the profuse perspirations of phthisis.

noxium Acidum is often very effectual when given with quinine, or with nitric acid.

ci Oxidum is frequently highly useful.

ci Sulphas is very highly praised by Dr. BARLOW in the night sweats of phthisis. He employs the following formula :

533.	℞.	Zinci sulphatis,	gr.j	
		Extracti hyoscyami,	gr.iv.	M.
For one pill.				

THE VOMITING OF.

Domica. The tincture (℥x) will often, according to Dr. DOUGLASS POWELL (*Practitioner*, November, 1868), arrest the vomiting of phthisis, and in some cases, where there is little catarrh, *strychnia* is efficient for this purpose.

THE PREVENTIVES OF.

Acidum Dilutum is praised by Dr. GRAVES as a preventive of phthisis. The chest should be washed daily with vinegar and water, beginning with it tepid, and gradually reducing the temperature, until it can be employed completely cold.

ferum. The experiments of M. COSTER upon the efficacy of iron in preventing the development of tubercular disease are important. A number of dogs and rabbits were placed in circumstances generally supposed to be the most favorable to the development of scrofula and tubercular disease, namely, cold damp cellars without light, where they were prevented from moving, and exposed to a most unwholesome atmosphere. Those fed upon ordinary food became, with one or two exceptions, tuberculous; whilst not one fed upon ferruginous bread (containing half an ounce of the sesquioxide of iron in each pound of bread), presented even a trace of tubercles. But, as Dr. SYMES THOMPSON remarks, iron cannot be rapidly assimilated in large quantities by feeble persons, but must be taken, like food, hour by hour, day by day, and year by year, till the blood is no longer poor, the tissues no longer short-lived and unresistant, and until the "tubercular dyscrasia" is overcome.

PLEURISY, ACUTE.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

In acute pleurisy, during the first stage, or that of *hyperæmia*, the best practitioners of all times and of all countries have taken blood from the arm, provided the strength be good and the symptoms sthenic. If, says LÆNNEC, after one or two bleedings the pain in the side and fever have not abated, blood should be taken from the side by leeches or cupping. The practitioner should also remember that effusion often takes place after the bleeding, during the subsidence of the inflammation, so that the breathing is often more oppressed, and the symptoms for a time aggravated, although the condition of the patient is in reality improved. The lung however, soon gets accustomed to this new state of things; and the fluid in a few hours beginning to be absorbed, the symptoms are generally ameliorated. The patient should be bled in an upright posture, in a full stream, until he can take a deep breath freely, or faints—from ten to twenty ounces.

Hot poultices and *leeches* should always be employed when pain on inspiration is present, of a "catching" or "stabbing" nature.

Tartar emetic, says LÆNNEC, is, in general, well supported in pleurisy, and contributes powerfully to subdue the inflammatory tendency; but, nevertheless, when the pain in the side and fever have ceased, it loses further power over the disease; at least, it does not appear to promote the removal of the fluid effused, so that its use must generally be abandoned as soon as the acute symptoms have passed away.

Blisters are not to be used until the acute stage is past; but when the pain has ceased for some days, and absorption proceeds slowly, and the disease promises to become chronic, a succession of blisters may be applied.

After free evacuation of the bowels has been effected, *calomel*, to the extent of producing the *slightest* mercurialization, is the most beneficial line of treatment in certain cases *only*—those which do not acknowledge any *constitutional diseases* as their cause. The more rapidly slight mercurialization can be produced the better; hence the following prescriptions are useful:

534. R. Hydrargyri chloridi mitis, gr.xviiij
 Pulveris opii, gr.ij
 Syrupi, q. s. M.

Divide into 12 pills. Take one every half-hour, until all are taken. At the same time rub *mercurial ointment* into the skin of the affected side, near the axilla, every fourth hour. The amount of opium may be increased if the pain is very acute.

Or,

535. R. Hydrargyri chloridi mitis, gr.xij-xxiv
 Pulveris digitalis, gr.vj
 Pulveris opii, gr.vj-xij
 Syrupi, q. s. M.

Divide into 12 pills. One to be taken every three or four hours, and the whole side to be covered with a piece of linen spread with *mercurial ointment*, over which is to be placed a poultice covered with oil silk.

The patient must be carefully watched that neither *ptyalism* nor *narcotism* be produced. The moment mercurial action has been established, the further administration of the mineral must cease.

Opium and digitalis are advised to be continued after the use of calomel has been suspended. With these may be given two grains of *squills* or of *nitrate of potassium*, which will act beneficially as a diuretic. After twelve or more hours very small quantities of *tartar emetic* in solution may be given at night, combined with small doses of *opium* and *ipecacuanha*, to allay the cough and general irritation.

After the febrile action has in some measure subsided, and the active stage of the disease is at an end, a *blister* may be applied over the lateral region of the chest, but not over the seat of pain; and if the fluid continues to accumulate, the blisters ought to be repeated, so as to maintain a surface at a distance from the affected part in a constant state of counter-irritation. Diuretics ought, at the same time, to be given freely. The *compound tincture of iodine*, in doses of *twenty minims, freely diluted*, is a valuable medicine at this juncture.

PROF. ROBERTS BARTHOLOW, M. D., CINCINNATI, OHIO.

536. R. Morphie sulphatis, gr.xvj
 Aquæ destillatæ, ℥.ʒj. M.

Dissolve and filter. Dose, for a hypodermic injection, five to ten minims.

Nothing can be more satisfactory than the treatment of pleurisy *in its early stage* by the hypodermic injection of morphia. It relieves at once the pain, and arrests or diminishes the morbid process.

PROFESSOR J. M. DA COSTA, M. D., PHILADELPHIA.

537. R.	Potassii acetatis,	gr. xv	
	Spiritus ætheris nitrosi,	f. ʒss	
	Vini ipecacuanhæ,	gtt. iij	
	Syrupi tolutani,	f. ʒss.	M.

For one dose, four times a day. Useful in subacute pleurisy.

538. R.	Tincturæ veratri viridi,	ʒxxiv	
	Potassii acetatis,	ʒss	
	Morphiæ acetatis,	gr. ss	
	Liquoris potassii citratis,	f. ʒijss	
	Syrupi tolutani,	f. ʒss.	M.

A dessertspoonful every three hours in dry pleurisy.

Locally, apply, two or three times a day, turpentine stupes.

RÉSUMÉ OF REMEDIES.

Antimonii et Potassii Tartras, in doses gr $\frac{1}{8}$ - $\frac{1}{4}$, sometimes proves useful in the earliest stages of acute pleurisy in young, plethoric subjects.

Digitalis is recommended by Dr. AITKEN.

Hydrargyrum. Mercury in pleurisy is objected to by the majority of modern practitioners. It is contra-indicated if there be an organic disease of the kidneys.

**Morphia*, hypodermically, gives the most satisfactory results in the early stage of pleurisy.

**Opium* is very desirable in many cases, relieving pain and procuring sleep.

Veratrum Viride is frequently employed with benefit.

Blood-letting. Venesection is rarely resorted to. The local abstraction of blood by **leeches* is often of great service.

Diuretics are useful after the febrile action has subsided.

Stimulants are sometimes indicated. Dr. ANSTIE relates a case successfully treated by stimulants, the only other remedy given being morphia in large doses.

EXTERNAL REMEDIES.

Cantharis. *Blisters* are rarely productive of benefit in the early stages. But after the pain and febrile action have subsided, and especially after effusion has taken place, they are of great advantage.

Turpentine stupes may be resorted to at a far earlier period than blisters, and in addition to relieving the pain, they seem to aid in arresting the inflammatory action.

**Poultices*. The prolonged use of light, soft, hot linseed poultices, large enough to cover the whole side, is of great benefit. Mercurial ointment may sometimes be applied under the poultice.

PLEURISY, CHRONIC.

PROFESSOR WILLIAM AITKEN, M. D., EDINBURGH.

539. R. Pulveris digitalis,
 Pulveris scillæ,
 Pilulæ hydrargyri, ʒʒ gr.ss. M.
 For one pill, two or three times a day, as a diuretic in chronic pleuritic effusion.

Also,

540. R. Hydrargyri chloridi corrosivi, gr.iv
 Tincturæ iodinii compositæ, f.ʒiv-vj
 Glycerinæ, f.ʒiij
 Aquæ destillatæ, f.ʒivss. M.
 For a lotion, to be applied over the chest by spongeo-piline, or by lint covered with oiled silk.

One or other of the following ointments may also be rubbed in on the skin, over the side of the chest, namely:

541. R. Hydrargyri chloridi corrosivi, gr.iv-v
 Unguenti iodinii compositæ, ʒiv-vj
 Adipis, ʒiv-ʒj. M.

Or,

542. R. Hydrargyri chloridi corrosivi, gr.iv-v
 Potassii iodidi, ʒij
 Aquæ destillatæ, q. s. to make solution.
 Adipis, ʒj. M.
 Make an ointment.

DR. CRUVEILHIER, FRANCE.

543. R. Tincturæ aloës, f.ʒj-ij
 Tincturæ scillæ,
 Tincturæ digitalis, ʒʒ gtt.xx. M.
 To be taken every two or three days, in the morning, on an empty stomach, in a small glass of a diuretic infusion. Used in chronic pleurisy with effusion. Flying blisters on the chest.

PROFESSOR J. M. DA COSTA, M. D., PHILADELPHIA.

544. R. Potassii iodidi, ʒj
 Extracti pruni virginianæ fluidi, f.ʒj
 Spiritus juniperis compositi, f.ʒiij. M.
 A tablespoonful thrice daily.
545. R. Potassii acetatis, ʒj
 Tincturæ digitalis, f.ʒij
 Extracti cinchonæ fluidi, f.ʒj
 Aquæ, f.ʒij. M.
 A teaspoonful thrice daily, in pleuritic effusions.

546. R. Potassii iodidi, ʒij
 Tincturæ scillæ, f.ʒvj
 Tincturæ opii camphorataæ, f.ʒiiss
 Misturæ acaciæ, f.ʒvj. M

A teaspoonful four times a day, in chronic pleurisy with consolidation of the lung. Also, a good nourishing diet; either whisky or half an ounce three times a day; and counter-irritation by means of tincture of iodine.

Afterward, when effusion has begun to disappear, the following tonic diuretic may be ordered :

547. R. Tincturæ ferri chloridi, f.ʒj
 Acidi acetici, f.ʒj. M.

And add :

548. R. Liquoris ammonii acetatis, f.ʒv
 Syrupi aurantii corticis, f.ʒij. M.

A dessertspoonful increased to a tablespoonful, thrice daily.

549. R. Potassii iodidi, ʒiv
 Potassii acetatis, ʒss
 Elixiris cinchonæ, f.ʒiij
 Curaçao, f.ʒj. M.

A dessertspoonful thrice daily, in pleuritic effusion, with roughness above effusion. Also a blister and an occasional cathartic.

DR. NÉLIGAN.

550. R. Iodini, ʒijss
 Potassii iodidi, ʒj
 Camphoræ, ʒss
 Alcoholis, f.ʒij. M.

Dissolve successively in the alcohol, the iodine the iodide and the camphor. A counter-irritant liniment, to be employed in pleurisy with effusion, with caution, however, on account of its energetic vesicant powers. Useful when the action upon the kidneys of a cartharidal vesicant is feared.

THOMAS HAWKES TANNER, M. D., LONDON.

551. R. Pilulæ hydrargyri, gr.ijj
 Pulveris digitalis, gr.ss
 Pulveris scillæ, gr.iss. M.

For one pill. To be taken as an alterative and diuretic, two or three times a day. (The dose in this pill differs somewhat from the same combination given by Dr. AITKEN. (F. 539.)

Very often, however, mercury in any shape does harm. The compound tincture of iodine, the iodide of iron, or cod-liver oil, is much more likely to be useful.

The patient ought to be kept on a moderate diet, free from stimulants. A series of flying blisters may be applied. Purgatives as well as diuretics should be administered.

CHARLES WEST, M. D., LONDON.

552. R.	Potassii iodidi,	gr. xij	
	Potassii nitratis,	gr. xxx	
	Spiritus aetheris nitrosi,	f. ʒj	
	Tincturae scillae,	ʒlxxx	
	Tincturae digitalis,	ʒlxxiv	
	Syrupi aurantii corticis,	f. ʒss	
	Aquam,	ad. f. ʒiv.	M.

Tablespoonful every four hours, for a child six years old.

Employed in the treatment of pleuritic effusion, and continued steadily for several days. Its action may be seconded by a small dose of mercury given once or twice a day, as one grain of calomel, or three of gray powder. The mercury may be discontinued at the end of a week, but the iodide of potassium may be persevered with for two or three weeks.

In regard to fluids in the pleural cavity see *Empyema*.

RÉSUMÉ OF REMEDIES.

Digitalis is sometimes given, combined with squill and mercury, in chronic pleuritic effusion.

Hydrargyrum. Blue pill is sometimes useful, combined with digitalis and squill.

Jaborandi has proved very serviceable in several cases of pleuritic effusion; in a late number of *La France Médical*, Dr. MICHOU reports two cases, the happy termination of which certainly appears to be due to the action of this drug. In both cases the patients were rather bad subjects, the symptoms severe, and other remedies unsuccessful. Five grammes (75 gr.) of jaborandi leaves were given in infusion, and in both cases this dose was soon followed by copious expectoration, salivation, and diaphoresis, together with marked absorption of the effusion, and speedy relief to all the symptoms.

Oleum Morrhuæ, conjoined with iron and tonic regimen, is of benefit in pleuritic effusions associated with debility.

Potassii Acetas is, in some cases, prescribed by Prof. Da. COSTA.

Potassii Iodidum, variously combined according to indications, is of the highest value in restraining inflammatory action and promoting absorption. (F. 544, 546, 549, 550.)

Quinia Sulphas, in the advanced stages, when the case assumes a typhoid character, especially when the patient is old or debilitated, is of great service.

Scilla is sometimes given, combined with digitalis and mercury. (F. 551.)

Tannicum Acidum. Dr. DUBOUÉ (in the *Gazette Hebdomadaire*, Dec., 1872,) relates the remarkably good effects which he has obtained from the use of tannic acid. The *exclusive* use of tannic acid, in eleven grave cases of purulent pleurisy attended with spontaneous evacuation of pus, was entirely successful in a very

short time in eight cases; the ninth case has been under treatment for a long time, with only partial success; two cases have ended in death.

He usually administered the tannin in pills:

553. R. Acidi tannici, gr.ij
Confectionis rosæ, q. s.

For one pill. Four to eight daily, one-half in the morning, remainder in the evening.

Dr. DUBOUE was guided, of course, by the condition of the stomach, which bore the drug remarkably well as long as there was a source of suppuration, as also by the effects obtained, a not only the return of appetite, diminution of expectoratic sweats, etc.

Diuretics are, of course, indicated in chronic pleuritic effusions. The principal drugs employed are *Digitalis*, combined with squin and mercury, with acetate of potash, or with iodide of potassium; *Ferri Chloridii Tinctura*; *Potassæ Acetas*; *Potassæ Nitras*; *Scilla*.

EXTERNAL REMEDIES.

Cantharis Blisters may be employed with manifest advantage.

Counter-irritants are of service. The principal employed are *Aquæ Ammoniacæ*; *Hydrargyri Chloridum Corrosivum*, combined with iodine; (F. 541.)* *Tincture of Iodine*.

PNEUMONIA.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

554. R. Antimonii et potassii tartratis, gr.ijj-xij
Hydrargyri chloridi mitis, gr.xij. M.

For twelve pills. One to be given every five or six hours, according to the severity of the disease.

This combination is believed to have saved a much larger number of cases than antimony alone. It is to be adopted in some cases. The bowels should be well cleaned out before resorting to it. So soon as the gums are touched, the prescription should be discontinued.

PROF. BOUCHUT, PARIS.

555. R. Veratriæ,
Pulveris opii, ʒss gr.iss
Pulveris ipecacuanhæ, gr.ijj
Syrupi, q. s. M.

For twenty pills. From one to five to be taken during the day.

PROFESSOR HARVEY L. BYRD, M. D., BALTIMORE.

556. R. Potassii bromidi, ʒj.
 Make twelve powders. One powder every two hours, and between each dose, as long as necessary to keep down activity in the circulation, two drops of Flemming's tincture of aconite.

PROF. J. M. DA COSTA, M. D., PHILADELPHIA.

557. R. Potassii iodidi, ℥iv
 Tincturæ cinchonæ compositæ, f.ʒiv. M.
 A dessertspoonful thrice daily, in subacute pneumonia with pleurisy.

Also,

558. R. Emplastri cantharidis, 4x5 in.
 To be followed by a poultice and dressed with basilicon ointment.

PROF. NATHAN DAVIS, M. D., CHICAGO.

In the treatment of active sthenic pneumonia in its first stage, when the patient has been strong and healthy, a free bleeding from the arm (oz. 16-20) during the first day or two, followed by arterial sedatives, just enough to control the circulation, united with just enough anodynes to lessen irritability and pain, constitutes the most efficient treatment.

When the disease is associated with a typhoid condition of the system, as is usually the case in cities, bleeding is not well borne. In this class, Dr. DAVIS has succeeded best by giving, during the first two or three days, the two following prescriptions:

559. R. Ammoniaë muriatis, ʒiij
 Antim. et pot. tartratis, gr.ij
 Morphiaë sulphatis, gr.iiij
 Syrupi glycyrrhizæ, f.ʒiv. M.
 A teaspoonful every four hours.

560. R. Hydrarg. chloridi mitis, āā gr.vj
 Ipecac. pulveris, gr. iiij
 Opii pulveris, gr. xxx.
 Sacchari albi, M.

For six powders. One powder every four hours alternately with the preceding prescription. At the same time cover the chest with emollient poultices.

At the end of twenty-four hours the powders should be omitted, and if the bowels have not been moved, a mild laxative should be given; but the muriate of ammonia mixture may be continued every three or four hours for several days. If the symptoms are not favorably modified by the third or fourth day, a blister from

three to six inches square should be drawn on the side of the chest most affected. If the pulse becomes soft and frequent, the breathing abdominal, and the lips of a leaden hue, the following may be given with advantage between the doses of the other medicine:

561. R. Quiniæ sulphatis, gr.ij
Ammonia carbonatis, gr.jv. M.

For one dose.

If delirium or morbid vigilance becomes troublesome, add chloroform, ℥x-xij, to each dose of the ammonia mixture. This will generally procure sleep or greatly improve the condition of the patient. Where a diurnal remission of the fever indicates the presence of malarious influence, fair anti-periodic doses of quinine should be given during the remission.*

PROF. FELIX VON NIEMEYER, M. D., TÜBINGEN.

562. R. Quiniæ sulphatis, ℥j.
For ten pills. One every two hours.

According to experiments of our author in the administration of quinine in this disease, it is called for when there is great danger, arising chiefly or entirely from excessive elevation of the temperature of the body. It may then be given as above, or in two or three ten-grain doses within a few hours.

JOHN POPHAM, M. D., CORK.

563. R. Potassii bicarbonatis, ʒj-vj
Misturæ acaciæ, f.ʒiij. M.

A dessertspoonful in water, four, six or eight times in the twenty-four hours.

The evidence of the good effects of this alkaline treatment appears on the second or third day. (*British Medical Journal*, December 28th, 1869.) It acts as a sedative by delaying the cough and abating the state of congestion on which it depends. A blister applied for four or six hours, but not for suppuration, is a valuable auxiliary. Suppuration from blistering is exhaustive and prejudicial.

A. T. H. WATERS, M. D., LONDON.

Our author is opposed to the prolonged administration of *tartar emetic* in small doses. There are very few cases that are not injured

* *Clinical Lectures on Various Important Diseases*, Phila., 1874.

by such a practice, and whenever the dose produces a depressing effect, or whenever it gives rise to sickness or purging, it does harm, and should not be persevered with. At the same time, there can be no doubt that large doses (gr.j-ij) may be safely given in some cases, and continued even for days, without producing its physiological effects—vomiting, purging, etc., and in such instances the antimony appears to do good; the symptoms of the pneumonia yield during its administration, and convalescence becomes established. But whilst these full doses of tartar emetic are well borne by some patients, it is doubtful whether it is ever desirable to exhibit them; for he believes we can get all the good effects which the drug is capable of affording, by using it in smaller quantities. The treatment employed by Dr. W., with a loss of only one case in forty-four, consisted mainly (apart from the occasional use of antimony, as above) of *carbonate of ammonia*, combined with *chloroform* (F. 568), *chloric ether*, *opium*, a generous, nutritious diet, beef tea, milk, etc., with the judicious use of *alcoholic stimulants* from an early period. *Turpentine stupes*, *sinapisms*, and *linseed meal poultices* were employed in the early stages of the disease, and *blisters* in the more advanced.

Dr. W. considers that too high a value has been placed upon *mercury* as a remedy in the stage of hepatization, for which it has been considered peculiarly applicable. He finds that in these cases it possesses no special properties for promoting absorption of the effused matters. As a purgative, it is very useful, as it tends to relieve the portal system, often overloaded in pneumonic inflammation; but if given in frequent doses, or with a view of producing salivation, its effects, save in a few exceptional cases, will be more or less prejudicial. It was only administered in one of the above-mentioned forty-four cases, and then it in no wise hastened, in the opinion of Dr. W., the recovery.

Opium is very desirable in many cases, often relieving pain, allaying the distressing cough, and procuring sleep. The pain in the side which so frequently accompanies pneumonia, and for which depletion was formerly prescribed, may generally be relieved by a dose of opium. It is believed of great value in arresting the delirium so apt to supervene in this disease. On the first appearance of the indications of approaching delirium, *e. g.*, want of sleep, restlessness, slight staring of the eyes, and slight tremor of the hands, a few doses of opium, and the exhibition of stimulants and

nourishment, may at once arrest the attack. At the same time, depletory measures should be avoided; the aim should be to improve the nutrition of the brain and give vigor to the circulation; for when these results are accomplished the delirium will disappear.

Few cases are now met with which are benefited by general bleeding, and the abstraction of blood by cupping or leeching is not often necessary.

The pulse affords an excellent indication as to the need of stimulants. As a rule, it may be said that when the pulse is below 100 the case is not a grave one, and will yield to treatment of simple character; but when it rises to 110, 120, and upward, the case is more serious. *The more frequent the pulse, the greater is the need for stimulants*, and it is very remarkable to see the effect they produce on the pulse when it is abnormally frequent, in some cases of pneumonia. Intermission of the pulse is an invariable indication for the free use of stimulants. In the pneumonia of aged people stimulants may be given without hesitation.

GERMAN HOSPITAL, PHILADELPHIA.

564. R. Extracti cinchonæ, ʒj
Moschii, gr.vj
Syrupi aurantii corticis, f.ʒj
Aquæ aurantii florum, f.ʒiij. M.

By tablespoonful doses in pneumonia with adynamic symptoms.

565. R. Ammoniæ acetatis, ʒijss
Extracti cinchonæ, ʒss
Tincturæ canellæ, f.ʒijss
Syrupi aurantii corticis, f.ʒj
Aquæ menthæ piperitæ, f.ʒiv. M.

By tablespoonful doses, from hour to hour, in adynamic pneumonia.

566. R. Ipecacuanhæ, gr.xv
Antimonii oxy-sulphureti, gr.vij
Camphoræ pulveris, gr.xv
Sacchari lactis, ʒijss. M.

Divide into ten powders. One powder every two hours, in adynamic pneumonia.

567. R. Antimonii oxy-sulphureti, gr.ij
Camphoræ pulveris, gr.v
Sacchari, ʒiss. M.

Divide into twelve powders. From four to six a day, to facilitate expectoration.

RÉSUMÉ OF REMEDIES.

Ammonii Carbonas is recommended, combined with chloroform, by Dr. A. T. H. WATERS, in cases in which antimony is contra-indicated. His formula is :

568. R.	Ammonii carbonatis,	gr. iv	
	Spiritus chloroformi,	℥xx	
	Aquæ camphoræ,	f. ʒx.	M.

To be given every three or four hours; may be given either with or without alcoholic stimulants.

Ammonii Chloridum, combined with ether, is often productive of excellent results in the advanced stages of pneumonia.

Antimonii et Potassii Tartras is much less employed in modern therapeutics than formerly. Large and repeated doses are now seldom given, and small doses (gr. $\frac{1}{10}$ – $\frac{1}{4}$) only in young, robust subjects, when febrile action is strong, and in the earliest stages of the attack. Very few cases are benefited, or escape injury, from its prolonged administration. Dr. AITKEN has obtained good results by combining it with calomel. For Dr. WATERS' opinion in regard to its use, see p. 247.

Antimonii Oxy-iodidum is said to be particularly useful as an alterative and diaphoretic in the second stage of pneumonia.

Apomorphia has been favorably reported upon.

Belladonna is highly spoken of by Dr. HARLEY, who found that under its use the grave symptoms rapidly subsided, and convalescence was speedily established.

Camphora is recommended by Dr. COPLAND, as one of the most valuable remedies in *asthenic* pneumonia, in doses of gr. ij–viij, every four, five, or six hours, combined with calomel and opium, or with antimony and henbane, according to the character of the attack; the latter being preferred when the inflammation approaches the sthenic form, in which case the doses of the camphor may be lessened.

Chloroformum, by inhalation (8 or 10 drops at a time, three or four times a day,) is said to relieve the stitch in the side and palliate the cough and oppression.

Cinchona. See Quiniæ Sulphas.

Digitalis has been much employed of late years. M. RONY-SAUCEROTTE regards it (*Practitioner*, March, 1869,) as one of the best means of relieving the febrile and other grave symptoms; less active as an antipyretic than veratrum, but more easily managed and less offensive; acting more slowly than leeches, but producing more durable results.

Ergot. Ergot in powder has been used successfully in *croupous pneumonia* by Dr. WYCESK (*New Remedies*, No. 2.) He would not advise it, however, in large infiltrations, in emphysema, in cases of rupture of cerebral vessels, or in exhausted and decrepit individuals, as it might in such cases prove hazardous.

Eucalyptus Globules. When pneumonia passes unto *pulmonary gangrene*. Dr. BUCQUOV, of l' Hôpital Cochin, Paris, states that no drugs have given him better results than eucalyptus globulus. He uses it in the form of an alcoholate—two grammes (half a drachm) dissolved in a mixture of water, gum, orange-flower water, and syr. Out of the various cases he has had under his care at Cochin

five ended in cure, whilst in all the others there was a favorable modification of the odor of the breath, the sputa, and the violent cough, after carbolic acid had failed.

Hydrargyri Chloridum Mite was formerly regarded as indispensable, combined with ether, antimony or opium, in the treatment of pneumonia. Although still employed, it is very much less so of late years.

Ipecacuanha is sometimes serviceable as an expectorant and diaphoretic but is not to be trusted to alone, nor continued when it nauseates and prevents the patient from taking nourishment.

Moschus, in doses of gr. xxiv-xxx daily, has been recommended when pneumonia assumes a typhoid character, particularly if attended with delirium.

**Opium* is frequently a valuable remedy in arresting delirium, relieving pain and cough, and inducing sleep.

Plumbi Acetas is highly recommended in *asthenic* pneumonia, occurring in debilitated subjects. It may be combined with quinine (gr. of each every two hours), or, if the cough be very violent, opium may replace the quinine. Dr. STROHL (*Journal de Médecine*, February, 1872,) considers it to be the best of the internal remedies for pneumonia. It is preferable, he remarks, to tartaric emetic, to digitalis, and to veratria, because its action is more certain, more prompt, and more free from inconveniences. Its action is incontestably superior in the pneumonia of old people. About five grains may be taken per diem in solution, in divided doses. He has never observed the slightest indication of saturnine poisoning in the course of this treatment. Far from producing constipation, it rather occasions diarrhoea. It can be administered at all ages. It does not interfere with any of the phenomena concomitant to the critical resolution, as expectoration, diaphoresis, etc. Under its action the pulse rapidly diminishes in frequency; the febrile symptoms and the temperature fall in the course of six days. The use of the lead may be intermitted as soon as the fever has abated and resolution has fairly set in.

Potassæ Liquor, in doses of ℥x-xv, added to an ordinary expectorant mixture, is often beneficial in the advanced stages of pneumonia when the sputa is scanty, thick and viscid.

Potassii Bromidum is prescribed by Prof. BYRD. (F. 556.)

**Potassii Iodidum* is frequently useful, combined according to circumstances, in the advanced stages of pneumonia. (F. 557.)

Potassii Nitras has been recommended.

**Quiniæ Sulphas* is of the highest value in *asthenic* pneumonia, and in the advanced stages of pneumonic inflammation of the old and debilitated. Under the administration of gr. v. every third hour, the pulse becomes slow and steady, and the respiration free. If the patient be young, with evidences of capillary congestion generally over the system, local depletion should precede its use. Dr. NIEMEYER recommends quinine (F. 562) when there is great danger, arising from excessive elevation of the temperature of the body.

Sanguinaria is recommended in *typhoid* pneumonia, when respiration is very difficult, the extremities livid, and the pulse full, soft and compressible. The dose should be large in proportion to the violence of the disease, and repeated until it excites vomiting or relieves symptoms.

**Senega*, in decoction, is recommended by Dr. C. J. B. WILLIAMS, when the inflammatory symptoms have subsided, and any amount of debility, with weak pulse, cool skin, cough, and dyspnoea remains. Cases which have resisted other remedies, often almost immediately improve by its use, the pulse becoming slower, the breathing freer, the tongue cleaner, and the strength greater.

Serpentaria is productive of good results in typhoid pneumonia.

Turpentine. This is an important remedy in acute pneumonia. Dr. R. E. POWER writes in the *British Medical Journal*, 1876, that for many years he has adopted the following treatment with great success: First, a hot terebinthinate stupe is applied until the skin is well reddened; then a little plain oil of turpentine sprinkled over the affected part; finally, a blanket wrung out of boiling water, covered with a dry blanket. He has had patients delirious and gasping for breath, with sordes on the lips, fall asleep as the last blanket was applied and awake out of danger. The internal remedies subsequently used were quinine and tincture of perchloride of iron. Diet: milk and water, beef-tea, lemonade *ad libitum*, occasionally wine. The application of the turpentine to little children must, of course, be modified to suit the age. In all cases, keep on the swathe three or four days or more uninterruptedly. As a rule, the active treatment need not be pursued very long, the patient being generally out of danger in twenty-four or forty-eight hours. The sequelæ of pneumonia are much modified; frequently altogether escaped.

Valeriana. The ammoniated tincture, combined with camphor, is sometimes employed in the advanced stages of pneumonia, but is inferior to musk.

Veratria has been employed with great advantage. It may be given in pills or in solution (if the stomach be irritable, with an effervescing draught). Prof. VOGT, of Berne, commences with gr. $\frac{1}{8}$, every two or three hours, until it produces vomiting or diminution of the pulse.

**Veratrum Viride* is much employed in pneumonia. The plan recommended by Dr. NORWOOD, is to begin with gtt. viij of the tincture every third hour, and add one drop to each successive dose, until the pulse is sufficiently reduced or nausea supervenes; the subsequent doses are then to be regulated so as to sustain the depressed state of the circulation, with as little disturbance of the stomach as possible, any excess of nausea being controlled by a little morphia. With the reduction of the pulse the inflammatory symptoms decline and convalescence ensues. Many physicians have reported very favorably upon this remedy.

Alkalies often prove useful in the advanced stages, when the expectoration is thick and viscid. (F. 563.)

- Blood-letting.* Venesection is seldom employed in pneumonia. Lo bleeding, by cupping or leeching, often affords great relief to pain, but most practitioners prefer to seek this relief by opium.
- **Stimulants* are often indicated, particularly in cases of very frequent pulse, and in aged people.

EXTERNAL REMEDIES.

- Baths.* On the theory that the danger in pneumonia arises from enfeeblement of the heart, Dr. T. JURGENSEN, of Kiel, has advocated the withdrawal of heat from the body by cold baths as often the temperature reaches 104°. The duration of the bath ought to be from seven to twenty-five minutes, and with the old and weak tepid water may be used. Before the use of the bath stimulant ought always to be administered, on account of the increased effort which the bath entails on the heart for the time being. In addition to the lowering of the temperature by the bath, JURGENSEN recommends the administration of quinine doses amounting to thirty grains, dissolved in water by the addition of acid. This quantity is to be administered every second evening between six and eight o'clock. There is no danger, he says, in even doubling this dose. He gives a nutritious diet with a moderate amount of wine.
- Blisters* are not beneficial in the early, but are useful in the advanced stages of pneumonia.
- Counter-irritants* may be employed in the early stages of the disease. The principal applications employed are *tartar-emetical ointment*; *croton oil*; *tincture of iodine; *turpentine stupes.
- Poultices* are especially useful in the early stages of the inflammation. Flax seed poultices, made so as to envelop the whole chest, give great relief, and exercise a salutary influence on the inflammatory action.

PNEUMONIA, CHRONIC.

- Lobelia* often proves useful in chronic pneumonia.
- Sanguinaria* has been found to be of essential benefit in some cases.
- Sumbul Radix* is employed by Russian physicians.
- For the treatment of the pneumonia of children and infants, see Disease of Children, Section VIII.

I. DISEASES OF THE CIRCULATORY SYSTEM.

General Therapeutics of Heart Disease—Angina Pectoris—Cardiac Dilatation—Cardiac Hypertrophy—Carditis—Fatty Degeneration of the Heart—Functional Palpitation of the Heart—Irritable Heart—Valvular Disease of the Heart.

GENERAL THERAPEUTICS OF HEART DISEASE.

DR. S. O. HABERSHON, LONDON.

This physician lays down seven rules of treatment applicable in all cases of heart disease. (*Guy's Hospital Reports*, 1867).

The *first* is to *lessen the work of the heart*; this may be done by mechanical rest, by the recumbent position, and by avoiding stimulants and sudden changes of temperature.

The *second* is to *insure regularity of action*, by avoiding mental excitement, by guarding against indigestion, and by never allowing constipation to continue.

The *third* is to *lessen distension*, especially of the right side of the heart, by purgatives, diuretics, and by mechanically diminishing the quantity of fluid in circulation.

The *fourth* is the prevention of syncope. With this view, sudden muscular movements must be avoided; stimulants may be required, as ammonia, brandy, etc.; and sedatives must be withheld or cautiously administered.

The *fifth* is to strengthen the muscular fibres of the heart by suitable nourishment; a bracing air, if other conditions allow; chalybeate medicines; and if the patient be exhausted by want of sleep, this symptom must, if possible, be relieved.

The *sixth* is to prevent fibrination of the blood. For this purpose carbonate of ammonia will often be useful; other alkalies, as potash, soda, and other salts, may be beneficial; but, if long continued, in considerable doses, they depress the action of the heart. The acetate and iodide of potash may be advantageously combined with the carbonate of ammonia, or perhaps the hydrochlorate of ammonia.

The *seventh* is to prevent secondary complications, and to relieve them when produced. These complications are: 1. Bronchopneumonia and pleuritic effusion. 2. Pulmonary apoplexy and other hemorrhages. 3. Visceral engorgement, as hepatic and renal congestions, with acites and anasarca. By freely acting on the bowels, the portal congestion is greatly diminished, and the liver is enabled to act in a normal manner. Thus a free mercurial purge is of great value. The kidneys may be excited to a more vigorous action by a combination of mercurial medicine with squill and with digitalis, when the latter can be borne. Salivation should be avoided. Diuretics are useful. An effectual way of diminishing the anasarca is by puncturing the skin on the thighs. The pulmonary engorgement is sometimes greatly reduced by applying cupping-glasses between the shoulders, or by the application of a blister to the chest.

J. MILNER FOTHERGILL, OF LONDON.*

Treatment of Primary Heart Disease. It is of the utmost importance, in primary disease of the heart, to reduce to a minimum the calls upon its action. Rest in bed is desirable, and light labor alone must be attempted. The tendency usually is for the veins to become too full of blood, while the arteries remain insufficiently filled. Much relief is afforded by unloading this venous congestion. Brisk catharsis, say pulv. jalapæ comp. ℥ij, at frequent intervals, does much good. Diaphoresis is also valuable. The form of diaphoretic best adapted to heart cases, is the application of heat externally. The bath, however, should not include the head, hence Turkish baths are objectionable. In the attacks of *dyspnea*, so common in diseases of the heart, large, hot poultices of linseed meal, faced with mustard, and applied over the front of the chest and between the shoulders, are most serviceable. Of all drugs in cardiac adynamy, *digitalis* takes the lead. Its cumulative action has been greatly exaggerated, if it exists at all. The continuous use of small doses is the best plan of treating chronic cases. In cardiac dropsy, full doses must be given. Its effects are most gratifying when it produces a full flow of urine. In simple cardiac debility the following is a pleasant combination:

569. R.	Tinct. digitalis,	℥x	
	Spiritus ætheris nitrici,	f.ʒss	
	Infusi buchu,	f.ʒj.	M.
This amount thrice daily.			

* *A Handbook of Treatment*, 1876.

At other times potash in any of its forms, but especially the citrate, may be added to the mixture. Where atonic gout is combined with the disease, the following is constantly used by Dr. F.:

570. R.	Potassæ bicarb.,	gr.x	
	Fer. pot. tart.,	gr.v	
	Tinct. digitalis,	ʒx	
	Infusi buchu,	f.ʒj.	M.

This amount thrice daily, to be followed by a good draught of water, and taken half an hour before meals.

Where there is palpitation, acute anemia and debility, the following may be given:

571. R.	Tinct. digitalis,	ʒx	
	Ferri ammonio-citratis,	gr.v	
	Ammonia carbonatis,	gr.v.	M.

This amount three or four times daily.

In the complex condition of cardiac debility, gastric catarrh, copious eructations of wind, and inactivity of the bowels, so commonly found together in chronic heart disease, digitalis may best be given in pill, as in this combination :

572. R.	Pulv. digitalis,	gr.xxx	
	Ferri sulph. excis.,	gr.xv	
	Pulv. capsici,	gr.xl	
	Pill aloes et myrrhæ,	ʒj.	M.

Make sixty pills. One twice daily.

In advanced dropsy, poulticing the abdomen and thighs with digitalis leaves has been found to produce excellent results.

Treatment of Secondary Affections of the Heart. High arterial tension is usually the result of continued hypertrophy, lithiasis (suppressed gout), and spasm of the arterioles. In lithiasis the various natural waters which contain potash are very valuable. When drugs are prescribed, it is a matter of first importance that each dose be accompanied by large draughts of water; this makes them much more effective. A good form of mixture is furnished by the following combination :

573. R.	Potassii iodidi,	gr.v	
	Potassæ bicarbonatis,	gr.xv	
	Infusi buchu,	f.ʒj.	

This amount, three or four times a day on an empty stomach, washed down with a tumblerful of water.

If the pulse be strong and hard, and the first sound of the heart good, then vini colchici, gtt. x, may be added to the above with advantage. If the opposite condition of the heart exist, with compressible pulse and dilatation, then instead of the colchicum tinct. digitalis ℥x may be added. This will maintain the vigour of the heart under the depressing action of the alkalies.

DR. THOMAS KING CHAMBERS, OF LONDON.*

Dietetics in Heart-Disease. Dr. CHAMBERS points out the fact that in disease of the heart the most remarkable change in respect to digestion is the slowness with which liquids are absorbed by the stomach, owing to the weakening of the circulation. The fluid in excess remains in the viscus and impedes digestion. The observation of a *dry diet* contributes greatly to the comfort of the patient, and more particularly so where dilatation of the heart walls exist, and where, therefore, distension of the stomach would interfere with the laborious action of the heart; also, in cases of cardiac disease complicated with obesity.

The dietary should be at least as nitrogenous as in health. There is danger of atrophic degeneration of the cardiac muscle which must be guarded against by generous diet. Alcohol should be used either not at all, or only in sufficient quantity to facilitate the assimilation of food; as soon as it diminishes assimilation, it is injurious. Indeed, we may say that alcohol is rather indicated during the times of acute failure than as a permanent part of the dietary of heart affections. The use of tea and tobacco, both of which are neurotic poisons when taken in quantities, must be rigidly restricted.

Climate in Heart Disease. Dr. CHAMBERS points out that in England degenerative heart disease is the rule and acute the exception; while in Italy, degenerative disease is the exception and acute disease the rule. Aneurism is almost unknown in Italy. The severe winters of the north of Europe and the northern United States are particularly trying on patients with heart disease. A low temperature, by contracting the capillaries, raises the blood pressure, and makes additional demands on the weakened heart. The diminished pressure of the atmosphere in elevated regions, as of our western plains, leads to excitability and hypertrophy of the

**A Manual of Diet in Health and Disease*, London, 1875.

heart. As a rule, cardiac diseases are less common and less fatal near the sea, where the extremes of temperature are less marked, and the atmospheric pressure the greatest. These considerations offer suggestions for the proper climatic treatment of cardiac affections.

DR. T. CLIFFORD ALLBUTT, M. A., F. L. S., ETC., LONDON.

To subdue the distressing nervousness, the dyspnea, the pain and night terrors of advanced heart disease, this writer urges (in *The Practitioner*, Dec., 1869,) the value of the *Prunus Virginiana*, and especially the *hypodermic use of morphia*. He justly says there is scarcely any disease more distressing than the latter stages of these maladies, when the patient, with a clear head, but with gasping breath, a striving heart, and swollen limbs, hardly finds a moment's rest from torment. Opium cannot be given, on account of its effect on the kidneys. His experience convinces him of the utility of the wild cherry in many of the milder cases of cardiac distress, and in such he urges its claims warmly; but it is impotent in the more severe forms. Here he employs *morphia*, hypodermically, especially in angina with diseased coronary arteries, in neuralgic distress from intra-thoracic tumors, in mitral regurgitation, and in aortic disease, where the heart is big and pumping.

He uses the hydrochlorate of morphia in doses varying from one-tenth to one-third of a grain; seldom half a grain, except in such a case as intense pain from angina or intra-thoracic tumor. He always begins with one-eighth or one-sixth; and in ordinary cases he finds a quarter of a grain the proper dose—in a case, say, of mitral regurgitation with pulmonary congestion in an otherwise healthy adult. The dose is best given in an evening, and should always be followed by perfect quiet in the room. The last is an important element in all cases of injection of morphia. The urine should be examined and the drug withheld, or given with caution if albumen be found. There need be no great fear of it during albuminuria only secondary to the heart disease, unless there be reason to suppose that excessive renal congestion be present, and head symptoms at hand. He scarcely ever remembers that morphia caused disturbance of the stomach or other inconvenience. As in cases of severe pain, so it seems that in cardiac disturbance the intolerable distress "carries off" the troublesome qualities of the drug. Its effects, again, are not merely comforting, but are

curative so far as such cases are to be cured. An injection of morphia three or four times a week, by tranquilizing the heart and allowing the circulation to recover its freedom, sets free also the organs which are oppressed, and the system can once more find something like its balance. Thus relieved, the patient may with incessant care enjoy some respite from his malady, and the occasional use of morphia may put off the day of its return.

HORACE DOBELL, M. D., LONDON.*

Dr. DOBELL lays down certain "aphorisms" in reference to *pain in the region of the heart*, which should materially influence the treatment adopted. Thus, such pain does not necessarily indicate heart disease; a neglected dyspepsia, especially that characterized by an excess of acidity, may produce it; also, an erratic neuralgia of the gastric branches of the pneumogastric; deteriorated blood in anemia; and local interference with the circulation. But if the pain at the heart is accompanied by pain in the left arm, it is an important symptom of cardiac disease; also, if it is excited by exercise on an empty stomach. Of course, in various dangerous forms of heart disease, pain is entirely absent.

In treatment, the patient should be instructed to take the warning given by nature, and stop exercise or exertion when called upon to do so by pain at or about the heart; yet a rigorous and persistent restriction of exercise, necessary in the early part of the treatment, must not be carried to the extent of weakening the muscular action of the heart. For dyspeptic pain, alkaline mixtures and vegetable tonics are demanded. A favorite one with Dr. D. is:

574.	R.	Sodæ bicarbonatis,	gr.v-x	
		Pulv. calumbæ,	gr.x-xx	
		Pulv. zingiberis,	gr.x.	M.

Take in water before each meal.

DR. LAYCOCK, OF DUBLIN.

575.	R.	Potassii iodidi,	gr.v	
		Potassii bromidi,	gr.xv.	M.

For one dose to be taken at night.

In the distressing *dyspnea* of heart disease, Dr. L. has found the above combination superior to any other, believing it to be both palliative and curative. Of opiates he prefers the hypodermic use

* *On Affections of the Heart*, London, 1876.

of morphia, or else ten to fifteen minims of the solution of the bimeconate of morphia by the mouth; although he is satisfied that in any form opium tends to increase the albuminuria and dropsy which accompany cardiac lesions. Should the gastric vagus be implicated, hydrocyanic acid is the most efficacious remedy. (*Dublin Medical Journal*, Dec., 1873.)

DR. C. M. DURRANT, OF LONDON.

Hygienic Rules in Incurable Heart Disease. The first rule to impress upon patients, says this writer, (*British Medical Journal*, Feb., 1875,) is the careful avoidance of sudden, hurried or violent motion. Rapid walking, lifting weights, prolonged traveling, must be shunned,

The second rule, and one not to be neglected without great risk, is the avoidance of partaking at any one time of a large, distending meal. The sudden death of heart disease is very apt to come shortly after or during a hearty meal. The food, therefore, should be easily assimilable, and taken in small quantities at frequent intervals.

The third rule is to avoid taking much liquid, especially cold liquids. By exciting nerve irritation, they produce cardiac syncope and sudden death.

Lastly, a patient, laboring under serious heart disease, should as a rule be absolutely forbidden to indulge in sexual intercourse.

ANGINA PECTORIS.

DR. ALFRED L. LOOMIS, NEW YORK.

This author states that the only remedies he has found of service in delaying and rendering less severe the paroxysms of this disease are *iron*, *strychnine* and *arsenic*, administered daily in small doses. During the paroxysm, rest and free administration of digitalis are of the greatest service. He adds that opiates, chloroform, and nitrite of amyl should not be used.

DR. T. H. TANNER, OF LONDON.

This author has found the following mixture exceedingly valuable in angina:

576. R. Spiritus ætheris compositi, f.ʒj
 Liquoris opii sedativi (Battley) grt. x
 Misturæ camphoræ. f.ʒss. M.
- This amount as required.

(Battley's sedative solution of opium is a secret preparation much used in England; said to be made as follows :

577. R. Extracti opii (hard), ʒiij
 Aquæ dest. bul., ʒiij.
 Dissolve and filter. When cold, add
 Spirit. vini rect., ʒvj
 Aquæ q. s. to make Oij.
 The above are English imperial measures. The dose is half that of
 laudanum.)

The patient should keep the above medicine by him, in order that it may be taken on the least threatening of an attack. A belladonna plaster worn constantly over the præcordial region may do good. The return of the seizure is to be guarded against by improving the general health, by great attention to diet, and by the avoidance of stimulants, strong exercise, and all mental excitement.

DR. F. W. MOINET, OF SCOTLAND.

During the paroxysm of angina, the treatment most efficacious in relieving the symptoms is that by diffusible stimulants and opium, hot brandy and water, sinapisms to the feet, and placing the hands in hot water. Galvanism, carefully and at first gently applied, is of service even in organic angina, by giving tone and stimulus to the heart's muscular fibre. When the circulation is languid and stagnant, bleeding is called for. Nitrite of amyl is occasionally useful. (*Edinburgh Medical Journal*, Feb., 1871.)

DR. HENRY HARTSHORNE, PHILADELPHIA.

Mustard plasters should be applied between the shoulders and over the chest, and the patient's feet placed in a warm foot-bath. Stimulants and anodynes are indicated, as

578. R. Sodæ bicarbonatis, Div
 Spts. ammon. aromat., f.ʒi
 Spts. ætheris compos., f.ʒi
 Tinct. cardamom. comp., f.ʒiij
 Aquæ camphoræ,
 Mucilag. acaciæ, ʒʒ f.ʒx. M.
- A dessert or tablespoonful at a dose.

579. R. Tinct. rhei et sennæ, f.ʒjss
 Syrupi zingiberis, f.ʒiij
 Tinct. opii, f.ʒj. M.

A teaspoonful in hot water.

580. R. Chloroformi,
 Spts. ammon. aromat., āā f.ʒij
 Spts. ætheris compos., āā f.ʒss
 Tinct. opii camphor., āā f.ʒss
 Mucilag. acaciæ, f.ʒss. M.

A teaspoonful at a dose.

DR. G. W. BALFOUR.*

In the treatment of angina pectoris, Dr. BALFOUR relies chiefly on the inhalation of chloroform; it not only relieves pain, but regulates the circulation. He has also a very high opinion of *arsenic*, stating that in all forms of cardiac angina it acts almost as a specific, and is a special tonic to the cardiac muscle. It has this effect even in very small doses. The preparation he uses is the liquor arsenicalis.

DR. FAUCONNET, OF PARIS.

581. R. Sulphureti antimonii aurati,
 Sulph. ferri exsic., āā gr.x. M.
 Sulph. quiniæ,

Make twelve pills. One thrice daily.

Dr. FAUCONNET, from personal experience, recommends the golden sulphuret of antimony, in cardiac neuroses of various forms. Professor RICHARD McSHERRY, of Baltimore, states that he has employed it largely, with generally satisfactory results. As organic heart diseases are nearly always attended with neurotic disorders, it is valuable as a palliative, even in incurable cases. Most patients bear well gr. j *ter die*.

PROFESSOR G. SÉE, PARIS.

Mr. SÉE has no faith in nitrite of amyl, chloroform or belladonna, in this disease. Electricity is dangerous. During the paroxysm he repeats twice or thrice hypodermic injections of morphia in full strength, following it immediately by an enema of chloral hydrate, gr. xxx-xlv, aquæ, f.ʒv. Sometimes acetate of ammonia, which is an energetic cardiac stimulant, will be found greatly to facilitate respiration. After the attack the morphia should be used daily for a few days to prevent a recurrence; and as a prophy-

**On Diseases of the Heart and Aorta*, London, 1876.

- **Morphia*, by hypodermic injection, is highly praised by Prof. BARTHOLOW.
- **Strychnia*, by hypodermic injection (gr. $\frac{1}{120}$ - $\frac{1}{80}$), twice daily for several weeks, is highly lauded by Dr. ANSTIE, who has seen remarkable benefit attending its use in presence of a threatening paroxysm.
- Quinia Sulphas* has been advised in intermittent angina pectoris.
- Zinci Sulphas* sometimes proves of great benefit when persevered in during the intermissions.
- Stimulants*. The relief of pain is better accomplished by the use of ether, or of morphia or atropia hypodermically, than by large doses of spirits.
- **Turpentine* stupes, applied to the chest, often mitigate the severity of the paroxysm, particularly in the old and debilitated.
- Issues*. An issue at the nape of the neck sometimes acts favorably in mitigating the symptoms.

CARDIAC DILATATION.

DR. ALFRED L. LOOMIS, NEW YORK.

The indications are: 1. To maintain nutrition; 2. To avoid violent cardiac action. For the first, our author commends an exclusively milk diet, the fluid taken in small quantities at short intervals. "As a rule, it is always safe to daily administer iron to a patient with dilated heart." Slightly stimulating baths, flannel next the skin, the avoidance of emotion, and the arrest of all exhausting discharges, are important. A dry, bracing atmosphere is most suitable. The most important remedy is digitalis, in sufficiently large doses to regulate the heart's action. As it loses its controlling power by continued use, it should not be exhibited indiscriminately.

J. M. DA COSTA, M. D., PHILADELPHIA.

- | | | | | |
|-------------------------------------|----|-----------------------|------|----|
| 584. | R. | Pulveris digitalis, | gr.v | |
| | | Extracti belladonnæ, | gr.j | |
| | | Ferri redacti, | ʒij. | M. |
| For twenty pills. One thrice daily. | | | | |
| 585. | R. | Emplastri belladonnæ, | 4x4. | |
| To be worn over the cardiac region. | | | | |

Belladonna is one of the best agents that can be employed to overcome irregularity of the action of the heart, and to relieve pain. Digitalis is also useful for the same purpose, especially

where the action of the heart is feeble; it is the only sedative which will reduce the frequency and not the force of the heart. It may be combined as follows:

586. R. Ferri lactatis, ʒss
Pulveris digitalis, gr.v. M.
For twenty pills. One thrice daily.

587. R. Tincturæ digitalis, f.ʒss.
Ten drops thrice daily, in cases of dropsy caused by cardiac dilatation

Also,

588. R. Pulveris jalapæ compositi, gr.x.
For one dose at night.

In such cases, a tablespoonful of lemon juice, three times a day acts as a diuretic and stomachic. Baths, also, are advantageous. Dry cups applied to the chest relieve the pulmonary congestion. It is more important to start the secretions and relieve internal congestions than to give tonics and iron, which find their appropriate place in the after-treatment.

DR. ROBERTS BARTHOLOW, OF OHIO.

589. R. Ferri redacti,
Quinæ sulphatis,
Pulv. digitalis, ʒā ʒj
Pulv. scillæ, gr.x. M.
Make twenty pills. One three or four times a day.

Recommended as extremely serviceable in dilatation of the heart and mitral regurgitation, accompanied by cough, difficult breathing and general dropsy.

Another valuable remedy in dilatation, without valvular lesion, is *ergot*. It may be given with digitalis.

590. R. Extracti ergotæ fluidi, f.ʒiijss
Tincturæ digitalis, f.ʒss. M.
A teaspoonful three times a day.

Ergot slows the action of the heart and produces a contraction of the smaller vessels.

DR. FELIX VON NIEMEYER, PROF. UNIVERSITY OF TUBINGEN.

Our author has convinced himself, by a great number of observations, that digitalis is a very efficient means of extemporarily strengthening the heart's contractile power, and of thus allaying

dropsy and cyanosis. In dilatation of the heart, digitalis, combined with an exclusively milk diet, is an invaluable remedy. Dr. von N. has repeatedly succeeded in obtaining complete removal of dropsical effusions of great magnitude, and producing considerable temporary relief by this mode of treatment.

Iron, which fortunately no longer has the reputation of being "heating," should always be prescribed when the patient shows any signs of anæmia or hydræmia.

DR. WALSHE.

When dropsy appears in cases of dilatation of the heart, the diuretics which yield most relief are the acetate, nitrate, iodide, and bitartrate of potassa, nitrous ether, compound tincture of iodine, the infusion and spirits of juniper, and gin. Hydragogue cathartics, elaterium, gamboge, citrate of potassa and the compound jalap powder, also aid in subduing the dropsical effusion. The following formula is a useful one for the administration of elaterium :

591.	B.	Extracti elaterii,	gr. l-j	
		Extracti creasoti,	gr. ij	
		Extracti hyoscyami,	gr. ij.	M.
For one pill.				

RÉSUMÉ OF REMEDIES.

**Belladonna* is prescribed by Prof. DA COSTA to overcome irregularity of the heart's action, and to relieve pain.

**Digitalis* is recommended in dilatation by Prof. DA COSTA and Professor NIEMEYER (see above), Drs. GULL, WILKS, FULLER, HANDFIELD JONES, TROUSSEAU, and others. The conclusions of Dr. MURRAY are as follows : 1. That digitalis will stimulate and strengthen a weak heart, and that the weaker are the muscular tissues of the heart, the safer will be the administration of the medicine. 2. That in hypertrophied heart it will fail to reduce the pulse either in frequency or strength, and in such cases will prove dangerous. 3. That in a weak organ, acting, on account of its weakness, with great rapidity, it will reduce the number of its contractions, and, as it were, strengthen or tone them down. To strengthen and quicken the action of a weak, slowly-acting heart, and to reduce the number of the rapid strokes of a full heart, is, according to ANSTIE, to do the work of a true stimulant ; bringing action up to the normal standard on the one hand, and reducing it to that level on the other. (*Brit. For. Med.-Chir. Rev.*, July, 1865.) Prof. DA COSTA says that digitalis is the only remedy which will reduce the frequency and not the force of the heart. Prof. NIEMEYER recommends digitalis, combined with an exclusively milk diet, as an invaluable treatment for dilatation.

Ferrum, according to Prof. DA COSTA, finds its appropriate place in the after-treatment, the secretions being regulated and the intern congestions relieved. Prof. NIEMEYER says iron should always be prescribed when the patient shows any signs of anæmia or hydræmia.

Diuretics are indicated when dropsy appears. DR. WALSHE finds that those which yield the most relief are the acetate, nitrate, iodide and bitartrate of potassa, nitrous ether, compound tincture of iodine, the infusion and spirits of juniper, and gin.

Dry Cups to the chest are often useful to relieve the pulmonary congestion.

CARDIAC HYPERTROPHY.

DR. HENRY HARTSHORNE, PHILA.

Where there is dilatation with hypertrophy, the main principle is to avoid exciting causes, especially violent exercise, alcohol and venery. Moderate venesection at long intervals is appropriate for robust patients; occasional leeching or cupping over the heart may be done. As an astringent and cardiac sedative, *acetate of leaa* is worthy of trial.

592. R.	Plumbi acetatis,	ʒss	
	Pulveris opii,	gr.v	
	Confect. rosæ,	q. s.	M.

Make twenty pills. One thrice daily.

Where abnormal rapidity of the heart is present, *digitalis* may be used unhesitatingly but moderately. In violent acceleration of the pulse, we may, however, expect more from *veratrum viride* as a sedative and palliative (gtt. ij-v of Norwood's tincture every three or four hours, diminishing the dose if nausea follows). Benefit is obtained also in such cases from the use of *wild cherry bark*.

DR. LEOPOLD SCHROETTER, OF VIENNA.*

In idiopathic hypertrophy, two remedies in particular are useful. The first is *cold*, used persistently and regularly. It is best applied by the temporary or continuous use of ice-bags laid over the chest or worn suspended around the neck. It often quiets in a wonderful manner the over-activity of the heart. The second is *digitalis*. It very decidedly diminishes the frequency of the heart's action, and

* In Ziemssen's *Cyclopedia*.

since it is usually required but temporarily, is quite in place in this *disease*. *Veratrum viride* and tartar emetic, recommended by *some*, our author considers are objectionable.

For the acute dilatation, which occurs in the course of inflammatory diseases, our object will be simply to maintain the energy of the heart's contractions for a short period; and for this purpose stimulants will be of great assistance, and amongst these he considers *tea* of special value.

ALFRED L. LOOMIS, M. D., NEW YORK.

This author condemns the practice of blood-letting, to which the pulse and symptoms of cerebral hyperæmia have prompted some practitioners in this disease. Of all remedial agents to diminish the force of the heart's action, he has found *aconite* the best. His prescription is:

593. ℞. Tincturæ aconiti rad. (Fleming's), q. s.
Two to three drops every three or four hours.

"No drug so fully and promptly relieves the vertigo and other painful sensations that attend cardiac hypertrophy." It is contra-indicated if the dilatation overbalances the hypertrophy of the cardiac walls. *Digitalis* is contra-indicated unless there is degeneration of the hypertrophied walls.

J. M. DA COSTA, M. D., PHILADELPHIA.

In the treatment of hypertrophy of the heart, as much rest as possible should be insisted upon. The patient must be directed to lie down for several hours each day. The sinking of the pulse, which naturally occurs in the recumbent position, makes this posture as potent a cardiac sedative as we possess. All stimulants to the action of the heart should be removed. This includes the removal of any dyspeptic symptoms which may be present, and of any other disordered function which can react upon the heart.

There are only two drugs in which our author has any confidence; one is *aconite*, or its active principle, *aconitia*, and the other *veratria*. These are the only medicines which directly and positively control the element of muscular power of the heart. *Digitalis* does not compare as a pure sedative with either *aconite* or *veratrum viride*. *Gelsemium* is useless; it has a false reputation. It is time lost to employ it. *Hydrocyanic acid* is often a useful

and pleasant adjunct when there is gastric disturbance; alone it is of no value.

These principles apply both in the treatment of simple hypertrophy, and in that complicated with valvular disease. A certain amount of hypertrophy with valvular disease is beneficial, and judgment must be exercised in order to determine when to interfere and when not.

594. ℞. Tinct. veratri viridis, f.ʒiiss
 " aconiti radiceis, f.ʒss
 " zingiberis, f.ʒvss. M.

Fifteen drops thrice daily, two hours after meals, in water.

The addition of the tincture of ginger causes the veratrum viride to be better borne by the stomach. Our author also frequently orders:

595. ℞. Tinct. aconiti radiceis, gtt.j.
 Thrice daily for *many months*, its effects being watched.

In a large number of cases this remedy thus employed prevents the further growth of the heart, and in some it lessens the already existing bulk of the organ.

DR. WALSH.

596. ℞. Extracti aconiti alcoholici, gr.ijss.
 For twenty pills. One as a dose. In repeating the dose, the effect must be watched.

Our author prefers this to all other cardiac sedatives in this affection.

RÉSUMÉ OF REMEDIES.

Aconite is one of the only two drugs (the other being veratrum) in which most authorities have any confidence in hypertrophy of the heart.

Camphor has been recommended, in doses of from grs. iij-xij, daily, as rendering regular the most tumultuous palpitations, and removing the dyspnœa attendant on hypertrophy of the heart with dilatation.

**Digitalis*. In regard to the value and propriety of the use of this remedy in hypertrophy there is considerable difference of opinion. Prof. DA COSTA says it does not compare, as a pure sedative, with either aconite or veratrum viride. The best effects of digitalis in hypertrophy are obtained from small doses, large doses being regarded by many as hurtful, if not dangerous, in this affection. Drs. GULL, WILKS, FULLER, W. MURRAY, and HANDFIELD JONES,

regard digitalis as prejudicial, and even dangerous, in simple hypertrophy, and would restrict its use to cases of dilatation and enfeeblement of the heart.

Fel Bovinum Purificatum has been recommended in certain forms of hypertrophy.

Hydrocyanic Acid alone has, according to Prof. DA COSTA, no value, but is often a useful and pleasant adjunct, when there is gastric disturbance.

Plumbi Acetas has been recommended in the incipient stages of hypertrophy, but is of doubtful value other than in relieving, in some cases, violent palpitations connected with hypertrophy.

Potassii Bromidum has been employed, but its utility is not established.

Potassii Iodidum in small doses, *long continued*, seems to exercise, in some cases, a beneficial influence.

**Veratrum Viride* is one of the only two drugs (the other being aconite) in which Prof. DA COSTA has any confidence.

Diuretics are strongly recommended by Dr. J. HOPE in hypertrophy, not only when there is dropsy but also when there is none, as powerful derivatives.

CARDITIS, ENDOCARDITIS AND PERICARDITIS.

DR. BERNHARD KRAUS, OF VIENNA.*

The principles of treatment of pericarditis embrace absolute rest in the recumbent position, cold applications, as ice bladders or cloths wrung out in ice water and laid over the praeordial region, and the mineral acid. Digitalis should be given promptly, but after two or three days, be suspended, as it not only is alleged to have a cumulative action, but according to SKODA, a debility of the contractile power of the heart appears, which must be met by quinine, opiates and alkalies. Collapse is to be combated by wine, coffee, musk, carbonate of ammonia, and other stimulants. As a diuretic,

597. R.	Extracti digitalis,	gr. xv	
	Aquæ petroselinæ,	℥̄vj	
	Oxymel scillæ,	ʒvj.	M.

A dessertspoonful every two hours.

Or ten drops of the liquor ammoniæ acetatis in a cup of warm infusion every two hours. Should there be much discharge into

**Diagnose und Therapie der Krankheiten des Menschen.* Wien, 1877.

point one or two inches to the left of the sternum in the fourth or fifth interspace. Nearer to the sternum than one inch endangers the internal mammary artery. For acute endocarditis he relies on the same treatment.*

DR. AUSTIN FLINT, OF NEW YORK.

On the subject of pericarditis, this author says blood-letting should be employed with great circumspection. Depletion by means of saline purgatives, with restricted diet, is indicated in the early stage. For some years the author has treated all cases of pericarditis without mercury, and he has found no reason to be dissatisfied with its omission. Opium should be administered. Locally, mild, revulsive and soothing applications. In the second stage, if the amount of effusion be sufficient to enfeeble the heart, it is highly important to remove the liquid as speedily as possible. For this end, the præcordia may be painted daily with the tincture of iodine, and small blisters may be applied, removing them as soon as vesication begins. Hydragogue cathartics and diuretics as in pleurisy, taking care not to depress the vital powers. The strength in this stage should be supported by alcoholic stimulants, tonics and nourishment.

PROFESSOR ARMAND TROUSSEAU, PARIS.

This eminent clinician recommends in endocarditis, and in pericarditis, general or local blood-letting, according to the strength of the patient, and the application of blisters. Internally, digitalis or digitaline, or the administration of the latter by the endermic method; or præcordial frictions with the tincture of digitalis.

ALFRED L. LOOMIS, M. D., NEW YORK.

Whatever the conditions which develop endocarditis, the patient should be kept in bed. Opium in small doses is proper. The temperature of the room should always be above 70° Fah. The chest should be covered with flannel, and not exposed. If the heart becomes feeble, digitalis is indicated. "Rest, opium, iron and the most nutritious diet, with occasional use of stimulants, constitute the most serviceable agents to be employed in the treatment of this affection."

**Diseases of the Heart and of the Aorta*, London, 1876.

In the *acute ulcerative form* of endocarditis large doses of quinine and stimulants are our only dependence.

In *pericarditis* the same cautions about rest, etc., are to be observed. Blisters, blood-letting, diuretics and cathartics, our author considers useless; digitalis of doubtful value. "Opium, iron, moderate stimulation, rest in the recumbent posture, anodyne poultices and concentrated nutrition, are about the only measures which I have found of service in the treatment of acute pericarditis." Aspiration he commends only when it can be positively determined that pus is in the pericardium.

DR. SHINGLETON SMITH, LONDON,

Regards (*Lancet*, August 22d, 1874,) the use of *aspiration* in copious effusion into the pericardium as of great value. From ten to fifteen ounces of fluid may be withdrawn, and the relief is immediate. The needle may be introduced into the space between the fourth and fifth rib, about two inches to the left of the middle line of the trunk.

RÉSUMÉ OF REMEDIES.

Aconite is recommended by Dr. RINGER in pericarditis when the heart throbs violently, and thus produces extreme pain.

Antimonii Ses-iodidum is sometimes employed.

Aspiration (see above).

* *Digitalis*, combined with hyoscyamus tincture (ää ʒxv-xx), is recommended by Dr. J. HOPE in pericarditis, after the acute symptoms have been subdued.

Hydrargyrum is considered by Dr. A. T. H. WATERS as rarely if ever desirable in pericarditis, except as a purgative. He prefers to the mercurial treatment and venesection recommended by Drs. LATHAM, HOPE, and others, the milder but more effectual remedies of opium, bicarbonate of potash, the moderate and cautious use of stimulants, large linseed poultices to the chest, and blisters in the advanced stage, with good nourishment throughout the disease.

* *Opium*, in grain doses, every three, four, six or eight hours, is recommended by Dr. A. T. H. WATERS in pericarditis. The great relief to pain which often follows the local abstraction of blood in this disease may be equally obtained by the administration of opium.

Potassii Iodidum, in doses of gr.iii-v ter die, is sometimes given with advantage in chronic pericarditis, appearing to favor the absorption of effused fluid.

Veratrum Viride is recommended by Dr. WARING-CURRAN (*The Practitioner*, August, 1868,) in pericarditis. He gives it in the form of

an extract made by inspissating the juice of the root, and combines with it gr.j of calomel, every two hours, carefully watching the effect.

Blood-letting. Venesection, which was formerly regarded as indispensable in inflammation of the heart and its membranes, is now much less frequently resorted to. The local abstraction of blood by *cups or leeches* often affords great relief to the pain, but many practitioners prefer to seek this relief by means of opium.

Blisters are hurtful in the early stages of cardiac inflammation, but useful in the advanced stages.

**Poultices.* Large linseed-meal poultices are of signal service in the earlier stages of inflammatory action.

**Turpentine* stupes, which can be employed at a far earlier period than blisters, are often of manifest advantage in relieving pain and distress, and arresting inflammatory action.

Issues in the præcordial region frequently give relief in chronic inflammation of the heart or its membranes.

RHEUMATIC CARDITIS.

**Colchicum*, with alkalies, etc., is, according to Dr. FULLER, necessary in rheumatic carditis, to counteract and get rid of the materies morbi, without the removal of which it is difficult to conceive that a cure can be effected.

**Hydrargyrum*, combined with opium, and carried to the extent of slight salivation, is strongly recommended by Dr. FULLER in rheumatic inflammation of the heart, occurring in young, robust subjects, but he does not advocate its use in weakly, irritable and unhealthy constitutions.

**Opium*, in large and repeated doses, is strongly recommended in rheumatic pericarditis by Drs. WALSHE, FARRE (*St. Bartholomew's Hospital Report*, 11, 1867), and others. If the surface has been blistered, *morphia* may be used endermically; and often, when opium internally is inadmissible, benefit is obtained from morphia hypodermically. Dr. FULLER says that in rheumatic carditis, opium in *full doses* is indispensable in every case. In the weak and irritable, where mercury is of little service, it proves particularly valuable. It is, of all remedies, that which comes most powerfully in aid of blood-letting and mercury. If, after all active symptoms have subsided, much irritability of the heart remains, occasional doses of opium and digitalis should be given, and an opium or belladonna plaster applied to the chest, while the general health is being attended to.

Quinia Sulphas, in doses of gr.ijss, combined with gr.xx of carbonate of potash, given in mucilage every four hours, was found by Dr. WINN (*Lancet*, November 14th, 1868,) highly beneficial in a case of rheumatic pericarditis attended with delirium.

Salicin, in scruple doses, every four hours, has been found by Dr. G. P. MAY of great use. (*British Medical Journal*, Jan., 1877.)

Stimulants. Alcoholic stimulants are often very beneficial in rheumatic pericarditis, especially when the attack is characterized by great pain, sleeplessness and jactitating movements of the limbs. In this form of the disease, Dr. ANSTIE regards alcohol as superior to opium as an anodyne and specific. It should be given in repeated small doses, the production of even the minor signs of intoxication being carefully avoided.

Blood-letting. Dr. GARROD states that so much relief follows the application of leeches to the cardiac region in rheumatic pericarditis, and in endocarditis, that he has no hesitation in recommending the measure, the bleeding never being allowed to produce any appreciable weakening of the patient. Generally, from three to twelve leeches are sufficient. The slow loss of blood by leeching is preferable to the more copious abstraction by cupping.

**Blisters* are recommended by Dr. GARROD in the advanced stages of rheumatic carditis, when cupping has taken place, as, of all local remedies, the most serviceable, their virtue being most unequivocally displayed when the amount of fluid is greatest.

FATTY DEGENERATION OF THE HEART.

MR. JOHN MARTIN, OF DUBLIN.

This writer (*Dublin Journal of Medical Sciences*, February, 1875) believing that the fatty change is owing to an excess of carbonate of lime in the system, recommends the use of the nitric and hydrochloric acids in combination with iron. They should be taken in small quantities and for a long time. The diet should be one avoiding compounds of lime.

DR. A. T. H. WATERS, OF LIVERPOOL.

Ferri Tinctura Chloridi is highly recommended by Dr. A. T. H. WATERS, who believes that if it be given in small doses for a long time, it will often restore to an enfeebled and fatty heart a good deal of its vigor, and possibly of its structure. But its administration must be continued for months, and even years, being omitted from time to time, as the digestive organs may demand. A chalybeate mineral water may be substituted for the tincture of chloride of iron, if the latter cannot be taken.

RÉSUMÉ OF REMEDIES.

Cimicifuga, is, according to BARTHOLOW, more efficient and safer, in fatty heart, to relieve the symptoms, than digitalis.

Digitalis, according to DR. A. L. LOOMIS, will sometimes afford relief when there is yielding of the cardiac walls.

Ergot is recommended by Dr. WARING CURRAN, as of material use in severe cases.

FUNCTIONAL PALPITATION OF THE HEART.

J. MILNER FOTHERGILL, M. D., LONDON.

This writer commends (*Medical Times*, April, 1876,) as the most satisfactory prescription, the following, or an appropriate modification of it:

60i.	R.	Potassii bromidi,	gr.xv	
		Tincturæ digitalis,	gtt.v.	M.
This amount thrice daily.				

If there is anæmia present, the potassio-tartrate of iron will be found to combine nicely with this prescription. A belladonna plaster should be worn over the region of the heart. Of course, in the treatment of such a neurosal affection, it is well to cut off every form of irritation, and everything which tends to create nervous excitement. The mind and body should both be kept as calm and tranquil as is possible. The alimentary canal should be attended to; the condition of the reproductive system ought to be carefully scrutinized, and the habits of life taken into consideration. Where there is a lack of tone in the nervous system, it is well to give the digitalis with hydrobromic acid, in which quinine readily dissolves, so as to furnish a tonic in the mixture. Where there is anæmia, the bromide and the digitalis may be combined with the potassio-tartrate of iron, or a few drops of some preparation of iron may be taken twice a day, after food, with advantage.

J. M. DA COSTA, M. D., PHILADELPHIA.

Inquiry should always be made as to the cause, for the first step in the treatment is its removal. The cause may be found to be drinking of coffee, chewing of tobacco, smoking, alcoholic drinks, masturbation, etc.

In all cases of functional disorder of the heart, attended with palpitation, digitalis is very serviceable, more so than aconite. If there be masturbation as the exciting cause, the following is a useful combination:

DISEASES OF THE CIRCULATORY SYSTEM.

602. ℞. Potassii bromidi, ʒvss
Tincturæ digitalis, f.ʒijss
Infusi cascarillæ, f.ʒiv. M.

A dessertspoonful two or three times a day.

ROBERTS BARTHOLOW, M. D., CINCINNATI.

The violent and irregular actions of the heart occurring in hysterical subjects are immediately relieved by the use of the hypodermic syringe. Morphia alone is used. In cases of dyspnoea dependent upon dilated right cavities, pulmonary œdema and mitral disease, advantage is derived from the following :

HYPODERMIC INJECTION.

603. ℞. Morphiæ sulphatis, gr.xvj
Atropiæ sulphatis, gr.j
Aquæ destillatæ, f.ʒj. M.

Filter. Dose—five minims (equal to one-sixth of a grain of morphia, and one ninety-sixth of a grain of atropia).

DR. BOUCHUT, PARIS.

604. ℞. Assafœtida, gr.xxxvj
Digitalis pulveris, gr.ijj
Extracti valerianæ, gr.vij. M.

Divide into eighteen pills; one morning and evening, to remedy nervous palpitations of the heart. If the blood be impoverished, a ferruginous natural mineral water is a useful drink with the meals, mixed with wine.

RÉSUMÉ OF REMEDIES.

- Aconite*, in small doses, often controls nervous palpitations of the heart.
Belladonna, in the form of a plaster, frequently does good.
The Bromides are often of service.
Camphor, in doses of gr.ijj–xij daily, is recommended in tumultuous palpitation.
Cimicifuga, in palpitations with dilated or fatty heart, is particularly serviceable.
Digitalis is recommended by Prof. DA COSTA as more serviceable than aconite in all cases of functional disorder of the heart.
Eucalyptus. In the palpitations frequent in women about the change of life, this is an efficient drug.
Hyoscyamus, in large doses, is especially indicated in functional disturbance of the heart arising from emotion. Dr. HARLEY recommends in these cases the hypodermic injection of gr. $\frac{1}{8}$ of sulphate of hyoscyamia.
Morphia, hypodermically, is recommended by Prof. BARTHOLOW in violent palpitation produced by emotion or reflex irritation.
**Potassii Bromidum*, in doses of gr.v–x ter die, is recommended by Dr. RUSSELL REYNOLDS in palpitation or fluttering of the heart, arising from disturbances of the vaso-motor system.

Senega, in combination with hyoscyamus and ammonia, often proves useful in *hysterical palpitations*.

Veratrum Viride is efficient to reduce the heart's action.

EXTERNAL MEASURES.

Emplastra of belladonna or of veratria are powerful local sedatives. A caoutchouc bag, filled with pounded ice, suspended around the neck so that it rests over the heart, is an admirable calmant.

Posture. In many instances, moderate palpitations, not depending on organic disease, may be almost immediately arrested by bending the head downward, and allowing the arms to hang pendent. The effect is still more rapidly produced by holding the breath a few seconds while the body is in this bent position.

Pressure on the Carotids. This is an excellent measure for palpitations of a nervous character, not dependent on organic disease. The compression should be exercised on both carotid arteries at once, and maintained only for a few seconds. The relief should be instantaneous.

Pressure on the Pneumogastric. This measure has been urged by Dr. J. F. A. ADAMS, of Boston, as giving results very striking and suggestive. In one case, violent nervous disturbance of the heart, with hysterical symptoms, came on a lady suffering from an attack of acute rheumatism. Compression was made, first of one vagus, and afterwards of both. In a few minutes the agitation had subsided, the heart's action became quieter and more regular, and finally all the nervous symptoms subsided. A few minutes afterward she sank into a steady sleep, and on awakening was perfectly quiet, and the cardiac symptoms never reappeared.

IRRITABLE HEART.

PROFESSOR J. M. DA COSTA, M. D., OF PHILADELPHIA.

This common condition of the heart, frequently the result of over-exertion, the demands of modern "high-pressure" life, the excessive consumption of meat and stimulants, etc., demands in the first instance *rest*, and the cessation of the habits which have been the exciting cause. The patients should lie down several hours daily. Digitalis in doses of gtt. viij-x of the tincture is the most useful drug. Where the impulse is forcible, however, aconite may be employed in place of digitalis. The dose is tinct. rad. aconit. (U. S. Ph.) ℥i-ij, *ter die*. In a few cases this dose requires to be doubled. In cases of decided increase of the organ, aconite most shows its influence. No medicine can then be compared to it. It

may be used steadily, in moderate doses, for months. Belladonna is an efficient agent, especially in instances of irregular action. Where no irregularity exists, but merely rapid action, it rarely shows itself of decided use. It may be advantageously combined with digitalis and iron. Opium has some quieting action, but only of a temporary character. Hypodermic injections of morphia are excellent to relieve the cardiac pain occasionally present. Tonics are often excellent adjuncts to the treatment, but are insufficient to control the disorder. Zinc, tincture of the chloride of iron, and gentian, may be mentioned. Where the attacks of palpitation are violent, Hoffman's anodyne and rest in the recumbent position are called for. Hypodermic injections of morphia and atropia relieve the pain. A belladonna plaster persistently worn is often also productive of good. Counter-irritation is valueless. The treatment is never a short one.

VALVULAR DISEASE OF THE HEART.

ALFRED L. LOOMIS, M. D., NEW YORK.

All valvular diseases require rest, the avoidance of strong emotions, a nutritious diet, and temperance. If anæmia is present, iron is called for. Digitalis should be employed carefully; "it should never be resorted to in aortic regurgitation while the hypertrophy compensates for the dilatation." Dr. LOOMIS thinks the best mode of administering it is by infusion.

The following tonic combination is commended by BARTHOLOW:

605. R.	Pulveris digitalis,	ʒij	
	Ferri redacti,		
	Quinæ sulphatis,	ʒj.	M.

To make twenty pills. One to be taken two or three times a day.

There is considerable diversity of opinion in the books as to the use of digitalis in aortic cases, though in other forms of heart disease opinions are pretty well agreed. Some authorities would regard aortic insufficiency as a nearly absolute contra-indication to the use of the drug. Dr. G. W. BALFOUR regards it as the most valuable remedy in this lesion. Mr. THOMAS HAYDEN says: "Given as the tincture, and combined with iron and ether, I have

rarely known digitalis to cause unpleasant symptoms; on the contrary, in numerous instances it has been followed by the most favorable and satisfactory results. I have in a few instances been under the necessity of suspending the use of digitalis, owing to threatened syncope; but in the cases referred to there was fatty degeneration of the heart, in some instances with, and in others without, disease of the aortic valves." Mr. HAYDEN's prescription is: ten minims each of tincture of digitalis, tincture of chloride of iron, and spirits of nitric ether, in an ounce of infusion of quassia, thrice daily.

Dr. BALFOUR, however, will not allow the fatty degeneration to be the explanation, as he quotes a very good case in which the drug was most useful, and says, speaking of fatty heart, "I have never seen any reason to withhold digitalis, and have always hitherto been rewarded by considerable and well-marked improvement." He prefers the tincture, and orders ℥v-xxx every four hours, to be suspended if there is any faltering of the pulse or nausea on movement. (*Edinburgh Medical Journal*, Feb., 1875.)

PROF. S. S. ROSENSTEIN, M. D., OF LEYDEN.

The indication in valvular disease is to develop and maintain compensatory action of the heart, and to moderate over-compensation. The diet should be nourishing, but not stimulating; coffee and tea should be weak; distilled liquors avoided; the exercise be moderate. Lukewarm baths followed by a cold rub-down attract the blood to the surface, and thus act favorably. Mentally, an "Olympian calm" should be warmly recommended. To allay the irritability of the cardiac muscle, cold to the præcordial region ranks first. The patient may carry for a few hours daily a gutta percha bag filled with ice suspended over the heart. Counter-irritants are injurious. The sovereign remedy in every stage of valvular disease is *digitalis*. Dr. R. has found this combination excellent:

606. R.	Tinct. digitalis,		
	Tinct. valerian.,	℥ss	f.ʒj
	Tinct. ferri acetat. aether.,		f.ʒjss.
	Twenty-five drops thrice daily.		M.

(The ethereal tincture of the acetate of iron, G. Ph., is made as follows:

607. ℞. Liq. ferri acetat., 9 parts,
Alcoholis, 2 parts
Etheris acetic., 1 part. M.

The patient should take this a fortnight, but not longer.)

The swelling of the liver and gastric catarrh which is apt to arise may be met by the use of quassia, gentian, or rhubarb, and gentle aperients, like the saline mineral waters.

When dropsy occurs, which is usually first noticed about the ankle's acetate of potash is called for :

608. ℞. Potass. acetatis, ℥ij
Tinct. ferri acetat. ether, ℥xliv
Syrup rhaedos, f.℥v
Aquam, ad. f.℥vi. M.

A tablespoonful thrice daily.

Squill may be reckoned a tried diuretic in such cases.

609. ℞. Aceti scillæ, f.℥j
Potassæ bicarb., ad saturandum
Aquæ cinnamom., f.℥viij. M.

One to two tablespoonfuls thrice daily.

Respiration of compressed air sometimes gives great though not lasting relief, especially in mitral affections with stenosis. Digitalis combined with quinia is often also of great value : it should be given in continued small doses.

In the fainting and dizzy fits so often exhibited by patients with aortic stenosis, the prompt application of volatile stimulants, as HOFFMAN'S anodyne, wine, or ether, is urgently necessary; the head should be placed low, while the body lies horizontal. The active congestion of the brain which occurs in insufficiency of the aortic valves must be combated by sinapisms or dry cupping to the neck, or small bleedings over the mastoid process.

PROFESSOR GERHARDT.

This writer (*Deutsches Archiv für Klinische Medicin*, Bd. V.) has treated fibrinous deposits and valvular diseases of the left side of the heart by the *inhalation of alkaline solutions*. He uses :

610. ℞. Potassæ bicarbonatis, gr. v-viij
Aquæ bullientis, f.℥j. M.

For use as an inhalation.

He believes the frequent inhalation of this alkaline vapor prevents fibrinous deposits, and being carried by the pulmonary veins

directly to the left side of the heart, may dissolve already existing vegetations. He claims good results from its employment.

DR. B. W. RICHARDSON, OF LONDON.

In cases of fibrinous deposit, especially *in extremis*, this physician recommends that depressing influences be at once withdrawn. The distress present suggests opium, but opium is fatal. The body should be placed in absolute rest, concentrated food should be given, the temperature should be 60°-70°, and the body kept warm by external dry applications. Internally he administers concentrated food and liquor ammoniæ, ℥x in ice water every hour, with potassii iodidi gr. v, every alternate hour. This treatment has been followed by a degree of success he had never anticipated.

PROFESSOR SÉE, PARIS.

This distinguished teacher recommends (*Union Médicale*, May, 1875, the following combined treatment in the œdema and anasarca which so frequently complicate cardiac affections. He claims to have effected their speedy disappearance.

611. R. Extracti scillæ, gr. xv
Pulv. rad. scillæ, gr. iss. M.
For ten pills. Six to ten of these a day.

Also,

612. R. Potassii bromidi, ℥j.
This amount to be taken daily, in divided doses.

ROBERT J. GRAVES, M. D., DUBLIN.

613. R. Potassii nitratis, ℥j-ij.
Tincturæ digitalis, ℥xxxv
Tincturæ hyoscyami, ℥xv
Misturæ amygdalæ, f. ℥x. M.

A tablespoonful from hour to hour in the œdema which accompanies disease of the heart.

DR. BOUCHUT, PARIS.

614. R. Digitalis pulveris, Div
Morphiæ muriatis, gr. v
Camphoræ pulveris, ℥ss
Confectionis rosæ, q. s. M.

Divide into forty pills. One to be administered morning and evening, in organic affections of the heart.

615. R. Tincturæ digitalis, f. ℥ivss
Vini colchici, f. ℥iss
Potassii iodidi, ℥ijss
Syrupi sarsaparillæ, f. ℥iss
Aquæ destillatæ, f. ℥iiss.

A teaspoonful three or four times a day in the anasarca of heart disease. The patient should be purged every third day with compound jalap powder.

616. ℞. Tincturæ aloës, f.ʒj
 Tincturæ scillæ,
 Tincturæ digitalis, āā ℥xv. M.

For one dose, every second or third day, in the dropsies of heart disease.

RÉSUMÉ OF REMEDIES.

Aconite is contra-indicated or to be used with the utmost caution, in organic disease, where the power or force of the heart is impaired.

Belladonna is recommended by Dr. A. T. H. WATERS in form of plaster or lotion over the heart in palpitation combined with valvular disease, the patient at the same time being kept at rest in bed: rest alone is often efficacious. In severe cases belladonna is superior to digitalis (which see).

**Digitalis* is recommended by Dr. A. T. H. WATERS in valvular disease, especially when there is hypertrophy of the heart. Dr. E. MACKEY (*British Medical Journal*, May 31st and July 11th, 1868,) thinks that neither *mitral regurgitation* nor *mitral obstruction* contra-indicates the use of digitalis, and gives numerous cases in which it was employed with advantage; but he regards its employment in *aortic regurgitation* and in *fatty degeneration* as contra-indicated or of doubtful safety. In any case where the heart's action is very feeble, Dr. M. considers that the commencing dose of the tincture should be ℥v-x every four or six hours; this dose may be increased to ℥xv-xx, or even ℥xxx with benefit; but, as a general rule, such a dose as ℥xxx should not be repeated more than twice in the twenty-four hours. An equivalent dose is f.ʒss of the fresh infusion, or gr. j of the powdered leaves. The patient, before taking such a dose, must be kept recumbent at least half an hour, and kept so for two hours after. Dr. M. hesitates to prescribe a larger dose than ℥xv of the tincture to any patient following his occupation, and believes that half drachm doses of the tincture, repeated several times at short intervals, especially in the upright position, may dangerously interfere with the circulation, whether by over-stimulation or partial paresis. But given in the manner directed, no cumulative action has been observed.

Ferri Chloridi Tinctura is recommended in chronic valvular disease by various writers; given in long-continued small doses, is it directed for fatty degeneration (which see).

**Morphia* has been employed hypodermically by Dr. CLIFFORD ALLBUT (*Practitioner*, December, 1869,) with marked advantage in diseases of the heart. He gives the injection in the evening and enjoins perfect quiet afterward. His commencing dose is gr. ʒ̄ or ʒ̄ of the muriate, increased, in ordinary cases, to gr. ʒ̄ for an adult. He finds it valuable in *mitral regurgitation*, but less valuable in mitral obstruction and in disease of the aortic valves;

but in aortic disease, when the heart is big and pumping, it gives much ease. The urine, however, should always be examined and the morphia given with caution or withheld, if albumen be found. Prof. BARTHOLOW also recommends morphia hypodermically in *mitral disease*, but is opposed to its employment in narrowing and obstruction of the aortic orifice.

Megä, combined with some other diuretic, is recommended by Dr. BARLOW in valvular disease of the heart, to promote the action of the kidneys and relieve the palpitation, especially the palpitation arising from aortic disease. He employs the following formula:

617. R.	Spiritus ætheris compositus,	f.ʒij	
	Tincturæ hyoscyami,	f.ʒiiss	
	Decocti senegæ,	f.ʒiiij	
	Misturæ camphoræ,	q. s., ad. f.ʒiv.	M.

Take one-fourth thrice daily.

Veratrum Viride is often employed with benefit on the pulse. It is a powerful agent in lowering the circulation. When given, it should be administered in quantities small enough not to produce vomiting, as the exertion of the act might prove most injurious. To prevent this, the veratrum may be guarded with a little opium, and should nausea supervene, the patient should rest in a recumbent position, and take small quantities of stimulants. Veratrum is, however, an uncertain drug in heart affections.

Zinci Sulphas is favorably spoken of by Dr. BARLOW in *mitral disease*. He employs:

618. R.	Zinci sulphatis,	gr.iiij	
	Extracti lupuli,	gr.vj.	M.

Make six pills. Take one thrice daily. The dose of the zinc should be gradually increased to gr.iiij. When there is much palpitation, he advises its combination with camphor.

619. R.	Zinci sulphatis,	gr.j-iiij	
	Camphoræ,	gr.j	
	Extracti hyoscyami,	gr.ij.	M.

Make into pills. Take thrice daily. When there is much irritability of the stomach, the iodide should be substituted for the sulphate.

Diuretics are found beneficial by Dr. HOPE in every stage of valvular disease of the heart. They draw off the serous portions of the blood, diminish the quantity without deteriorating the quality of that fluid, and thus relieve palpitation and dyspnoea, and obviate infiltration, without materially reducing the strength.

Frigus. The local use of cold is called for when there are indications of cardiac irritability, recurrent palpitation, hypertrophy, etc. For occasional use the ether-spray may be thrown on the præcordial region. A rubber bag, containing pounded ice, may be sus-

pended from the neck so that it would rest over the heart. This application should not be continued longer than half an hour to an hour once or twice daily.

Venesection. The turgidity of the veins often witnessed in valvular heart disease seems at first sight to suggest the abstraction of blood. Experience, however, has shown that any relief so obtained is ephemeral and fallacious. It is better, as suggested above, to relieve the engorged vessels by drawing off the serous portion of the blood by means of diuretics, than to run the risk of debilitating the patient by venesection. Nevertheless, as stated in 280, small bleedings over the mastoid process are occasionally very serviceable to correct the active congestion of the brain which occurs in insufficiency of the aortic valves. Dry cupping and the relief of local congestions by similar derivatives, are sometimes most useful.

DISEASES OF THE DIGESTIVE SYSTEM.

Anorexia—Biliary Calculi—Cholera Asiatica—Colic (Flatulence, Ileus, Colica Pictonum)—Constipation, Habitual—Diarrhœa (acute, chronic)—Dysentery (acute, chronic)—Dyspepsia—Gastralgia—Gastritis—Gastric Ulcer—Hematemesis—Hepatitis (acute, chronic)—Intestinal Worms—Jaundice—Liver: Functional Disorders of—Pyrosis—Vomiting.

NOTE.—Diseases of the Teeth, Oral Cavity and Pharynx, including Tonsillitis, Pharyngitis, Caries, Odontalgia, etc., are treated of under *Surgical Therapeutics*, Chap. X.)

ANOREXIA.

Loss of appetite is a common symptom in disease, and must be treated by the indications of each case.

DR. SYDNEY RINGER, OF LONDON.

In loss of appetite and digestive power from fatigue, a glass of wine or a little brandy and water before food is useful; as also in indigestion during convalescence from acute disease.

Most of the "bitters," as calumba, gentian, quassia, chiretta, cascarilla, etc., are popular agents to increase the appetite. They exert a slight irritant action on the stomach, and in this indirect manner assist both appetite and digestion. They should be taken a short time before food, as their effect soon wears off.

Cinchona or quinine is an excellent sharpener of the appetite, and also assists digestion. It is particularly useful in the case of nervous people and inhabitants of towns, who have been "run down" by confinement, sedentary occupations, and impure air.

DR. N. GALLOIS, PARIS.

620. R.	Tincturæ nucis vomicæ,	gtt.v
	Extracti gentianæ,	gr.xv
	Syrupi aurantii corticis,	f.ʒiiss
	Vini cinchonæ,	f.ʒv.
		M.

One-half to be taken half an hour before each of the two principal meals, in order to awaken the appetite.

621. ℞. Rhei, gr. xxxv
 Aloës socotrinæ, gr. xxv
 Myrrhæ,
 Saponis, āā ʒj
 Spiritūs menthæ piperitæ, ℥iij
 Extracti taraxaci, ʒj. M.
- Divide into forty-five pills, and order from one to three at a dose, laxatives, and to stimulate the functions of the stomach.

622. ℞. Aloës socotrinæ, gr. xvj
 Ipecacuanhæ, gr. viijss
 Zingiberis, gr. xxv
 Syrupi, q. s. M.
- Divide into sixteen pills, order one a day, before dinner, to stimulate the appetite and regulate the system.

623. ℞. Fel bovini purificati, ʒiv
 Ferri carbonatis, ʒss
 Rhei,
 Extracti gentianæ, āā ʒiv. M.
- Divide into one hundred and twenty pills, order six or ten a day, to combat a want of appetite.

DR. REECE, FRANCE.

624. ℞. Sodii carbonatis exsiccatae, ʒj
 Extracti gentianæ, ʒij
 Zingiberis, gr. xij. M.
- Divide into thirty-six pills, and order two morning and evening, as absorbents and stomachics.

PROF. FONSSAGRIVES, MONTPELLIER, FRANCE.

625. ℞. Extracti cinchonæ flavæ, ʒss
 Tincturæ nucis vomicæ, gtt. v
 Syrupi aurantii corticis, f. ʒiiss
 Claret wine, f. ʒviiij. M.
- Take several tablespoonfuls at the commencement of the meals, to stimulate the appetite.

LONDON HOSPITAL.

626. ℞. Pulveris anthemidis, ʒss
 Pulveris rhei,
 Pulveris zingiberis, āā ʒij. M.
- Divide into 16 powders. Take one a day, an hour before or after meals, to stimulate the appetite and facilitate digestion.

DR. HUSS, FRANCE.

627. ℞. Pulveris nucis vomicæ, gr. xv-xx
 Pulveris quassiaæ,
 Cretæ præparatæ, āā ʒss. M.
- Divide into 20 powders, and order one three times a day, half an hour before each meal, to stimulate the appetite and favor digestion.

erated by movement of the body or by slight excitement. When this occurs, the medicine should not be interrupted, but the dose must be diminished. No good effect is to be expected unless the remedy be continuously administered for some time.

DR. JOHN A. OCTERLONY, OF KENTUCKY.

This practitioner records his observations in thirty-five cases of chole-lithiasis. (*Transactions of the Kentucky State Medical Society*, 1877.) The indications are two: first, to relieve the pain during the attack; and, secondly, to prevent its recurrence.

1. For the immediate relief of the patient hypodermic injection of morphia are most appropriate. Opiates should never be given by the mouth nor in solid form for the relief of gall-stone colic. In some cases where the pain is so atrocious that morphia seems to be inadequate, chloroform or ether may be given by inhalation. *Chloroform* has also been given internally, ℥ʒ every hour while the pain lasted, and as much after each meal for five days longer. It is asserted to melt away gall-stones of considerable size. Such large doses of chloroform may, however, produce alarming symptoms, and must be used with caution.

The general prolonged hot bath is sometimes of signal benefit. Surrounding the patient's waist with a sheet wrung out of hot water is a good substitute. Leeches to the side are sometimes effectual when other measures fail.

Emetics ought to be rigorously proscribed.

2. To prevent the recurrence of the paroxysm, any gall-stones remaining in the gall bladder must be dissolved, and their formation prevented.

The *diet* must be carefully watched. Highly seasoned food, malt liquors, fats, sweets, and rich viands must be forbidden. The meals should be *at short intervals*, three or four a day. As a remedial measure to prevent the formation of the stones, Dr. BUCKLER has proposed succinic acid and peroxide of iron on account of the large amount of oxygen contained in both of them, which is almost wanting in cholesterin. These can be combined in the *hydrated succinate of peroxide of iron*, and should be taken continuously for six months according to the following formula:

631. R. Hydrated succinate of peroxide of iron, ℥ʒss
 Distilled water, ℥vjss. M.

A teaspoonful after each meal.

In almost every case Dr. OCTERLONY has used this salt with complete success. (Dr. BUCKLER's article is in the *American Journal of the Medical Sciences*, July, 1867.)

Carlsbad, Vichy, or Marienbad waters, and their counterparts in this country, are useful.

A remedy much employed and with good results by the late Dr. LEWIS ROGERS, of Louisville, is:

632. R.	Ammoniæ muriatis,			
	Extracti taraxaci,	āā	ʒss	
	Aquæ,		f.ʒvj.	M.

A dessertspoonful three times a day.

DR. JAMES E. JACKSON, OF PENNSYLVANIA.

This practitioner states that the following combination forms the most active solvent for gall stones, biliary secretions, etc., he has ever tried. In connection with its use the patient should avoid meat and fats, and confine himself to a milk and vegetable diet.

633. R.	Chloroformi,			
	Etheris sulphurici,	āā	f.ʒss	
	Olei terebinthinæ,		f.ʒj	
	Sacchari albi,		ʒij	
	Mucilaginis acaciæ,		f.ʒij.	M.

A teaspoonful three times a day.

DR. DURAND, PARIS.

634. R.	Olei terebinthinæ,		f.ʒiij	
	Ætheris sulphurici,		f.ʒij.	M.

Half a teaspoonful, night and morning.

This is the celebrated "solvent" of DURAND, endorsed by TROUSSEAU. It has unquestionable utility as a preventive of the recurrence of an attack. Alkaline drinks, such as Vichy water, or as Dr. PROUT recommends, bicarbonate of soda, ʒi or ʒij in warm water Oj, aid its action.

RÉSUMÉ OF REMEDIES.

* *Belladonna*. Dr. MURCHISON highly recommends the extract of belladonna, in one-half grain doses, every two or three hours, in the passage of gall-stones.

Chloral is frequently employed with advantage, on account of its producing muscular relaxation.

* *Chloroform* by the mouth, or in the form of inhalation, relieves pain, diminishes spasm, and does not interfere with the onward propulsion of the stone.

- Ether*, internally, has been recommended on account of its power of dissolving cholesterine, as well as because of its anti-spasmodic properties.
- **Opium* in full doses (gr.ij or gtt.xl of laudanum) by the mouth or rectum, repeated in half an hour if necessary, generally relieves the intense pain attending the passage of biliary calculi better than any other remedy. It should be combined with the use of the hot bath. The administration of ether or chloroform may also be advantageously resorted to. The *hypodermic injection morphia* (gr.¼), repeated if necessary, is particularly useful from the rapidity of its action.
- Sodæ Phosphas*, in doses of ℥j-ʒj, administered for several months, before each meal, has been found by BARTHOLOW to be extremely efficacious in preventing the recurrence of attacks of hepatic colic. It is believed to act by relieving the catarrh of the duodenum which is present in most of these cases, and, by transference to the gall bladder, forms a nucleus of mucus and bile around which the cholesterine crystallizes.
- Saline Mineral Waters*, such as Carlsbad, etc., are extremely useful if taken steadily, and supported by a strict regimen. All fat, butter, cheese, rich meats, spices, salt fish and meat, strong coffee and alcoholic beverages, must be strictly excluded.
- Nitro-Muriatic Acid Baths* are a valuable remedy. The right hypochondrium may be repeatedly bathed with a solution of the acid, f.ʒij to a gallon of water; and the whole person rubbed down with it. Or a flannel roller, ten or twelve inches wide, and long enough to encircle the body twice, may be moistened with the fluid and worn around the waist.

CHOLERA ASIATICA.

THE MEDICAL STAFF, U. S. ARMY.

The classical work on *The Cholera Epidemic of 1873 in the United States*, mainly prepared by Dr. ELY McCLELLAN, U. S. A., contains the well-digested experience of practitioners during the last cholera epidemic in this country. We quote some of the most successful measures adopted.

Dr. R. W. MITCHELL, of Memphis, Tenn., writes; "When satisfied that I had cholera to contend with, as indicated by rice-water discharges, vomiting, cramps and shrinkage of extremities, I ceased medication by the stomach, and used the formula given hypodermically:

635. R.	Acidi sulphurici,	ʒss	
	Morphiæ sulphat.,	gr. ʒ	
	Spiritus vini gallici,	ʒiiss	
	Aquæ destillatæ,	ʒiij.	M.

"The above was injected under the skin of the arms, legs, and over the stomach, every hour until the symptoms of the disease were relieved."

Dr. G. B. THURSTON, of Memphis, Tenn., writes: "The general treatment that I adopted was about as follows: Calomel and opium in alterative doses, say in two of the former to one of the latter, repeated every hour for several hours. In conjunction with this, used the following:

636. R.	Extracti cannabis indicæ,	gr. xvj	
	Gum camphor,	ʒss	
	Chloroform,	ʒss	
	Olei terebinthinæ,	ʒij	
	Mucilag. acaciæ,		
	Syrupi simplicis,	ʒss	
	Aquæ cinnamomi,	ʒj.	M.

Dose, a teaspoonful every one or two hours."

Dr. J. T. JONES, of Nashville, Tenn., reports that, in the cold stage of cholera, he has used creasote with greater success than any other article of the materia medica, and suggests the following formula:

637. R.	Creasoti,	gtt. j	
	Aquæ camphoræ,		
	Infusi gentianæ compositæ,	ʒvj.	M.

At a dose, and repeated every two hours.

Dr. S. T. CHANDLER, of Campbellville, Ky., who treated, during the epidemic of cholera in 1854, some sixty to seventy cases of the disease in its various stages, records his experience as having been largely in favor of the use of dilute sulphuric acid in full doses and repeated every fifteen to thirty minutes, until the vomiting and purging are arrested. In the epidemic of the year 1873, the same plan of treatment was adopted, and with like results. "The acid relieves the nausea, arrests the vomiting like a charm, and gradually the dejections are stopped."

Dr. McCLELLAN adds, that the necessity of instituting treatment at the earliest moment after the occurrence of a diarrhœa was most generally recognized throughout the area of infection. Whenever physicians, during the progress of the epidemic, ceased the

attempt to diagnose between cholera, cholera-morbus and diarrhœa, and treated all cases that occurred as cases of cholera, the lists of mortality were reduced; while, on the other hand, increasing mortality was shown whenever too great reliance was placed upon diagnostic powers.

The evidence is conclusive that the exhibition of opium, followed by alterative doses of calomel, and absolute rest in the recumbent posture, almost invariably arrested the disease when in the premonitory stage. In the advanced stages, the entire range of the pharmacopœia seems to have been brought into use, with no better results than had been obtained in previous epidemics.

The experience of the writer is strongly corroborative of the beneficial results which may be obtained from the use of sulphate of iron and dilute sulphuric acid as prophylactics during an epidemic of cholera; and, further, that the most successful treatment of the disease is to be found only in all that is implied in the word sanitation.

Dr. JOHN M. WOODWORTH, Supervising Surgeon U. S. Marine Hospital Service, records the experience of his department in the following language: "Beginning with the year 1814, the cholera literature down to the present time abounds in proofs, clinical, physiological, pathological and meteorological, of the efficacy of *sulphuric acid*; and there can be no doubt, despite the dicta of the last International Sanitary Conference, that we possess in the mineral acid a certain means of prophylaxis against cholera. The lessons of the epidemic of 1873 point strongly to the value of sulphuric acid even as a therapeutic agent against the disease. According to Dr. McCLELLAN, mortality among cholera patients treated with acids was only eight per cent., while the lowest mortality rate where other remedies were used was twenty-three per cent., and the highest fifty-nine per cent."

DR. WILLIAM STEVENS, OF LONDON.

This author in two epidemics claims to have had very successful results from the *saline* treatment, in his hospital and prison patients. Cases presenting premonitory symptoms—diarrhœa and vomiting—were removed into an observation ward, where an even temperature was constantly maintained. A seidlitz powder was immediately administered; if sinking was felt, without purging, three or four teaspoonfuls of Epsom salts were added to the pow-

der. On these agents acting, plenty of thin beef tea, well seasoned with salt, was given; if there was any pain, a sinapism was applied to the gastric region; and thirst was relieved with seltzer water, soda, or pure water *ad libitum*. Most of the cases were thus cured. If, however, cramps, coldness or shrinking of the pulse came on, the patients were considered as cholera cases in the second degree. The following was then administered:

638. R.	Sodii chloridi,	ʒij	
	Sodæ carbonatis,	ʒij	
	Potassæ chloratis,	ʒij	
	Aquæ,	℥ʒvj.	M.

Two tablespoonfuls in water about every half-hour.

If there was much irritability of stomach, a large sinapism was applied; if much heat or burning pain, an additional quantity of carbonate of soda was added to the mixture. In cases in the stage of collapse, a strong solution of the same salts, dissolved in hot water (100° F.), was thrown into the bowels, and repeated every two or three hours. Sinapisms were also applied to the stomach, between the shoulders, etc.; and in the cold stage, frictions with warm towels were used. A pure air for the patient to breathe was considered of the greatest importance.

In mild cases, the "wet-sheet envelope" will favor reaction, but it has only proved mischievous in severe instances. When the vomiting is severe, or the thirst insatiable, nothing gives more relief than permitting ice to be continually sucked. The patient is also to be isolated as far as possible. He is to have plenty of fresh air; and care must be taken that the water he drinks is uncontaminated—particularly, that it has not been drawn from a well near any sewer. Moreover, his excreta should be received in a pan containing a disinfecting fluid, and then at once thrown away.

The greatest caution will subsequently be required for many days as to diet; not a few deaths have occurred from the too early use of animal food. As a rule, broths and farinaceous substances only should be allowed, without any solids whatever, until the renal secretion has been fully re-established, and all the symptoms have vanished.

DR. FLEMING, QUEEN'S HOSPITAL, BIRMINGHAM.

639. R.	Plumbi acetatis,	gr. xxiv	
	Liquoris morphiæ acetatis,	℥.ʒj	
	Acidi acetici diluti,	ʒ. xij	
	Aquæ destillate,	℥ʒvj.	M.

A tablespoonful every two hours (an hour before or an hour after food is taken) in a tablespoonful of water; beef tea and milk, alternately every four hours; warm negus in moderation.

The value of acetate of lead and opium in diarrhœa is well known. DR. FLEMING calls attention to the *mode of administration*. The astringent action of both lead and morphia is in consequence of their absorption and conveyance in the blood to the affected part. Hence, the marked advantage of giving them in a thorough solution in distilled water, which promotes their passage into the blood. This is further secured by giving the medicine on an empty stomach before meals, and so avoiding, as far as possible, precipitation of the lead by contact with the gastric fluids. In the ordinary lead and opium pill, more or less lead is probably converted into the meconate; or the pill dissolving slowly in the stomach in contact with the gastric secretions, the lead runs much risk of conversion into the insoluble chloride. Our author has adopted this mode of administration for many years, and speaks strongly of its efficiency. In the diarrhœa of children the same mixture, according to the following formula, gives most valuable results:

640.	℞	Plumbi acetatis,	gr. xij	
		Liquoris morphiæ acetatis,	℥. xij	
		Acidi acetici diluti,	f. ℥j	
		Aquæ destillatæ,	f. ℥iij.	M.

A teaspoonful every five, six or eight hours, to a child one year of age.

WILLIAM SEDGWICK, M. R. C. S., ETC., LONDON.

Our author strongly recommends (the *Lancet*, August 19, 1871,) *dilute phosphoric acid* in half-drachm doses, combined with syrup of orange, and largely diluted with ice-water.

In cases of choleraic diarrhœa, and in the early stage of confirmed cholera, this remedy appears to be capable of checking the progress of the disease with greater certainty than sulphuric acid.

GEORGE JOHNSON, M. D., F. R. C. P., PROFESSOR OF MEDICINE IN KING'S COLLEGE, LONDON; PHYSICIAN TO KING'S COLLEGE HOSPITAL, ETC.

In the treatment of cholera and choleraic diarrhœa, which is, in fact, cholera in a mild form, the main principle to bear in mind is, that the discharges are as essentially curative as is the eruption of small pox. The discharges are not to be abruptly stopped by opiates. Experience has abundantly proved that this is a pernicious practice. Neither are they permitted to accumulate in the aliment-

ary canal. There is one remedy which is almost universally applicable in all forms and stages of the disease, and that is an abundant supply of cold water, to flush the intestinal sewer and to wash out the poisonous discharges. A copious imbibition of pure cold water will suffice for the cure of most curable cases.

Palpation and percussion of the abdomen reveal the fact that there occurs not unfrequently a painful and sometimes a paralyzing over-distention of the bowel by rapidly effused morbid secretion. This, if not promptly relieved, may even go to the extent of causing a fatal obstruction. More especially is this likely to happen when the sensibility of the bowel has been deadened by opium. The plan to prevent and to remove this accumulation is to give some quickly-acting yet unirritating evacuant dose. For this purpose, castor oil is, on the whole, better suited than any other remedy. The objection sometimes raised—that all remedies must be useless, because none are absorbed—obviously does not apply to such a remedy as castor oil, which, by its merely local action upon the mucous surface, stimulates the bowel and expels its contents. Experience has amply proved the success of the treatment in this and kindred classes of cases.

The time to give opium, if at all, is in small doses, to soothe the bowel, after the expulsion of the poisonous secretions. Opiates are useless, or even dangerous, when the blood is poisoned, or when the bowel contains offensive morbid secretions. Opiates in the early stages of diarrhœa and cholera would be more frequently and decidedly injurious, were it not for the fact that their absorption is prevented by the rapid current of liquid which is being passed from the blood into the alimentary canal; therefore, they are quickly expelled, together with the morbid secretions, and they are powerless to arrest the discharges. (*The British Medical Journal*, August 19, 1871.)

Sir THOMAS WATSON, Bart., M. D., etc., states in the last edition of his *Practice* that he firmly believes that the doctrines advanced by Dr. JOHNSON are well founded, and approves his rules of treatment. No doubt the true indication of treatment is to stop the flow as soon as possible; but this may sometimes be best effected (as also in crapulous diarrhœa, and in the summer cholera of Sydenham) by carrying off the offending matter.

JOHN MURRAY, M. D., INSPECTOR GENERAL OF HOSPITALS, INDIAN
MEDICAL SERVICE.

When irritating or indigestible food in the bowels is the cause, as is frequently the case, of the early diarrhœa, it should be removed, if it has not previously been discharged in the evacuations, and a recurrence of the looseness guarded against. For this purpose our author recommends the following cholera pill:

641. R.	Pulveris opii,	gr. j.	
	Piperis,	gr. ij.	
	Assafœtidæ,	gr. iij.	M.
	To make one pill.		

It appears to check the looseness and stimulate the secretions, and does no harm if needlessly exhibited. It should be repeated should the looseness continue. It will cure most cases, and in all restrain the symptoms until regular medical advice can be procured. It may be distributed to every house and be available in a few minutes, whereas the delay of a few hours may allow the disease to advance beyond control. These pills have been distributed in tens of thousands in the towns and villages of India with most satisfactory results. Some surgeons prefer red to black pepper, and others add camphor to the opium and assafœtida, and report favorably of the combination. They are distributed in the dispensaries and placed in the charge of the police in India. (*The British Medical Journal*, August 12, 1871.)

In a discussion at the Thirty-ninth Annual Meeting of the British Medical Association, between Drs. JOHN MURRAY and GEORGE JOHNSON, Dr. M. stated that Dr. JOHNSON seemed to confound elimination with purgation, and that nature was best assisted by restraining the further advance of the disease, of which the most dangerous symptom is looseness, whether naturally induced by indigestion, by improper food, or by purgative remedies. Dr. JOHNSON said that the main difference between Dr. M. and himself was with regard to the treatment of the early stage of cholera, Dr. M. considering evacuants dangerous and opiates safe, while he (Dr. J.) held an opposite opinion with regard to both classes of remedies. (*The British Medical Journal*, August 26, 1871.)

DR. EDWARD R. SQUIBB, OF BROOKLYN.

642. ℞. Tincture of opium deperated,
 Spirit of camphor,
 Tincture of capsicum, āā f.ʒj
 Chloroform purified, f.ʒiij
 Alcohol, 95 per cent., q. s. to f.ʒv. M.

Each fluid drachm, or teaspoonful, contains about one hundred drops, consisting of twelve minims of each of the first three ingredients, and four and a half minims, or eighteen drops, of chloroform. Dose.—For persons over eighteen years of age, a teaspoonful; for persons fourteen to eighteen years of age, a small teaspoonful; for persons ten to fourteen years of age, half a teaspoonful; for persons six to ten years of age, thirty drops; for persons two to six years of age, ten to thirty drops; for infants, one to ten drops, according to age. To be taken in water.

In time of epidemic cholera or diarrhœa, when any person has two movements of the bowels more than natural within twenty-four hours, the second one should be followed by a dose of this mixture; the dose to be repeated after every movement that follows. If the movements increase in frequency, or in copiousness, after the second dose of the medicine has been taken, a physician should be sent for at once, and a double dose be taken after each movement, until he arrives. Immediately after taking the first dose, the person should go to bed, and remain there for twelve hours after the diarrhœa has entirely ceased.

Made a little more dilute, to adapt it better to extended popular use, it was largely applied in the last epidemic of cholera by the Metropolitan Board of Health of New York, and by the Boards of Health of some other cities, and appears to have accomplished all that could be reasonably expected from any arbitrary formula.

HAMLIN'S CHOLERA MIXTURE.

No. 1.

643. ℞. Tincture of opium,
 Tincture of camphor, āā 1 part
 Tincture of rhubarb, 2 parts. M.

No. 2.

644. ℞. Tincture of opium,
 Tincture of capsicum,
 Tincture of cardamom. co.,
 Ginger, āā equal parts. M.

RUSHENBERGER'S CHOLERA MIXTURE.

645. ℞. Tincture of ginger,
 Tincture of capsicum,
 Tincture of peppermint,
 Tincture of opium, āā equal parts.

CHLORODYNE.

646. R.	Sulphate of morphia,	grs.lxxx.
	Hydrocyanic acid dil.,	
	Glycerin,	
	Caramel,	℥ss
	Extr. Indian hemp,	ʒij
	Oil of peppermint,	ʒss
	Oleo-resin of capsicum,	gtt.xv
	Chloroform pur.,	f.ʒvj
	Alcohol,	f.ʒj.

DR. JOHN SULLIVAN, M. D., BRITISH INDIA.

In his recent work on *The Endemic Diseases of Tropical* (London, 1877,) this writer altogether rejects the treatment of diarrhœa. The plan he has found most successful is: First, prescribe complete cessation from all labor and fatigue out of bed and the adoption of the horizontal position on the very first appearance of diarrhœa. Secondly, arrest of diarrhœa, "whether in the preliminary state, or whether it takes the form of rice-water evacuations;" and for this purpose he prefers the employment of opium or laudanum, by means of suppositories and enemata. Thirdly, he endeavors to supply the loss of fluid, by giving "iced or cold water or tea;" and occasionally some more powerful astringent cordial.

DR. N. GALLOIS, PARIS.

647. R.	Sinapis nigræ pulveris,	ʒiij
	Spiritûs terebinthinæ,	f.ʒvj.
After standing four days, filter and add,		
	Camphoræ pulveris,	ʒij.
This liniment is to be employed in frictions to induce revulsions on the skin.		

A still more energetic rubefacient is the following:

648. R.	Spiritûs sinapis,	f.ʒijss
	Alcoholis,	f.ʒvj.

Or,

649. R.	Spiritûs sinapis,	gtt.l
	Olei amygdalæ dulcis,	f.ʒj.

These mixtures are to be spread on the skin and covered with cloths, and pressed during about ten minutes.

DR. BOURGOYNE, FRANCE.

650. R.	Tincturæ opii camphoratæ,	gtt.xxx
	Aquæ menthæ piperitæ,	f.ʒvj
	Syrupi aurantii florum,	f.ʒj
	Malaga wine,	f.ʒiv.

A tablespoonful to be given every quarter to half an hour, to patients affected with cholera. For drink, rice-water, with a little old Bordeaux wine added. Mustard plasters over the abdomen; starch enemata.

RÉSUMÉ OF REMEDIES

Ammonia Aquæ, when inhaled or taken internally, largely diluted, is a useful stimulant and restorative in the collapse of cholera.

Argenti Nitras has been recommended injected into the colon, by means of a long flexible tube.

The following solution is thus injected :

651.	℞.	Argenti nitratis,	gr.xvj	
		Aquæ destillatæ,	f.ʒiv.	M.

Ten minutes afterward the following enema is to be administered :

652.	℞.	Tincturæ opii,	f.ʒiv	
		Gruel,	f.ʒvj.	M.

Dr. WARING considers this treatment worthy of trial. In an epidemic of cholera at Assam, in 1853, Dr. BARRY used nitrate of silver internally with great success, giving one grain after each stool.

Atropia Sulphas, hypodermically, in dose $\text{gr.} \frac{1}{100} - \frac{1}{40}$, is recommended by Dr. HARLEY as one of the most appropriate and useful means of resuscitation in the collapse of cholera. It stands at the head of all our stimulants in such cases, for there is no medicine which approaches belladonna in its simple, direct, immediate, and powerful influence in exalting the force and rapidity of the heart's action.

* *Camphor* is recommended by Dr. SYDNEY RINGER, from personal experience. He gives six drops of a strong alcoholic solution of camphor every ten minutes, until the symptoms have abated, and then less frequently. By this treatment, he generally at once controlled the vomiting and diarrhoea, and often altogether checked them, removed the cramps, and restored warmth to the extremities. An Italian physician, Dr. RUBINI, of Naples, is said to have treated with success nearly six hundred patients by a solution of camphor in alcohol at 60° over proof. The commencing dose was gtt.iv, every five minutes (in severe cases, gtt.xx, or more), persevered in until reaction set in, the patient being well wrapped up in blankets. It should be given in sugar, and not in water, as in the latter the camphor solidifies and loses its power.

Cannabis Indica has been highly spoken of, ℞-xxx of the tincture being administered in repeated doses.

Carbo Ligni, in drachm doses, has been employed with repeated benefit.

Carbolic Acid has, it is stated (*Medical Press*, Jan. 22d, 1868,) proved successful.

* *Chloroform*, in doses of ℞v-vij every hour or half-hour, often arrests the vomiting and relieves the spasms and cramps in the early

stages of cholera. When the vomiting is excessive, a little chloroform, on lint, placed over the epigastrium and covered with oiled silk or gutta-percha, will frequently relieve it. Chloroform liniment, alone or with turpentine, diligently used, is very effectual against the spasms and cramps. The spasms are also quickly relieved by chloroform inhalations, stopped short of complete anæsthesia. In giving chloroform internally, some prefer to combine it with the carbonated alkalies, soda or potash (grs. xl-lx) in solution; others, with the oil of turpentine (℥xx-xxx). Dr T. M. LOWNDES, of the Bombay army, advises (*British Medical Journal*, Aug. 29th, 1868,) the following formula, which he has used for years in the treatment of choleraic diarrhoea, with the best results:

653. ℞.	Chloroformi,	℥xv-xx	
	Tincturæ opii,	℥v-xv	
	Spiritus vini,	f.ʒj	
	Aquæ,	f.ʒj.	M.

Chloroform, as a remedy in cholera, has the advantage that, being very volatile, it does not, like calomel and solid opium, accumulate in the stomach, and thus produce serious effects when reaction is established.

Hydrargyri Chloridum Mite has, as Dr. WARING remarks, been given in cholera for upward of half a century, in every variety and stage of the disease, in every gradation of dose, from one grain to sixty, in almost every possible form of combination, with the view, by turns, of obtaining its purgative, or its cholagogue, or its stimulant, or its sedative action, and the reported results have been of the most diversified and unsatisfactory character. Dr. AYRE has reported great success from the following plan of treatment, which, probably, deserves the preference, if the mercury be employed at all: grs. j-ij of calomel, with ℥j-v of laudanum, are given every five, ten or fifteen minutes, omitting the latter when the dose has reached 60 or 80 drops. Perhaps a great measure of the success recorded of this treatment is due to the patient being allowed to drink freely of cold water, the colder the better. During the stage of collapse, the fact must not be lost sight of, in administering calomel and other powerful drugs, that the stomach has lost its power of absorption, exposing the patient to all the dangers of an accumulated drug when reaction sets in.

Ipecacuanha, as an emetic, at the outset of the attack, forms part of the eliminative treatment recommended by some. Small repeated doses (gr j-ij every fifteen or thirty minutes, until nausea is felt,) have been recently advised. The power of minute doses of ipecacuanha to arrest many forms of vomiting is now well known, and would seem to indicate its utility in cholera.

Nitric Acid, given in copious draughts of stimulants, has been recommended as an adjunct to treatment.

Morphia, hypodermically. Dr. W. BATES relates a case (*Lancet*, August

21st, 1869,) treated with success by the subcutaneous use of morphia.

**Opium*, though still much employed in the earlier stages of the disease, alone or conjoined with the acetate of lead or camphor, or calomel, is no longer regarded, as formerly, as the sheet-anchor in cholera. Its use in the solid form in large and repeated doses, in all stages of the disease, is now nearly abandoned, in consequence of the inutility, and even danger, of its employment. In the liquid form, in very small doses, it frequently arrests the action of other remedies.

Piper Nigrum is, it is said, often prescribed in cholera by the natives of India, in the form of an infusion of recently-roasted black pepper. A popular Bengal cholera pill is the following:

654. R.	Pulveris piperis nigri,			
	Assafœtidæ,	āā	gr.j	
	Camphoræ,		gr.ij	M.

For one pill. If given early, it is stated that it frequently arrests the disease.

**Plumbi Acetas*, in combination with opium, at first proposed by Dr. GRAVES, of Dublin, is very effectual at the outset of cholera in checking the diarrhœa. Dr. FLEMING prefers combining the acetate of lead with a solution of acetate of morphia. Dr. E. GOODEVE also prefers administering the acetate in a fluid form, but gives the opium independently. He employs the following:

655. R.	Plumbi acetatis,	grs. xxx	
	Acidi acetic,	ʒx	
	Aquæ destillatæ,	f. ʒvj.	M.

Two or three tablespoonfuls every half-hour or hour. Opium, in doses of one grain, repeated once or twice, is given separately. He limits, as a rule, the quantity of the acetate of lead to grs. x-xv, and of the opium to grs. iij, in the first three hours. If the disease shows signs of yielding, the doses are to be diminished or stopped altogether.

Potassii Chloras is frequently employed; it forms part of the "saline treatment" of this disease (see Salines).

Quinine, though recommended by Dr. BELL, and others, as both a curative and prophylactic in cholera, is not often employed, excepting as a tonic in convalescence.

**Ricini Oleum* is the purgative *par excellence* employed by Dr. G. JOHNSON in the "eliminative treatment." He directs, as early in the promonitory diarrhœa as possible, a tablespoonful of castor oil in a mixture of orange or lemon juice and water, or cold water, or other convenient vehicle. If this be vomited, it should be again given, and the patient directed to lie still and take no more liquid for half an hour, by which time the oil will have passed from the stomach into the bowels. Within an hour or two the oil will usually have acted freely, when a tablespoonful of brandy in thin arrowroot or gruel is given; and if there be

much feeling of irritation, with a sense of sinking, gtt. v-x of tincture of opium, in cold water. In this manner most cases of choleraic diarrhoea are promptly arrested. Rhubarb (gr.xv of the powder, or f.ʒss of the tincture) may be employed if objection exist to castor oil. If vomiting be present, it should be encouraged by copious draughts of tepid water; and if nausea exist without vomiting, especially if the stomach is supposed to contain congested or unwholesome food or morbid secretions, an emetic is advised (gr.xx of ipecacuanha, or a teaspoonful of mustard, or a tablespoonful of common salt). The approval given to this "evacuant system" of treatment by Sir T. WATSON, and the success reported from it in the hands of numerous practitioners, entitle it to consideration and general trial.

Sodii Carbonas forms one of the principal ingredients in the "saline treatment" of Dr. WILLIAM STEVENS.

Sodii Chloridum was formerly given in large draughts of cold water, with the view of inducing emesis, and at the same time supplying the blood with the saline constituents supposed to be carried out of the system in the evacuations.

Sulphur was first suggested as a remedy by Dr. A. BLACKLOCK, of the Madras army, in 1848. He recommended, also, as a prophylactic, during epidemics, sulphur internally, and a diet rich in sulphureted ingredients. Dr. J. GROVE (in his work on epidemic cholera, in 1865) highly praises this remedy, which he prescribes as follows:

656. R.	Sulphuris præcipitati,		
	Sodii bicarbonas,	āā	ʒiv
	Spiritus lavandulæ compositus,		f.ʒxxiv
	Aquæ,		f.ʒlxxij. M.

The soda and sulphur are to be first thoroughly triturated together, in a mortar, the spirit of lavender gradually added, till the whole is well mixed, when the water is added.

Dose, two teaspoonfuls, in a little water, every two, three or four hours in simple choleraic diarrhoea; but if the case is urgent, every ten or fifteen minutes. In sudden or severe attacks, ʒx-xxx of laudanum are given with the first dose.

Terebinthine Oleum has been employed internally, as well as externally, with benefit.

Blood-letting has its advocates in cholera, who consider that by relieving the pulmonary embarrassment, and freeing the circulation, it increases the excreting power of the intestinal mucous membrane. But if employed, it should invariably be conjoined with the use of stimulants.

**Ice* in lumps and iced drinks, given *ad libitum*, are grateful to the patient and highly beneficial in relieving the burning heat at the pit of the stomach and the intolerable thirst, arresting the vomiting and exciting reaction.

Salines. The saline treatment has been already described.

Stimulants are useful, but their indiscriminate use is not to be recommended. Champagne, ammonia and turpentine are among the best, but weak brandy and water is sometimes retained better than any other stimulant.

Blisters are sometimes beneficial, applied, in the collapse of cholera, to the epigastrium, over the heart, etc.

Turpentine Stupes, applied hot successively to the abdomen, the cardiac region and along the spine and extremities, and turpentine frictions and enemas, are valuable aids to the other treatment.

Water, iced, and freely used as a drink, aids whatever mode of treatment may be adopted. Even if rejected for the first four or five times, it should be persevered in, and so soon as it remains on the stomach a change for the better will be observed.

COLIC.

CHARLES MURCHISON, M. D., F. R. S., LONDON.

Flatulent colic will often be relieved by the various ethers and the essential oils of peppermint, anise and cajuput, by vegetable charcoal, galbanum and assafœtida. When, however, it is due to decomposition, from deficient or deteriorated bile, those remedies will be found most useful which act by checking decomposition, such as creasote, turpentine or carbolic acid.

657. ℞.	Acidī carbolicī fluidi,		
	Spiritūs chloroformi,	ñā	f.ʒi-ij
	Aquæ menthæ piperitæ,		f.ʒij. M.

Dose—A tablespoonful.

Or, a pill containing one drop of creasote.

Flatulence, and other dyspeptic symptoms arising from want of bile in the bowels, are also greatly relieved by the use of purified bile from the ox or pig, which may be given in doses of from three to six grains, about two hours after meals. As it is not desirable that the bile should come in contact with the stomach, it is well to give it inclosed in capsules or in pills coated with a solution of tolu in ether.

The following recipe will be found useful for the same purpose:

658. ℞.	Sodæ chloratis,	gr.x	
	Aquæ menthæ piperitæ,	f.ʒss.	M.

For one dose.

PROF. ROBERTS BARTHOLOW, CINCINNATI,

Has found marked advantage from the use of permanganate of potassa in the flatulence and dyspepsia so constantly attendant on obesity, as follows :

659. ℞. Potassæ permanganas, gr.vij
 Aquæ destillatæ, f.ʒij. M.
 Keep in a glass-stoppered bottle. Dose—A teaspoonful thrice daily.

DR. BOUCHUT, PARIS.

660. ℞. Chloroformi, f.ʒijss
 Alcoholis diluti, f.ʒijss
 Syrupi acaciæ, f.ʒviiij. M.
 A small wineglassful thrice daily, to persons subject to hepatic colic
 Abstinence from fats, oils, fatty food and strong wine.

DR. TOURASSE, FRANCE.

661. ℞. Chloroformi, f.ʒss
 Olei amygdalæ dulcis, f.ʒj
 Syrupi acaciæ, f.ʒiss. M.
 To be well shaken. A tablespoonful every quarter or half-hour in hepatic colic.

662. ℞. Magnesii carbonatis, f.ʒj
 Rhei pulveris, gr.xxx
 Tincturæ rhei, f.ʒiiij
 Tincturæ opii, ℥xv
 Spiritûs anisi, gtt.vj
 Spiritûs menthæ piperitæ, f.ʒij
 Aquæ destillatæ, f.ʒvj. M.
 This is a popular remedy in the west of England in intestinal pains.
 From three to six tablespoonfuls a day.

DR. NATHAN S. DAVIS, OF CHICAGO.

In obstinate intestinal obstruction, not dependent upon invagination, but produced by irregular contraction of the muscular coat of the intestines, this physician has long used, with gratifying results, *tobacco enemata*. One drachm of chewing tobacco is put into one pint of boiling water, and when cool enough, one half of this amount is injected into the rectum. The powerfully relaxing effect of the tobacco relieves the intestinal contractions, and soon produces copious evacuations. It is, however, a remedy of extreme power, inducing faintness and great temporary prostration, and should be used with corresponding caution.

PROF. A. TROUSSEAU, PARIS.

In the dangerous form of colic, known as *Ileus*, characterized by

feculent emesis, when the pain is severe, local blood-letting sometimes lessens the spasm by disgoring the tissues. Prolonged baths are useful. The local application of emollients and narcotics, repeated purgatives, cold baths, or ice to the abdomen, iced drinks and the swallowing of pieces of ice, may all be resorted to. If the tympanitis be very considerable, relief may be afforded by puncture with a fine trocar. Should all other remedies fail, gastrotomy may be performed.

DR. J. COPLAND, LONDON.

This author remarks that, notwithstanding constant or even feculent vomiting, advantage will sometimes be derived from one to two tablespoonfuls of the unrectified oil of turpentine, taken with aromatics. He has seen the vomiting cease and the distention of the abdomen rapidly subside immediately after this dose, which should be repeated if rejected at first.

Large injections of warm flaxseed oil (Oij-iv), steadily and slowly thrown up (regurgitation being prevented by pressing the guard of the pipe against the anus), often prove remarkably successful even after feculent vomiting has come on. The patient should be placed on the right side, with the pelvis elevated, and a ball of linen firmly placed against the anus to prevent the premature return of the injection. This clyster, with the addition of opium, if much exhaustion is present, should be repeated every three or four hours.

A case, accompanied with fecal vomiting, is reported (*Dublin Quarterly Journal of Medicine*, November, 1864,) as successfully treated by the application of galvanism to the mucous surface of the intestine. A sponge, with the metallic handle to which it was attached, was passed up the rectum two or three inches, whilst the other sponge was applied to the abdominal walls. The effect was immediate, the constipation being at once relieved and the patient recovering from an apparently hopeless condition.

RÉSUMÉ OF REMEDIES.

Ammonii Carbonas, in doses of gr.v-vij in some aromatic water, frequently proves useful, especially in the flatulence of atonic dyspepsia or of hysterical females.

Anthemis, in strong infusion, or gtt.ij-iiij of the volatile oil, frequently affords relief after the failure of other remedies.

Assafatida, in enema, is of especial value in the flatulent colic of hysteria.

Cajuputi Oleum often affords immediate relief.

Carbo Ligni, inclosed freshly prepared in gelatine capsules, each containing gr.x of heavy vegetable ivory charcoal (dose, two, *i. e.*, gr. xx), is a valuable remedy, from its gas-absorbent property. If administered in this manner, the large nauseous doses so frequently prescribed are avoided.

Carbolic Acid is recommended by Dr. KEMPTER in cases accompanied with foul breath.

Cardamomum, in the form of the compound tincture, is highly serviceable.

Carui Oleum is often of benefit, in doses of gtt.ij-v on sugar.

Caryophyllum in infusion, or the vegetable oil (gtt.ijj-v), is useful.

Cinnamomum is a pleasant and excellent carminative.

Creasotum, in doses of gtt.j in water, taken three or four times daily, will greatly relieve the distressing flatulence of bilious dyspepsia and bilious diarriasis.

Etheris Spiritus Nitrosi, in decoction, is very efficacious in a cupful of any convenient vehicle, is a powerful and efficacious remedy.

Etheris Spiritus Compositus is a powerful carminative, particularly in the flatulence of hysterical females.

Juniperi Oleum is an efficient carminative.

Lavandula, in the form of the compound tincture, is an agreeable remedy.

Mentha Piperita Oleum, with or without a few drops of laudanum, is a pleasant carminative.

Myristica Oleum, in doses of gtt.ij-v, affords relief. Grated nutmeg may be given in a little warm brandy and water.

Ruta Oleum, in doses of gtt.ij-v on sugar, is a popular remedy; or the infusion of rue may be given.

Sodii Bicarbonas is effectual when there is acidity in the primæ viæ.

**Nux Vomica* is valuable in obstinate flatulence. Dr. BARLOW recommends the following useful formula :

663. R. Extracti nucis vomicæ, gr.iss
Argenti nitratis, gr.ij
Extracti lupuli, gr.xij. M.

Make six pills. Take one thrice daily. This formula is particularly serviceable when there is also pyrosis and heartburn.

Terebinthina Oleum in enema is an excellent remedy.

Zinci Sulphas has been recommended in flatulent affections of the bowels, especially of the colon. The following formula has been employed :

664. R. Zinci sulphatis, gr.xviii
Pulveris opii, gr.ij
Mucilaginis, q. s. M.

Make six pills. Take one four or five times a day, after a meal. When the stomach can dispense with the opium, substitute extract of gentian or rhubarb.

Zingiber in tincture or effusion (with or without the addition of carbonate of soda and aromatic spirit of ammonia), is of great benefit. A ginger plaster over the epigastrium often admirably relieves colicky pain.

* *Carminatives* act by stimulating the stomach, causing the expulsion of flatus and the relief of the pain produced by its presence.

Cathartics. A purgative of castor oil, or of oil of turpentine, frequently affords immediate relief.

CONSTIPATION—HABITUAL.

The habit of constipation may be broken up by *massage, change of diet, enemata, laxative mineral waters, or drugs.*

In regard to *massage*, or the movement cure, the following little operation executed by the patient upon himself, when properly performed, is valuable:

Place the tips of the fingers of the right hand exactly over the cæcal region, with *very slight* pressure; carry them upward, along the ascending colon, to the right hypochondrium; continue the movement *without any intermission* over the region of the transverse colon to the angle of junction with the descending colon; stop not, but proceed downward, gently and steadily, to the iliac region of that side; instead of the previously very gentle pressure, the finger must now be pressed firmly and deeply (without pain) into the pelvic cavity, and there retained for about fifteen seconds; then remove the hand altogether, rest a few seconds, and repeat the procedure. This may be continued for the period of from a few minutes to a quarter of an hour or more. Some little care and tactile dexterity are needed to do this properly; and where the hand is dry, or the cuticle thick and hard, it is advisable to slightly moisten the ends of the fingers. When the right hand is tired, the left can be used, and so alternately, but it is better not to alternate them too rapidly. If there be failure, it must not necessarily be given up. Invalids themselves will often fail, almost invariably, if their bowels be *extremely intractable*. But now the aid of a friend for passive movements may be invaluable. The medical adviser can give instructions regarding the precise anatomical relations of the parts involved, and the method of performance. The proceeding should usually extend over a period of from five or six minutes to occasionally twenty-five minutes.

For occasional use, in the treatment of *constipation in old age*, the following pill affords an excellent formula:

665. R. Extracti colocynthidis compositi, gr.v-vij
Extracti hyoscyami, gr.ij. M.
For one pill.

J. M. DA COSTA, M. D., PHILADELPHIA.

666. R. Podophyllin, gr.j
Extracti belladonnæ, āā gr.v
Capsici, gr.v
Pulveris rhei, ℥j. M.
For twenty pills. One three times a day.

Belladonna is undoubtedly a stimulant to the muscular fibres of the intestines. It acts on them as a stimulant to contraction. It also enables the physician to get along with smaller quantities of purgative medicine. Podophyllin is a tonic of the bowel, to increase the action of the muscular fibres of the bladder; it stimulates the action of purgative medicine, and enables the physician to get along with smaller quantities of purgative medicine. Podophyllin is a tonic of the bowel, to increase the action of the muscular fibres of the liver.

667. R. Tincturæ gentianæ compositæ, f.ʒiij
Tincturæ rhei dulcis, f.ʒj
Tincturæ belladonnæ, f.ʒiss. M.
Dessertspoonful thrice daily.

668. R. Extracti gentianæ, ʒj
Extracti nucis vomicæ, āā gr.ijss
Podophyllin, gr.ijss
Olei cajuputi, gtt.xx. M.
For twenty pills. One twice a day as a tonic for chronic constipation.

669. R. Extracti belladonnæ, gr.iss
Pulveris rhei, gr.xxiv
Pulveris zingiberis, gr.xij. M.
For twenty-four pills. One four times a day.

S. S. BIRCH, M. D., LONDON.

670. R. Extracti rhei alcoholici, ʒss
Extracti taraxaci, gr.xxiv
Quiniæ sulphatis, gr.ij. M.
Divide into twelve pills.

One should be taken either on rising in the morning or at dinner-time, or even at both periods when the constipation is very obstinate. This is a very gentle stomachic and tonic evacuant, particularly useful for the delicate. In addition, when there is torpor of the liver, deficiency or perversion of the biliary secretion, the patient should be ordered:

671. R. Hydrargyri cum cretâ, gr. ʒ-ij
 Sacchari albi, gr. v. M.
 For one powder.

This is a sufficient dose, when given alone at bedtime, for two or three successive nights, or in very sensitive persons every second or third night. But the hydrargyrum cum cretâ is often prepared imperfectly, and then causes considerable annoyance and dissatisfaction to the practitioner.

PROFESSOR WILLIAM THOMPSON, M. D., OF NEW YORK.

This writer observes (*Medical Record*, May, 1877,) that obstinate constipation is owing to deficient action of: 1, the small intestine, or, 2, the large intestine.

1. *Deficient action of the small intestine* is often owing to deficient secretion. Constipation from this cause is common in the Southern States as a sequel to diarrhœa, and is often met with in the Northern States as the result of malarial poisoning. There is in these cases no extraordinary accumulation and impaction, but a sluggish action of the bowels, medicine being required to produce stools in four or five days, which are even then moderate in amount and quite dry. In most cases there is present a dull pain, or rather an uncomfortable sensation, at the back of the head, which is best relieved by a free discharge of bile. The tongue is not large and flabby, but usually small, with a little redness at the tip and along the edges. The secretions of the mouth are viscid, indicating the condition of defective secretion that prevails all along the canal.

Mild cathartics in these cases are injurious, and active purgatives still more so. What is wanted is the presence in the intestine of a small increase of lubricating liquid, and this is obtained by causing the patient to take a great deal more water than customary—drinking on rising, for example, two tumblers full of water; and as a rule those who drink a considerable quantity of water are not constipated. Its laxative action may be insured by the addition of some saline, as carbonate of soda or salt—the water to which this is added not passing so readily through the mucous membrane into the general system, and thus more readily exciting peristaltic action. A half-drachm of *sulphate magnesie* dissolved in a pint of water will for this reason act sufficiently as a cathartic. A curious fact is that the addition of a small dose of quinine to salines increases their power of acting on the intestinal canal.

672. R. Magnesiæ sulphatis, ʒj
 Quiniæ sulphatis, gr.j. M.
 To be taken in a tumbler of water every morning.

This dose rarely fails to produce all the laxative effect required in every form of deficient secretion—as, for instance, in constipation following fever—where we wish to obtain free evacuations. Patients should be told not to expect much effect for a week or two; but, if they can be induced to persist in the daily use of large quantities of water, great benefit will almost always follow.

When flatulence is present, and defective innervation, the following pill is excellent:

673. R. Pulveris assafetidæ, gr.iv
 Extracti nucis vomicæ, gr.ss
 Saponis, gr.ix.
 For three pills. To be taken daily.

Such a combination is suitable in persons of a sedentary habit, with a tendency to headache and a dull sallow color.

2. *Deficient Action of the Large Intestine.* This also may depend upon deficient secretion, or defective innervation; but far more frequently on the latter. One of the worst forms of this is when the constipation depends upon deficient nerve-power in the rectum alone, and which, if overlooked, may give rise to rectal abscess. The patients have little knowledge that they should have a movement, and when the sensation does occur, they have little or no power of expelling the fæcal accumulation.

One of the most common causes of this condition is chronic inflammation set up about hæmorrhoids. The relaxed condition which follows the defective innervation renders prolapsus of the rectum very probable. These patients are remarkable for being generally low-spirited, so that even insanity may be induced by such a state of the rectum, disappearing when this has been relieved. In treating these cases the first indication is to keep the rectum empty; and when accumulations do take place, they are best removed by enemata. These, however, should never be prescribed as a regular treatment, for if the habit is acquired of emptying the bowels daily by their aid they can never be dispensed with. When the accumulation, which has caused the enema to be employed, has been thoroughly removed, other means should be resorted to for restoring the innervation of the bowel; and in these cases the injection of *strychnia* into the submucous tissue is

an exceedingly valuable specific. If necessary, a fold of the mucous membrane may be drawn down, and the injection inserted. It will frequently cure the worst forms of prolapsus of the rectum, as well as that condition in which there is simple debility with hypertrophy of the mucous membrane.

In other forms of constipation there are accumulations of scybulous matters in the upper part of the rectum and in the transverse colon. When these last are dislodged they come down into the sigmoid flexure; and mineral waters, such as the Kissingen, are useful in effecting such dislodgment, loosening the scybala without depressing the patient. The water may be taken in the morning; a suppository of *stramonium* or *belladonna* (sufficient to cause a little dryness of the throat and slight dilatation of the pupil) may be introduced in the evening. Constipation may be met with during the recovery from pneumonia and other febrile affections, arising from accumulations at various parts of the canal. Compound jalap powder is a very effective means for preventing such accumulations.

DR. F. PEYRE PORCHER, OF SOUTH CAROLINA.

674. R.	Extracti hyoscyami,	gr. j
	Podophyllin,	gr. $\frac{1}{4}$ - $\frac{1}{8}$
	Ferri sulphatis,	gr. ij
	Extracti gentianæ,	q. s.

For one pill, to be used as a mild laxative in torpid bowels. One at night to be repeated at intervals as required.

DR. METTAUER'S ALKALINE MIXTURE OF ALOES.

675. R.	Aloes,	2½ ounces
	Bicarbonate of soda,	6 ounces
	Compound spirit of lavender,	2 fluid ounces
	Water,	4 pints.

Mix. Macerate for two weeks, and filter. Dose—from one fluid drachm to one fluid ounce half an hour after meals, for persons of a costive habit.

In constipated persons who suffer much from *difficult defecation* the following enema is very highly recommended.

Take a tumbler and fill it half-full of water at the temperature of the room, pour in a few drops of tincture of camphor, just enough to give the water a slight sapidity, then fill the glass with water. Inject this slowly into the rectum till about sixty or eighty grammes have been introduced. At first no effect is perceived, but in about ten minutes the desire to defecate becomes irresistible. The effect

becomes energetic in proportion to the quantity of tincture of camphor added. After the defecation it is well to repeat the injection of a small quantity of the same mixture and retain it in the rectum, which can readily be done, so as to prevent constipation on the following day.

PROF. ROBLEY DUNGLISON.

676. ℞. Magnesiæ sulphatis, ʒj
 Potassæ bitartratis, ʒj
 Ferri sulphatis, gr.x. M.

For one powder. Add to a quart of water and take a wineglassful, on rising, every morning.

This recipe was frequently recommended in his lectures by the late distinguished professor of physiology.

JOHN FORSYTH MEIGS, M. D.

677. ℞. Confectionis sennæ, ʒj
 Potassæ bitartratis, ʒij
 Sulphuris præcipitati, ʒj
 Ferri subcarbonatis, ʒj
 Mellis despumati, q. s. M.

Make an electuary. Teaspoonful after meals.

PROF. METCALF, M. D., OF NEW YORK.

678. ℞. Extracti aloës (purif.), ʒj
 Extracti hyoscyami, ʒj
 Extracti nucis vomicæ, gr.xij
 Olei anisi, gtt.x. M.

Divide into sixty pills. One to be taken after each meal, particularly for constipation in women.

THOMAS HAWKES TANNER, M. D., F. L. S., LONDON.

679. ℞. Zinci valerianatis, gr.xij-xxiv
 Extracti belladonnæ, gr.ij-vj
 Extracti gentianæ, gr.xxiv. M.

Make twelve pills and silver them. One to be taken three times a day, in nervous cases of habitual constipation, and in spasmodic contraction of the sphincter ani.

PROF. W. H. VAN BUREN, M. D., OF NEW YORK.

680. ℞. Extracti aloës, ʒss
 Extracti nucis vomicæ, gr.vj
 Extracti hyoscyami, ʒj
 Pulveris ipecacuanhæ, gr.j. M.

Divide into twenty pills. One to be taken at night.

This recipe, termed the "Pil. salutis," is of special value in the constipation of females.

DR. J. COPLAND, LONDON.

681. R.	Potassii bitartratis,	ʒj	
	Sodii boratis,	ʒiiss	
	Sulphuris loti,	ʒvj	
	Confectionis sennæ,	ʒiiss	
	Syrupi zingiberis,	f.ʒvj	
	Syrupi,	f.ʒij.	M.

A teaspoonful or a dessertspoonful of this laxative electuary in the evening, at bedtime.

682. R.	Potassii bitartratis,	ʒj	
	Sulphuris loti,	ʒss	
	Mellis despumati,	ʒij	M.

A teaspoonful once or twice a day, in habitual constipation.

It has been observed that aloes is useful in habitual constipation due to atony of the colon, the result of fever and debilitating diseases, old age or sedentary habits. It may be combined, as indicated, with aromatics, hyoscyamus, ipecacuanha, nux vomica or quinine. Dr. SPENDER recommends (*Medical Times and Gazette*, February 19th, 1870,) the following pill:

683. R.	Extracti aloës aq.,	gr.ss-j	
	Ferri sulphatis,	gr.iss-ij.	M.

For one pill, to be taken thrice daily, immediately after the principal meals, and continued regularly for a few days till the occurrence of the first loose motion, after which one only is to be taken night and morning. At the end of a week or two another pill may be omitted, and within a month a single pill once or twice a week suffices.

Nothing approaching purgative ought ever to be permitted. Profs. METCALF and VAN BUREN both combined aloes with hyoscyamus and nux vomica.

DR. J. CLELAND, EDINBURGH.

This author highly recommends the *saccharate of lime*. He first introduced it through the *Edinburgh Medical Journal*, August, 1859, to the profession. He prepares it as follows:—

684. R.	Slake of quicklime,	ʒviiij	
	Rub up with it of white sugar,	ʒv	
	Add of water,	f.ʒxx.	M.

Stir and filter. The product should be perfectly clear, with only a slightly yellowish tinge. Each ounce, by weight, should contain 18 grains of lime. Dose—ʒxv-xxx, or f.ʒj.

Dr. C. finds this saccharate of lime a very valuable means of overcoming gradually that chronic constipation which so frequently accompanies dyspepsia, and that persons who for years have been in the constant habit of using aperient medicines have been able

to abandon them, in a great measure, after taking this remedy for some time.

DR. MIALHE, PARIS.

685. ℞. Sulphuris loti, ʒijss
Magnesii carbonatis, ʒv
Mellis despumati, ʒxv. M.

A teaspoonful in the morning before eating.

686. ℞. Extracti belladonnæ, gr.v
Rhei pulveris, āā gr.xv. M.
Aloës socotrinæ,

Divide into twelve pills. One or two in the evening, at bedtime, every other day, in habitual constipation.

687. ℞. Aloës socotrinæ, āā ʒij
Rhei pulveris, ʒss
Pulveris aromatici, ʒj
Saponis, q. s. M.
Syrupi,

Divide into sixty pills. g, in the habitual constipation of dyspeptics.

Or,

688. ℞. Aloës socotrinæ, āā ʒj
Rhei pulveris, āā ʒss. M.
Ipecacuanhæ pulveris,
Saponis,

Divide into thirty pills. One or two in evening.

DR. CONTARET, FRANCE.

689. ℞. Extracti belladonnæ, āā gr.vij
Extracti rhei, q. s. M.
Althææ pulveris,

Divide into twenty pills. One three hours after dinner, in habitual constipation.

DR. C. PAUL, PARIS.

690. ℞. Podophyllin, gr.v
Mellis, q. s. M.

Divide into ten pills. One at bedtime, in habitual constipation. Podophyllin can be employed for a long time, without losing its efficacy, and its purgative effects are not followed by consecutive constipation.

691. ℞. Sulphuris loti,
Magnesiæ,
Sacchari lactis, āā ʒijss. M.

Mix with care. Persons subject to constipation will take a teaspoonful of this laxative powder at bedtime, from time to time.

692. ℞. Sodii sulphatis exsiccatae, ʒij
Saponis pulveris, ʒiv
Mellis despumati, q. s. M.

Divide into four suppositories. Useful in habitual constipation. They are to be oiled before introduction into the rectum.

RÉSUMÉ OF REMEDIES.

Aleuritis Triloba. The oil of the aleuritis nut has been highly recommended as a substitute for castor oil. It has the further advantage of not being disagreeable to take, having the flavor of the hazel-nut. An adult is easily purged with a dose of fifteen grammes. It is an excellent aperient, and its effects on the intestine are identical with those of castor oil. About three hours are required for its action, which takes place without pains or colic.

693. ℞.	Olei aleuritis, Sacchari albi, Pulv. acaciæ, Aquæ,	f.℥ss ℥ss āā ℥iij.	M.
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For one dose.

In rebellious cases of constipation and in abdominal pains, good results have been obtained by making frictions on the abdomen with the following liniment :

694. ℞.	Olei aleuritis, Tincturæ cantharidis, Ammonia carbonatis,	f.℥ss f.℥iij ℥iij.	M.
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For a liniment.

Aloes. (See above.)

Arseniosum Acidum is said by Dr. ISNARD, of Marseilles, to be particularly useful in the constipation of aged people and sedentary persons.

**Belladonna* is highly recommended by TROUSSEAU, who obtained from it the happiest result, given as follows :

695. ℞.	Extracti belladonnæ, Extracti gentianæ,	gr. $\frac{1}{4}$ - $\frac{1}{8}$ gr. j - ij.	M.
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For one pill, to be taken every morning at rising.

Prof. DA COSTA recommends belladonna as a stimulant to the muscular folds of the intestine, and as increasing the effect of purgatives.

Benzoini Tinctura, in doses of gtt.xx thrice daily, is said, in cases of constipation apparently depending upon stricture of the colon, to keep up the peristaltic action without irritating the bowels.

Colchicum, in doses of gtt.v of the tincture of the root several times daily, has been highly recommended in obstinate constipation.

Colocynth. Dr. CRICHTON recommends (*British Medical Journal*, November 28, 1868.) the Prussian tincture of colocynth, in doses of $\mathfrak{m}\nu$ -x in a little water, taken about an hour before breakfast, as an efficient remedy. The formula of the Prussian tincture is as follows :

696. R. Colocynthis pulpæ, ℥i
 Illicii anisati, ℥j
 Alcohol, f. ℥xx. M.

Dr. BIRCH recommends colocynth combined with hyoscyamus, in the constipation of old age.

Fel Bovinum Purificatum. When there is torpidity of the liver and deficiency of the biliary secretion, ox-gall may prove useful by supplying the deficiency. Either of the following formulæ may be used :

697. R. Fel bovini purificati, ℥ij
 Olei carui, ℥x
 Magnesiæ carbonatis, q. s. M.
 Make thirty-six pills. Take two twice daily.

Or,

698. R. Fel bovini purificati,
 Pilulæ assafœtidæ compositæ, āā gr. xxx
 Extracti aloës, gr. xx
 Saponis duris, gr. x
 Pulveris ipecacuanhæ, gr. viij. M.
 Make thirty pills. Take one to two daily, before dinner.

Ferri Carbonas has not, in the opinion of Dr. GRAVES, been duly appreciated as a remedy in habitual constipation. He has succeeded in curing with it alone a patient who had long been subject to extreme constipation, and who had been reduced to the necessity of taking an immense dose of purgatives almost every week.

Magnesiæ Sulphas, in small, frequently-repeated doses, with the addition of a few drops of diluted sulphuric acid, will sometimes subdue obstinate constipation after the failure of other means. Combined with sulphate of iron and bitartrate of potassa, it was a favorite prescription of the late Prof. ROBLEY DUNGLISON.

Nitricum Acidum, in the opinion of Dr. GRAVES, is a very reliable remedy in habitual constipation, and combines tonic with aperient qualities.

Pix Liquida, persevered in for some time, often effectually removes habitual constipation.

Podophyllin is useful when there is torpor of the upper portion of the bowel.

Rheum. Dr. F. W. PAVV recommends the following pill in habitual constipation :

699. R. Pilulæ rhei comp., gr. ij-ijj
 Pulveris capsici, gr. j. M.

To be taken *with the food*, and repeated daily, as occasion requires.

In the constipation of anæmic females, Dr. ASHWELL recommends the following mixture :

700. R. Pulveris rhei,
Magnesii carbonatis, āā 3ss
Confectionis aromaticæ, gr.xx
Aquæ cinnamomi, f.ʒix
Tincturæ cardamomi compositæ, f.ʒj. M.

Make a drink. To be taken at bedtime, every three or four days.

Dr. BIRCH advises it combined with taraxacum and quinine, and Professor DA COSTA, combined with belladonna and ginger.

Ricini Oleum is one of the best purgatives which can be employed in habitual constipation, acting speedily, without much griping, and causing less subsequent constipation than any other purgative given to remedy this state.

Senna, particularly in the form of confection, is a mild, efficient purgative, causing little excitement, and leaving no subsequent constipation. Dr. JOHN FORSYTH MEIGS combines it with bitartrate of potassa, sulphur, and subcarbonate of iron.

Stramonium. Prof. ARMOR (*American Practitioner*) has been in the habit of using stramonium in the form of suppository, and is pleased with the results. Half or three parts of a grain of the extract may be combined with a sufficient quantity of cocoa-butter. It is admirably adapted to obstinate constipation of nervous females, who suffer at the same time from pelvic irritations from various causes.

**Nux Vomica* is often of equal benefit. Dr. COPLAND recommends the following pills :

701. R. Extracti nucis vomicæ, gr.iiij
Extracti colocynthidis compositæ, ʒij
Saponis castiliensis, gr.xij. M.

Make twelve pills. Take one every night for a few weeks.

Veratrum Viride, in doses of gtt.iiij of the tincture four or five times daily, is said (*Practitioner*, November, 1868,) to be useful in some cases of obstinate constipation.

Zinci Valerianas is recommended by Dr. TANNER in nervous cases of habitual constipation, combined with belladonna and gentian.

Electricity. Dr. ALTHAUS reports (*Lancet*, November 16th, 1865,) several cases of habitual constipation which yielded readily to faradization of the bowels after the failure of other remedies; but in the hands of LECLERC, electricity is rarely or never of service in these cases. Drs. BEARD and ROCKWELL state that when constipation is associated with and constitutes a part of nervous dyspepsia, it will often yield rapidly, and permanently to electrization. Constipation dependent on spinal irritation, which is more often the case than is supposed, will often promptly disappear on treatment by the current directed to the spine.

DIARRHŒA.

WILLIAM AITKEN, M. D., EDINBURGH.

702. ℞. Salicin, gr.v.
 For one powder. To be taken every four or six hours.

In cases of diarrhœa with clear tongue, which will not yield to opiates, astringents, or stimulants, either singly or combined, and which, probably, depend on a want of tone in the intestine. In these cases, the above recipe has often stopped a diarrhœa that appeared fast hurrying the patient to his grave.

One general rule may be acted on in the cure of diarrhœa, which is, that in the adult, whatever be the form of the diarrhœa, if the stools be dark at first, and then become light-colored, purgative medicines are no longer beneficial, and in no instance ought they to be continued longer than is sufficient to remove any irritative substance accumulated in the alimentary canal.

J. M. DA COSTA, M. D., PHILADELPHIA.

703. ℞. Bismuthi subnitrat̄is, ℥j
 Acidi tannici,
 Pulveris ipecacuanhæ compositæ, āā gr.iiij. M.
 For one powder. To be taken three times a day in chronic dysenteric diarrhœa.

It is particularly in cases in which there exists persistent irritability of the bowels, influenced by the taking of much food which cannot be digested, and in which there are gastric symptoms in connection with the dysenteric affection, that the subnitrate of bismuth will be found very serviceable. In order that it shall produce an effect, it is necessary that it shall be administered in sufficiently large doses, not less than twenty grains. The dose may gradually be increased to a drachm.

THOMAS HILLIER, M. D., F. R. C. P., LONDON, ETC.

704. ℞. Acidi gallici, gr.xij
 Tincturæ cinnamomi, f.ʒiiss
 Tincturæ opii, ℥viiij
 Aquæ carui, q. s. ad. f.ʒij. M.
 Dose—Two teaspoonfuls for a child two years old, with chronic diarrhœa and irritable stomach.

705. ℞. Olei ricini, f.ʒij
 Pulveris acaciæ, ʒj
 Tincturæ opii, ℥viiij
 Syrupi, f.ʒij
 Aquæ carui, q. s. ad. f.ʒij. M.

Dose—A tablespoonful for a child six years old.

A useful oleaginous mixture in dysenteric diarrhœa.

W. KEMPSTER, M. D., UTICA, N. Y.

706. ℞. Acidi carbolici, gr. j
 Aquæ, f.ʒj. M.

This is the strength of the standard house solution in the State Lunatic Asylum at Utica, New York. Of this a dessertspoonful is given thrice daily, in case of sluggishness of the bowels accompanied by offensive breath. Diarrhœa produced by eating unripe fruit, or other articles which promote fermentation, is relieved by combining a drachm or two of the solution with the usual remedies. When a fetid smell emanates from the cutaneous surface, order a warm bath, and then wash the surface with a solution, gr.v-f.ʒj.

DAVID YOUNG, M. D., FLORENCE, ITALY.

This writer (*Practitioner*, March, 1875; December, 1876,) states that in nearly every form of diarrhœa he trusts almost exclusively to diet and one or two forms of castor oil emulsion. For instance:

707. ℞. Olei ricini, ℥xxiv
 Spt. chloroformi, ʒjss
 Sol. morph. mur., ʒj
 Pulv. gum acaciæ, ʒijss
 Syrupi, ʒss
 Aquam, ad. ʒiv M.

A small dessertspoonful every hour and a half till the bowels are quieted.

He adds the following rules:

1. When the diarrhœa is chronic, and the stools contain mucus, he usually increases the dose of castor oil to from four to six drops.
2. If the pain is very severe, six drops of morphia may be given with each dose, but he has never had occasion to give more.
3. If the mixture is carefully prepared it is pleasant and readily taken, and the taste of the oil is so completely covered that in only two or three cases of the large number in which he had given it, was the mixture suspected to taste like castor oil.
4. The mixture does not keep well, especially in warm weather, but the addition of four grains of quinine to a three-ounce bottle will keep it fresh for several weeks.

In muco-enteritis, or dysenteric diarrhœa, Dr. YOUNG has derived

decided advantage from the employment of *arsenic*. It is especially indicated where the stools are slimy, contain much mucus and blood, and are attended with great prostration of strength. Two drops of the *liquor arsenicalis* (B. Ph.) are given every two or three hours. If the movements occur soon after food, the arsenic should be taken before meals; if not, in the usual way, after food.

DRS. BURKART AND RICKER, STUTTGART, GERMANY.

These writers have lately called attention to what they deem the extraordinary powers of *coto bark*, and its active principle, *cotoïn*, in diarrhœa, intestinal catarrh and dysenteric disease. The remedy was employed in the form of powder, tincture, and the active principle *cotoïn*. The taste of the powdered bark and tincture is particularly disagreeable, increasing the flow of the saliva in a marked degree. In moderate doses they generally produce a burning sensation in the stomach, and very frequently eructations and vomiting, making both these forms of exhibition extremely undesirable. The employment of *cotoïn* is free from these objections, for very small doses produce the desired effect, without inducing secondary disturbances or disagreeable sensations of any kind.

708. ℞.	Cotoïnæ,	gr. j	
	Aquæ destillatæ,	f. ℥iv	
	Alcoholis,	gtt. x	
	Syrupi,	f. ℥j.	M.

A tablespoonful every hour.

Some of the cases were of long standing, some were severe attacks of cholera morbus, and others had been but little benefited by tannin, opium, or lead acetate. The above mixture produced speedy improvement, generally in a few hours, and complete recovery in from twelve hours to six days.

DR. EDWARD R. SQUIBB, BROOKLYN.

The following is a favorite prescription of this physician in diarrhœa :

709. ℞.	Tincturæ opii,		
	Tincturæ camphoræ,		
	Tincturæ capsici,	āā	f. ℥j
	Chloroformi purificati,		f. ℥iij
	Alcoholis,	ad.	f. ℥v.

A teaspoonful as required.

SIR J. FAYRER, F. R. C. P., OF BRITISH INDIA.

This eminent believes that in the treatment of chronic diarrhœa *diet* is the most important element—more so than drugs. He gives the following rules:

All irritating or indigestible or solid food must be at first prohibited, and only that which is most easily absorbed and assimilated allowed. Milk alone, or, better, diluted with about one-fourth or one-third part of lime-water, given in small quantities and at frequent intervals, say a wineglassful every second or third hour, in some cases more frequently, will generally be found to answer well, and may be continued for a time to the exclusion of all other food. Milk, undiluted, will seldom agree, as may be seen by its causing increased irritation, frequency of action, and the passage of undigested caseine. Beef tea, raw beef juice, or other plain animal broth, free from all extraneous matters; a raw egg beaten up with milk, to which a teaspoonful of brandy may be added, will sometimes be tolerated; arrowroot, tapioca, or other plain farinaceous food, will sometimes, but not always, answer.

Tea and coffee, as a general rule, disagree, and should be avoided. Stimulants, especially for those who have long been habituated to their use, are often needed; the best are a little whisky or brandy diluted with Vals or Vichy or potash water; but these should be laid aside for plain water if they, as they sometimes do, increase the action of the bowels. Or a little very good port wine may be tried; as a general rule, all other wines are unsuitable.

Regularity in the times of administration and in the quantity of nourishment given is most essential. The greatest care should be taken not to give too much of anything at a time, and at once to discontinue whatever appears to disagree.

It is necessary that the patient should be kept warm, and at an equable temperature day and night. The body should be covered with flannel or woollen next the skin, and a flannel bandage should surround the abdomen. Chills and damp are especially to be avoided; exposure to them may seriously aggravate the mischief; during cold weather the patient should not leave the house.

JOHN FORSYTH MEIGS, M. D.

710. R.	Pulveris opii,	gr.vj	
	Extracti nucis vomicæ,	gr.ij	
	Cupri sulphatis,	gr.j.	M.

Divide into twelve pills. One three times a day, in chronic diarrhœa.

The value of this pill has been proved by army surgical experience.

CHARLES MURCHISON, M. D., F. R. C. S., ETC.

- | | | | |
|---------|-----------------------|------------|----|
| 711. R. | Acidi tannici, | ℥iv | |
| | Tincturæ opii, | ℥xl | |
| | Glycerinæ, | f.ʒss | |
| | Aquæ menthæ piperitæ, | ad. f.ʒiv. | M. |

A tablespoonful in a tablespoonful of water every four hours.

After the diarrhœa is checked, order:

- | | | | |
|---------|------------------------|------------|----|
| 712. R. | Acidi nitro-muriatici, | f.ʒiss | |
| | Tincturæ opii, | ℥xl | |
| | Syrupi, | f.ʒss | |
| | Aquæ, | ad. f.ʒiv. | M. |

A table Spoonful in water, four times a day.

DR. JEANNEL, PARIS.

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|---------|-----------------------------------|----|-------|----|
| 713. R. | Cinchonæ flavæ pulveris, | āā | ℥iv | |
| | Calcii phosphatis precipitatæ, | | ʒss | |
| | Aurantii amari corticis pulveris, | | ʒijss | |
| | Confectionis rosæ, | | q. s. | M. |

Make an electuary, of which give a teaspoonful or tablespoonful several times a day in diarrhœa.

DR. BOSSU, PARIS.

- | | | | | |
|---------|----------------------------|----|--------|----|
| 714. R. | Extracti opii, | | gr.iss | |
| | Hydrargyri chloridi mitis, | | | |
| | Ipecacuanhæ pulveris, | āā | gr.ijj | |
| | Confectionis rosæ, | | q. s. | M. |

Divide into ten pills. One morning and evening in chronic diarrhœa. Roast meat at the meals, exercise in the open air.

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|---------|--------------------------|-----|----|
| 715. R. | Bismuthi subnitratæ, | ʒj | |
| | Cinchonæ flavæ pulveris, | ʒss | |
| | Carbonis ligni, | ʒj. | M. |

Divide into twenty powders. One twice or three times a day, between meals, in chronic diarrhœa.

DR. DELIOUX, FRANCE.

- | | | | |
|---------|----------------------|--------|----|
| 716. R. | Bismuthi subnitratæ, | ℥iv | |
| | Rhei exsiccata, | gr.xxv | |
| | Simarubæ pulveris, | ʒss. | M. |

Divide into ten powders. One twice or thrice a day in chronic diarrhœa.

- | | | | |
|---------|----------------------|----|---------|
| 717. R. | Cretæ præparatæ, | | |
| | Bismuthi subnitratæ, | āā | ʒijss |
| | Pulveris opii, | | gr.ijj. |

Divide into ten powders. One an hour before each of the principal meals, in chronic diarrhœa.

RÉSUMÉ OF REMEDIES.

Camphor is regarded by Dr. RINGER as one of the most efficacious of remedies in summer diarrhœa, but it must be employed at the very commencement of the disease, or it will fail of its effect.

Capsicum is regarded by Dr. COPLAND as almost a specific in diarrhœa arising from putrid matters in the intestines, and especially when occasioned by fish.

Carbolicum Acidum has been recommended in the diarrhœa caused by eating unripe fruit, etc.

**Ipecacuanha* is often of benefit after the other remedies have proved useless.

Leptandrin is valuable when the stools are destitute of bile and the mucous membrane is irritable. In such cases, the stools under its use are said to assume their natural color and consistence.

Limonis Succus is sometimes found of service.

Linum. The infusion of flaxseed is an excellent demulcent in diarrhœa.

**Opium* is a most valuable remedy in diarrhœa. In cases due to the indigestion of indigestible food, etc., an aperient should be first given, to remove the irritating matter, then, if the diarrhœa persist, opium, in mixture, or pill, or enema, will often arrest it. Dr. WARING recommends in the so-called summer or autumnal diarrhœa the combination of laudanum (℥x-xx,) with dilute sulphuric acid (℥xv-xx,) as often successful.

Plumbi Acetas proves useful in many forms of diarrhœa.

Quassia has been recommended in the advanced stages of diarrhœa.

**Rheum* is often of great benefit, by its property of first removing irritant matters from the bowels, and then acting as an astringent and tonic. The following is an excellent formula for general use, which by itself will often effect a cure:

718. R.	Pulveris rhei compositi,	ʒj	
	Sodii carbonatis,	gr. xx	
	Tincturæ opii,	℥x-xv	
	Aquæ menthæ piperitæ,	f.ʒx.	M.

Make a drink. If after its operation the diarrhœa continues, chalk mixture and opium may be given.

Sodii Bicarbonas, in full dose (ʒij-ʒj), combined with tincture of ginger (f.ʒss-f.ʒj) and aromatic spirits of ammonia (f.ʒss-f.ʒj) and a little laudanum, is of great service in diarrhœa attended with colic and gastric irritability, and flatulence, especially when this is consequent on the indigestion of unwholesome food.

Emetics. An ipecacuanha emetic, repeated once or twice, according to circumstances, often arrests a diarrhœal discharge.

Enemata are often of great service, either mucilaginous or containing opium, ipecacuanha or astringents.

SUBACUTE AND CHRONIC DIARRHŒA.

Alum, in doses of ʒss-ʒj daily, or in enema (ʒj-vj), is often of benefit in

diarrhœa dependent upon a relaxed condition of the mucous intestinal membrane. The following formula is useful :

719. R.	Aluminis,	gr. x	
	Pulveris kino compositi,	gr. v	
	Confectionis rosæ,	q. s.	M.

Make pill. Take every sixth hour.

Argenti Nitras is of service in chronic diarrhœa when the stools are watery or mucous.

Arsenic is highly spoken of by Dr. RINGER in chronic diarrhœa. He gives one to two minims of FOWLER'S solution before each meal.

Bael. A teaspoonful of the liquid extract, twice daily, is recommended by Dr. J. K. SPENDER in painless chronic diarrhœa.

Bensoin has been recommended.

***Bismuthi Subnitras**, in doses of not less than twenty grains, is recommended by Professor DA COSTA in chronic diarrhœa where there exists persistent irritability of the bowels. Professor BYRD also prescribes it. Professor ALONZO CLARK recommends as particularly excellent in chronic diarrhœa :

720. R.	Bismuthi subnitratiss,	gr. v	
	-Morphiæ sulphatis,	gr. ʒi.	M.

This much, two, three or more times daily.

Calcis Carbolas, in one-grain doses, combined with henbane, has been successfully employed by Dr. HABERSHON (*Lancet*, January 4, 1868,) in diarrhœa attended with flatulent distention of the colon.

Calcis Phosphas, in doses of gr. j-ij, several times a day, is praised by Dr. RINGER as of great value in chronic diarrhœa, effecting both a general and local improvement.

Carbazotate of Ammonia, in grain doses, thrice daily, has proved successful in very chronic cases.

Cascarilla is much used in Germany in the advanced stages of diarrhœa.

***Catechu**, when there is no inflammatory action, is useful (in doses of gr. x-xv of the compound powder, or f. ʒj-ij of the infusion) in diarrhœa depending upon a relaxed state of the mucous membranes of the intestinal canal.

Cetraria Islandica, in the form of decoction or jelly, is a useful tonic and nutritive aliment in convalescence from diarrhœa.

Cinnamomum, in combination with chalk and opium, is often of benefit in chronic diarrhœa.

Creasotum is occasionally effectual. The following formula may be used :

721. R.	Creasoti,	ʒj-iv	
	Spiritûs ammoniæ aromatici,	ʒxv	
	Aquæ,	f. ʒiiss.	M.

When there is much pain paregoric may be added.

Or the following :

722. ℞. Creasoti, ʒiiss
 Pulv. opii,
 Pulv. capsici, ʒj
 Pulv. krameriz, q. s. M.
 Make sixty pills. One every hour or two until the violent symptoms are relieved.

* *Cupri Sulphas*, combined with opium, is often very serviceable. Dr. WARING recommends the following formula :

723. ℞. Cupri sulphatis, gr. ʒ-ss
 Pulveris ipecacuanhæ compositi, gr. v M.
 Make powder. Take thrice daily.

Dr. JOHN FORSYTH MEIGS combines it with opium and nuxvomica ; Dr. TANNER, with opium and gentian.

Cuspariæ Cortex may be given with advantage in the latter stages of diarrhœa.

Ergot, in doses of gr. v thrice daily, has been employed, with marked improvement, when dysenteric symptoms were coming on.

Erigeron Canadensis. Dr. J. W. MOORMAN, of Kentucky, says there is no better remedy in diarrhœa with debility than the *oleum erigerontis*, gtt. xv, every four hours till relieved. It is best given in sugared water and in full doses. (*American Journal of Medical Sciences*, 1865.)

Ferri Pernitratæ Liquor, in doses of gtt. x-xv thrice daily, is a valuable astringent and tonic. Dr. KERR recommends the peresquinitrate. To prepare it, he mixes one ounce and a half of nitric acid with seven and a half of water, and puts into the mixture half an ounce of iron wire. The solution is then poured off from the remainder of the wire, and water is added to it, till the whole amounts to thirty ounces. The liquid ought to be transparent and of a beautiful dark red color.

Ferri et Potassii Tartras. The following formula is recommended by Dr. E. GOODEVE in chronic diarrhœa attended with anæmia :

724. ℞. Ferri et potassii tartratis, ʒj-ij
 Tincturæ opii, f. ʒiiss-ijj
 Aquæ cinnamomi, f. ʒiv. M.
 A tablespoonful in water thrice daily.

Galla, in doses of gr. x-xx of the powder, several times a day, is occasionally useful in chronic diarrhœa. Dr. J. K. SPENDER recommends ʒj of the tincture thrice daily in painless diarrhœa

Granati Fructus Cortex, in decoction, is recommended by Dr. WARING in chronic diarrhœa unattended by inflammatory action. It is particularly useful in diarrhœa consequent on debilitating diseases.

Hæmatoxylum, in decoction, in the form* of an extract (gr.x-xxx), is a useful astringent and tonic after active inflammation has subsided. Dr. F. W. PAVY recommends in chronic diarrhœa the formula for extract of logwood advised for the diarrhœa of phthisis. (F. 530.)

**Kino*, in doses of gr.xij-xx, with or without opium, is a valuable astringent in chronic diarrhœa, especially that connected with follicular derangement. It is also frequently prescribed even when febrile symptoms are present.

Krameria is much employed by Spanish physicians in chronic diarrhœa, and is especially useful when the stools are mucous and slimy, and when there is no inflammatory action.

Matico, in infusion, is usually of benefit in chronic diarrhœa.

Muriatic Acid, combined with tincture of nux vomica, and given before meals, is found of benefit, by Dr. WILLIAM FOX, in the nervous disorder of digestion associated with diarrhœa.

Myristica, in mild cases of asthenic diarrhœa, is recommended by Dr. PEREIRA as a substitute for opium, with warm brandy and water (if not contra-indicated) as a vehicle.

Nitricum Acidum Dilutum, in doses of gr.v-xv, combined with laudanum (mxxv-xx) in a little vegetable infusion, has been recommended in chronic diarrhœa.

Nux Vomica is highly praised by Prof. GRAVES in obstinate chronic diarrhœa which resists ordinary remedies, and in that form especially which accompanies exhaustion after fevers. It may be combined with opium and sulphate of copper.

**Opium* is frequently given, alone or in combination with other remedies. Dr. SPENDER says it is now and then absolutely necessary, and it should always be prescribed in comparatively small and frequent doses, so as to obtain the least physiological with the most medicinal effect. Let the wine of opium be given to an adult in the quantity of three or four minims (with an ounce of chloroform water), five or six times in twenty-four hours, and the remedy ought invariably to be left off by degrees.

Plumbi Acetas, by the mouth or in the form of an enema, is often an effectual remedy.

Potassii Choras is recommended by Dr. COPLAND in chronic mucous diarrhœa with whitish, grayish or mucilage-like stools, arising from the absence of bile, etc. He combines it with pulvis tragacanthæ compositus and aromatics, with great benefit.

Quercus Cortex, in decoction, is sometimes serviceable. Acorns, roasted and powdered, have also been used.

Salicin, in cases of chronic diarrhœa dependent on want of tone, is recommended by Dr. AITKEN. It should be administered in a dose of five or six grains, perhaps combined with a grain of ipecacuanha. Let them be mixed into a couple of pills, and taken three or four times a day. This plan seldom fails to appease an obstinate diarrhœa.

Tannin, with opium, sometimes proves of surprising efficacy in cases of chronic diarrhœa which have resisted all ordinary treatment, and

which are not dependent on obstructive disease of the heart or liver. It is especially useful where there is an irritable, weakly mucous membrane. It may be given in the form of a pill or mixture.

Turpentine Stupes, applied to the whole abdomen and allowed to remain on as long as the patient will endure them, are often of great benefit.

Tormentilla, in decoction, is frequently of service in the advanced stages of diarrhoea, when inflammatory action has been subdued.

Zinci Oxidum, in doses of gr.iiij-v thrice daily, has been recommended by Dr. WARING-CURRAN. Dr. BONAMY, of Paris, has employed the method indicated by M. GUBLER, that is to say: 52½ grains of oxide of zinc mixed with 7½ grains of bicarbonate of soda, and divided into three or four doses, to be taken every three hours. M. BONAMY has not observed any vomiting. He sums up the advantages of the treatment thus: 1st. *Superiority of action*; since all the cases of diarrhoea in which oxide of zinc was employed with success had resisted other means of treatment; and since the diarrhoea reappeared as soon as the oxide of zinc was replaced by another agent. 2d. *Rapidity of action*; diarrhoea dating for several months was favorably modified after the administration of the first dose.

Zinci Sulphas, combined with ipecacuanha and opium, occasionally proves of advantage.

Blisters. A small blister to the abdomen is often very effectual in obstinate subacute diarrhoea.

DYSENTERY, ACUTE.

DR. CARL SCHWALBE, OF COSTA RICA.

In the *Deutsches Archiv für Klinische Medicin*, March, 1875, this writer gives a very judicious treatment of acute dysentery as it occurs in hot climates, by pursuing which he had the good fortune not to lose a case. He advises, whenever a diarrhoea sets in during a heated term, or immediately after a marked fall in the temperature, to suspect the possibility of dysentery, and at once to administer a large enema of *lukewarm water*, 100° Fah., after it has been thoroughly boiled. This should be repeated until one and a half to two gallons have been thrown up, and the colon thoroughly emptied. After the onset of the dysenteric symptoms, these copious clysters should be repeated thrice daily. Against the tenesmus, when very annoying, Dr. SCHWALBE uses:—

725. R. Atropiæ sulphatis, gr. j
 Aquæ destillatæ, f.ʒj. M.
 Two or three drops every half-hour, in water, until the pupil enlarges
 and the throat feels dry.

When there is much intestinal pain the following recipe proves of value :

726. R. Acidi muriatici diluti, f.ʒij
 Morphiæ sulphatis, gr. ij
 Aquæ destillatæ, f.ʒiij. M.
 A teaspoonful three or four times daily.

Mustard plasters should be applied to the abdomen. The diet should be fluid and nutritious. White-of egg water, made by shaking thoroughly the whites of four eggs in a pint of boiled and cooled water, is especially serviceable.

PROF. W. C. MACLEAN, M. D., OF ENGLAND.

Ipecacuanha should be administered in large doses as early in the disease as possible. From grs. xxv to xxx should be given in as small a quantity of fluid as possible. Some advise the administration half an hour previously of ℥xxx of laudanum, or a few drops of chloroform. The patient should be kept perfectly still in bed, and abstain from fluid for at least three hours. If thirsty, he may suck a little ice, or may have a teaspoonful of cold water. Under this management, nausea is seldom excessive, and vomiting rarely troublesome, usually not setting in until two hours after the medicine has been taken. *Sinapisms* or *turpentine stupes* should be affixed to the abdomen. In from eight to ten hours, according to the urgency of the symptoms and the effect produced by the first dose, *ipecacuanha*, in a reduced dose, should be repeated, with the same precautions as before. The effects of this treatment are surprising, and soon manifest; the tormina and tenesmus subside, the motions quickly become feculent, blood and slime disappear, and often, after profuse action of the skin, the patient falls into a tranquil sleep, and awakens refreshed. The treatment may require to be continued for some days, the medicine being given in diminished doses, care being taken to allow a sufficient interval to admit of the patient taking some mild nourishment suited to the stage of the disease. As the disease abates, the dose should be reduced, but it is well to administer grs. x-xij at bedtime for a night or two, after the stools are, to all appearance, healthy.

Fomentations, turpentine stupes, or chloroform liniment, to the abdomen, lessen tormina and diminish suffering. If a little diarrhoea without the dysenteric odor remain, it may be checked with a small quantity of an astringent mixture; but *astringents*, in any shape, during the acute stage, are not only useless but dangerous.

The *hot bath* is of great service in the mild forms of dysentery. It should be brought to the bedside, and kept at a high temperature, the patient remaining in until he feels faint. He should then be quickly and carefully dried, put to bed, and given ipecacuanha (gr. xv-xx), which may require to be repeated in eight or ten hours, the patient abstaining from all fluid for some hours after taking the medicine, and turpentine stupes being applied to the abdomen. This simple form of treatment, if it be resorted to early, will suffice in a great many cases of the mild form of dysentery which follows chills without much charging the system with malaria.

Dr. MACLEAN condemns *blood-letting* in dysentery, for the following reasons: 1. Because, although from the violence of the symptoms there is an appearance of *power*, this is deceptive, for alarming depression often follows free depletion. 2. Even where the measure appears to relieve the symptoms, the heart's action is weakened to such an extent that congestion of the affected mucous membrane remains, a condition nearly as destructive to the tissues as the more acute action. 3. Because convalescence after bleeding is tedious. 4. Because, although bleeding has fallen into disuse, the mortality from dysentery has decreased. Ipecacuanha has superseded the lancet.

In *malarial* dysentery, *quinine*, in full doses, should be given, not less than a scruple, in solution, some time before commencing ipecacuanha (which should be given as recommended above), and it should be repeated until cinchonism is induced; the two drugs should then be given in alternate doses until the characteristic effects of both are produced.

Many others have testified to the value of massive doses of ipecacuanha in dysentery.

DR. NATHAN S. DAVIS, OF CHICAGO.

This teacher states that in the treatment of acute dysentery he has never succeeded with the evacuant treatment, by laxative salines. Nor does he think highly of the method by ipecacuanha in large doses, although in some cases he states that it does produce the happiest effects.

The plan he usually follows in the first stage is to give, if the patient has not had free evacuations at the beginning of the attack, gr. iv-v of calomel, either with or without gr. ij-ijj of ipecac, followed in five or six hours by a laxative of castor oil, sulphate of magnesia, or Rochelle salts, as it is safe to assume in such cases that there is more or less fecal matter retained in the alimentary canal.

The patient is then placed upon some combination that is sufficiently anodyne to overcome the pain and reduce the frequency of the discharges. *Turpentine* has some property that diminishes inflammatory action of the mucous membrane, especially after the first stage. It is not merely astringent or tonic, but it possesses an alterative influence that is valuable in the peculiar condition of the vessels that belongs to these cases after the acute stage.

727. R.	Olei terebinthinæ, Tincturæ opii, Acaciæ, Sacchari albi, Aquæ menthæ,	āā	f.ʒijj	
		āā	ʒijj f.ʒijj.	M.

One teaspoonful every four hours.

When this emulsion begins to nauseate it should be suspended. In many instances it may profitably be alternated with an anodyne carbolic acid solution, as:

728. R.	Acidi carbolici crystal., Tincturæ opii camphoratae, Glycerinæ, Aquæ,	gr.vj f.ʒjss f.ʒss f.ʒij.	M.
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A teaspoonful every four hours.

DR. JOHN J. REID, OF NEW YORK.

This physician reports very excellent results in acute dysentery from the administration of *injections of hot water*. (*New York Medical Journal*, Dec., 1876.) The water used is of a temperature varying from 100° to 110°.

The method of administration is quite simple, and does not require the services of a skilled nurse, or extensive apparatus.

The hips of the patient are slightly raised, by means of a pillow, and a basin of water of the requisite temperature is placed in the bed so as to allow the nates to rest on the edge of the vessel. The vaginal nozzle of a Davidson's syringe is then introduced into the rectum, and alongside of it the rectal or smaller nozzle. A cur-

rent of water is then kept up for ten minutes, the water passing through the vaginal nozzle into the rectum, and returning by a steady stream through the smaller one into the basin, without causing any inconvenience to the patient. If the disease is extensive, and the colon involved for a considerable distance, a long rectal pipe may be employed instead of the vaginal nozzle.

The immediate effect on the patient is one of comfort, which lasts for about an hour.

The injections are to be continued every two hours, till the active stage of the disease is past.

SURGEON CHARLES N. TRIPLER, U. S. A.

The plan recommended by this surgeon as eminently successful in the Mexican war has been tried with brilliant success in private practice. It is to commence the treatment with a full dose (ʒss-ʒ) of *sulphate of magnesia*, following this by mild opiates if required.

Dr. JACKSON, of Kentucky, remarks in a recent address that diametrically opposite to the common treatment as this course was, yet it did not seem to be a great while before it was extensively tried; for within a couple of years, on the war breaking out, it was soon the general practice in each army, and with what good results the monthly reports of each army attested. He might say, that since the adoption of the saline treatment, an entire change had taken place, dysentery no longer being the dreaded disease it formerly was to either physician or patient; for he thought he was not exaggerating in saying that in nine instances out of ten, when seen at the beginning, and the saline treatment used, the disease was jugulated.

DR. PARIS, PARIS.

729. R.	Iodini,	gr. ix	
	Potassii iodidi,	gr. xv	
	Aquæ destillatæ,	f. ʒij.	M.

To be employed as an enema in dysentery. It is sometimes necessary to administer it twice in the course of the twenty-four hours, and to continue its use several days. One of the principal effects of the iodine enema is to relieve promptly the tenesmus.

RÉSUMÉ OF REMEDIES.

Argenti Nitras, in doses of gr. ss-iss daily, reduced to fine powder, and conjoined with Dover's powder in the form of pill, is highly recommended by Dr. WARING and others in the advanced stages of acute dysentery.

Belladonna, both internally and externally, is often extremely efficacious.

Carbolicum Acidum. Considerable success in the treatment of dysentery is reported by Dr. A. M. RAGLAND, of Texas, (*Va. Med. Monthly*, Oct., 1876,) by the use of the following :

730. R.	Acidi carbolici,	gtt.x	
	Syrupi rhei aromatici,	f.ʒj	
	Olei limonis,		
	Olei sassafras,	ʒʒ	gtt.v. M.

A teaspoonful every two or three hours.

If tormina and tenesmus are present, add ten drops of laudanum to each dose.

Creasotum has been found by Dr. J. R. CUSHING, of Chicago, a valuable anti-dysenteric remedy.

731. R.	Creasoti,	gtt.xx	
	Acidi acetici,	gtt.xl	
	Morphiæ,	gr.ij	
	Aquæ,	f.ʒij.	M.

A teaspoonful every two hours until relieved.

In connection with this, he was accustomed to cover the bowels with cloths saturated with the following liniment :

732. R.	Aquæ ammoniæ,		
	Olei sassafras,	ʒʒ	f.ʒss
	Tinct. opii,		f.ʒij
	Olei olivæ,		
	Olei petrolei,	ʒʒ	f.ʒij. M.

For a liniment. (*Chicago Medical Journal*, Jan., 1875.)

Ergotin, in doses of gr.vj in emulsion, or in bland enema (gr.xij–xv), has been used with excellent results by Dr. GROS. (*Practitioner*. November, 1868.) One of the effects noted under this treatment was the speedy reduction in the quantity of blood voided.

Hydrargyrum, formerly always resorted to, in large doses, in acute dysentery, has now fallen into comparative disuse, except as an occasional aperient, and ipecacuanha has taken its place. Particularly in the asthenic and scorbutic forms of dysentery, mercury in every form should be avoided. If, in exceptional cases of acute dysentery, it be employed, the following formula, for many years very generally used in Southern India, may be given :

733. R.	Pilulæ hydrargyri,	gr.ij–ijj	
	Pulveris ipecacuanhæ radiceis,	gr.i–ij	
	Opii,	gr.¼.	M.

Make pill. Take one every four or five hours.

The following is also an effectual combination :

734. R.	Hydrargyri chloridi mitis,	gr.ss	
	Morphiæ sulphatis,	gr.¼	
	Quiniæ sulphatis,	gr.ij.	M.

Make pill. Take one every two or three hours.

**Ipecacuanha*, justly called "radix anti-dysenterica," is of the highest value in dysentery. Although from its introduction (by PISO, in 1658,) its power in this disease has been more or less recognized, it was not, in consequence of the practice of conjoining it with other remedies supposed to possess similar virtues, until 1858 that its real value was demonstrated by Mr. DOCKER (*Lancet*, July and August, 1858), who re-introduced the original plan of PISO and HELVETIUS, of giving it alone, in large and effective doses. The following facts now seem to be established: that acute dysentery is more successfully and speedily treated by large doses of ipecacuanha than by other means; that this remedy is more effectual in the acute than in the chronic forms; that large doses (gr.xxv-xxx) may be given with perfect safety, without fear of hyperemesis or other ill effects. The mode of treatment, in the main, now generally practised, is that detailed by Dr. W. C. MACLEAN in the article on dysentery in REYNOLDS' System of Medicine, a condensed statement of which has already been given.

Limonis Succus should form an essential part of the treatment when the state of the gums or other circumstances lead to the belief in a scorbutic taint. A mixture of equal parts of lime juice, decoction of cinchona and port wine, was employed with good results in the British army in the first Burmese war.

Linum. The infusion of flaxseed is an excellent demulcent.

**Opium* fulfills three important indications: 1. Allaying pain and muscular excitement; 2. Moderating the peristaltic motion of the intestines; and, 3. Promoting the cutaneous secretion. It is considered by Dr. WARING as, on the whole, however, inferior, especially at the onset of an acute attack, to ipecacuanha. A preliminary dose of opium is often of great service in enabling the stomach to retain ipecacuanha and in preventing its emetic operation. The dose of solid opium may be increased from gr.j to gr.iiij-iv, three or four times a day, not only without inconvenience, but with benefit, there being a marked tolerance of opium in this disease. The signs that its administration has been carried as far as is consistent with safety, are nausea and vomiting, tympanitic distention of the abdomen, and scanty stools. *Tormina* and *tenesmus* are best relieved by opiate enemata.

Plumbi Acetas, in doses of gr.iiij-iv, in combination with Dover's powder (gr.iv-v), may be given with advantage in the advanced stages of acute dysentery, especially when the stools contain much mucus. The following *enema* may often be advantageously employed:

735. R.	Plumbi acetatis,	gr.x	
	Acidi acetici diluti,	℥x	
	Morphiæ acetatis,	gr. ʒ	
	Aquæ tepidæ,	℥ssiv.	M.

Potassii Bitartras. In the advanced stages of acute dysentery, when laxatives are indicated and the stools abound with thick viscid

mucus, cream of tartar seems to exercise a special influence in diminishing the mucous intestinal secretion and in unloading the portal system. It may be given with equal parts of sulphur, or with jalap, in the form of the approved pulvis jalapæ compositus.

Turpentine Stupes are highly serviceable in lessening tormina and tenesmus.

Blood-letting. Venesection has fallen into nearly total disuse in dysentery.

**Leeches* to the verge of the anus often afford great relief to the tormina and tenesmus, and, by unloading the portal and hemorrhoidal veins, exercise a favorable influence in the course of the disease.

Cathartics. When given judiciously, mild cathartics are often beneficial, but ill-chosen or ill-timed, they do much mischief. Castor oil, though valuable, is inferior to cream of tartar alone, or combined with sulphur or with jalap, in the officinal pulvis jalapæ compositus.

Enemata. Large enemata (four or six pints thrown into the transverse colon by means of a long flexible tube per rectum) are sometimes given. Small enemata (f.ʒiiss-ij) containing opium and ipecacuanha, are often useful in allaying tormina and tenesmus.

DYSENTERY, CHRONIC.

DR. RICHARD B. MAURY, OF MEMPHIS.

Some of the most satisfactory results in chronic dysentery have been obtained by the plan first advocated by this gentleman in the *Atlanta Medical and Surgical Journal*, December, 1872, and later in the *New York Medical Journal*, March, 1876. The patient is placed in the left lateral position, used for making uterine examinations, and the interior of the rectum is exposed to view by means of a small Sims', or other appropriate speculum. This reveals one or more superficial ulcerations of the mucous surface. These are carefully cleansed with cotton-wool, and a solution of nitrate of silver, ʒij to f.ʒj of water, is thoroughly and carefully applied to the ulcerated surface. The treatment causes considerable pain, which should be relieved by morphia hypodermically, and the patient be kept in bed. The improvement is immediate, the movements become less frequent, and the sanguineous discharges cease. In from four days to a week the caustic application should be repeated, which is often sufficient to effect a permanent cure. The following specific directions are given:

Proceed deliberately and carefully, as in any other surgical pro-

cedure. Always etherize the patient, and always stretch the sphincter ani. When properly done, these are both perfectly safe measures. The patient being etherized, the operator is enabled to explore the rectum, and make his applications deliberately and thoroughly. Paralyzing the sphincter is not only necessary to complete any satisfactory explorations, but the quieting influence secured thereby to the rectum can hardly be over-estimated. Put the patient in Sims' position for uterine examinations, and use Sims' vaginal speculum for examining the anterior and lateral walls of the rectum, and the bivalve with hinges on one side for examining the posterior wall.

If much disease is discovered on examination, the surgeon may use nitric acid. If ulceration is superficial, and the mucous membrane not much hypertrophied, the nitrate of silver does well. The patient should be required to remain in bed for a week or two, on a milk and meat diet.

LUCIUS M'GUIRE, M. D., SAN FRANCISCO.

Our author recommends the use of *iron* in chronic dysentery:

736. R.	Ferri subsulphatis,	℥ij	
	Glycerinæ,	f. ʒj	
	Aquæ,	f. ʒviij.	M.

One-half to be given as an injection every two hours.

A single injection will often arrest the discharges almost immediately. The doctor has had occasion to try the Monsell salt a number of times as a *dernier resort* in dysentery, and with uniform success.

W. E. WHITEHEAD, M. D., ASSISTANT SURGEON, U. S. A.

Our author recommends *ipecacuanha* in chronic dysentery. He directs the following treatment:

A *hot salt bath* daily, or several times a week, just before going to bed; such nourishing food as best agrees; flannel next the skin; a well-ventilated, dry and warm sleeping-room; and

737.	Pulveris ipecacuanhæ,	ʒiij.
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For twelve powders. One to be taken morning and evening, on an empty stomach.

As improvement takes place lessen the dose of *ipecacuanha* to ten grains twice a day, and then to eight grains at bedtime. After

the ipecacuanha is stopped, it may be followed with advantage by ten drops of the *muriated tincture of iron* morning and night. Other testimony to the value of ipecacuanha in chronic dysentery has been recently given by Dr. A. A. WOODHULL, U. S. A., and others.

THOMAS HAWKES TANNER, M. D., F. L. S., ETC.

738. ℞. Cupri sulphatis,
 Extracti opii, āā gr.v
 Extracti gentianæ, ʒj. M.
 For twenty pills. One three times a day in obstinate diarrhœa.
739. ℞. Argenti nitratis, gr.ss
 Extracti opii, gr.ij. M.
 Make a pill. To be taken night and morning.

In very obstinate dysenteric diarrhœa, where opium agrees with the system.

MR. R. DONALDSON, BRITISH INDIA.

This writer, in the *Indian Medical Gazette*, June, 1876, recommends the *compound tincture of benzoin* as a most efficient remedy in dysenteric affections. He says that, in Burmah, dysentery is a very common affection, and in the European, as well as in the native, exhibits a marked tendency to become chronic. In many of these cases, ipecacuanha appears to have little or no effect; any persistence in the treatment by large doses of this drug, far from being productive of good, is fruitful of positive mischief. The stomach is rendered so irritable by it, that the patient is unable to retain nourishment; and he then suffers from exhaustion, the combined effect of the disease and innutrition. In these cases, the tincture of benzoin, given in combination with astringents—notably with logwood—has been found extremely useful; often, indeed, acting like a charm; and it may be truly said of it, that its powers of healing diseased mucous membranes equal its performances when applied externally to wounds. The formula recommended is:

740. ℞. Tincturæ benzoini comp., f.ʒss
 Tincturæ catechu comp., f.ʒj
 Tincturæ opii, ℥x
 Extracti hæmatoxyli, gr.x
 Aquam, ad. f.ʒj. M.
 For a draught: to be given thrice daily. If necessary, the remedy may be administered by the rectum.

DR. B. H. WASHINGTON, OF TENNESSEE.

This physician, whose experience in obstinate chronic dysentery

has been considerable, is convinced that the treatment by enema and scarification fails unless the ulcerations are strictly confined to the rectum. (*Nashville Journal of Medicine and Surgery*, 1874.)

He directs his patients to use a wet bandage covering the whole stomach and bowels. This is covered with a dry bandage on the outside, so attached that both lie smooth on the person. It should be wet anew in cold water when it grows dry or too warm. Every other day the patient is dry cupped down the whole length of the spinal column. As the skin is almost always dry and torpid, the patient should be washed down daily with hot water and rubbed with a coarse cloth, until the action of the skin is well stimulated; after which such a bath twice weekly will be sufficient.

He also encourages the patient to drink as freely as possible of pure water, containing gr. xxx-xl. of bicarbonate of potash to the pint. Under this treatment he has found some exceedingly obstinate cases recover completely.

RÉSUMÉ OF REMEDIES.

Alum is much less employed in chronic dysentery now than formerly. It may be given in combination with Dover's powder.

Ammonii Chloridum. DR. WILLIAM STEWART (*Madras Monthly Journal of Medical Science*) has found chronic dysentery, associated with chronic disease of the liver, yield to a few twenty-grain doses of the chloride of ammonium, after ipecacuanha and other remedies had failed.

**Argenti Nitras* is of great service in chronic dysentery. It should be given in the same manner as directed for the advanced stage of the acute affection.

Arnica is praised by German authorities in chronic dysentery, when the vital powers are greatly depressed.

Benzoinum has proved successful in the hands of Dr. CHIPPERFIELD, of Madras (*Madras Quarterly Medical Journal*, January, 1867), given as follows:

741. R.	Tincturæ benzoini compositæ,	f.ʒj-ij	
	Tincturæ opii,	ʒxx-xl	
	Pulveris acaciæ,	gr. xxx	
	Aquam carui,	ad. f.ʒvj.	M.

Dose—One-fourth part every four hours.

**Bismuthi Subnitras* is highly praised in subacute and chronic dysentery by TROUSSEAU and RÉCAMIER. It is also much employed by Prof. DA COSTA.

Calcis Aqua by the mouth, or by enema, proves useful in some cases.

Carbo Ligni was recommended by Prof. CHAPMAN, who found it, inter-

nally administered, to remove the acrid and offensive character of the stools.

Carbonic Acid Gas introduced per anum has been advised

Cascarilla is highly thought of by the Germans.

Cetraria Islandica, in the form of jelly or decoction, is a valuable tonic and nutritive during convalescence.

**Cupri Sulphas*, combined with opium, is often highly serviceable in chronic dysentery.

Cusparia may be given with advantage in the latter stages.

Fermentum has been recommended for removing the fetor of the stools and diminishing their frequency :

742.	R.	Fermenti,	f.ʒx	
		Camphoræ,	gr. xxx	
		Spiritus ætheris nitrosi,	f.ʒss.	M.

A tablespoonful every two or three hours, according to the severity of the symptoms.

Ferri Chloridi Liquor, in doses of gtt. iij–vij, well diluted with water and syrup, is frequently employed in France. The same doses in enema, combined with opium, are often serviceable.

**Ferri Nitratis Liquor* is of great benefit, particularly in those anæmic from loss of blood and the depraving influence of malaria.

Ferri Subsulphatis Liquor, diluted in enema, has been recommended.

Hamatoxylum, in decoction or extract (gr. x–xxx), is an excellent tonic astringent, but inadmissible so long as any active inflammation exists.

Hydrargyrum, excepting very occasionally as a purgative, when there is congestion of the liver, is wholly uncalled for in chronic dysentery.

**Ipecacuanha*, in the form of Dover's powder, is often of the greatest benefit in chronic dysentery, given at bedtime in full dose (gr. x–xij), or in small, frequently-repeated doses, in combination with nitrate of silver.

Jalapa, in the form of pulvis jalapæ compositus, is the best purgative which can be employed in dysentery.

Leptandrin is said to be useful when the stools are destitute of bile and the mucous membrane is irritable.

Nitro-muriaticum Acidum Dilutum, in lotion (f.ʒj to aquæ Oj), applied to the abdomen, is of benefit, especially when there is hepatic disease.

Nux Vomica, combined with opium and iron, is worthy of trial when there is much exhaustion.

**Opium* is of great value in chronic dysentery, and may be given combined with nitrate of silver, sulphate of copper, or sugar of lead.

Plumbi Acetas, though less effectual perhaps than nitrate of silver or sulphate of copper, may be employed at an earlier stage than either of those salts.

Potassii Bitartras is one of the best purgatives which can be employed when laxatives are indicated.

potassii Chloras. Injections of this salt have been strongly advocated:

743. R.	Potassii chloratis,	ʒss	
	Glycerinæ,	f.ʒss	
	Aquæ,	f.ʒiij-iv.	M.

For an injection. Two or three a day, the patient to retain them as long as possible.

Sanati Fructus Cortex, in decoction, occasionally, in the absence of inflammatory action, proves useful.

Maercus Cortex, in decoction, has been recommended in the advanced stages of chronic dysentery.

Quinice Sulphas, in full doses (not less than ʒj, in solution), should be given in malarial dysentery, and repeated until cinchonism is induced. *Ipecacuanha* should then be given as directed.

Soda Chlorinata Liquor. Dr. E. M. MORSE (*California Medical Gazette*, September, 1868,) has met with marked success by throwing up into the rectum and colon from two to five pints of Labarraque's solution of chlorinated soda, largely diluted, in chronic simple uncomplicated dysentery, by which are meant those cases not kept up by organic disease of the heart, or phthisis pulmonalis, nor dependent on immediate obstruction of the liver or spleen. The right strength for the first enema is twenty parts of water to one of Labarraque's solution.

Sulphur appears to exercise a favorable influence in some cases of chronic dysentery.

Tannin, in combination with opium and *ipecacuanha*, is often of service.

Tormentilla, in decoction, may be given with advantage in the advanced stages of dysentery, after inflammatory action has been subdued.

Zinci Oxidum, in doses of gr. iij-v thrice daily, is recommended by Dr. WARING-CURRAN.

Zinci Sulphas, combined with *ipecacuanha* and opium, has been employed with success.

Water Belt. Dr. W. C. MACLEAN recommends the use of a water belt over the abdomen for some hours daily. It acts as a fomentation, and the steady, uniform pressure it maintains seems to favor the absorption of the fibrine effused between the intestinal coats. If there be much uneasiness about the anus, a water compress over the part often affords more relief than an opiate enema. The cold hip-bath daily, for a few months, is of service.

Mineral Waters. The Oak Orchard Water, of Lockport, New York, and the Rock Alum and similar springs of Virginia, possess astringent and tonic properties often of very decided benefit in cases of chronic dysentery.

DYSPEPSIA.

WM. AITKEN, M. D., EDINBURGH.

744. R. Sodæ bicarbonatis, ʒv
Potassæ nitratis, ʒj. M.

For twenty powders. Order one, two or three times a day in those forms of indigestion marked by excessive acidity and heartburn. At the same time free excretion from the liver and bowels must be sustained by occasional doses of blue pill or podophyllin, combined with extract of colocynth and of henbane, while exercise and diet are duly attended to.

745. R. Ammoniz carbonatis, ʒj
Extracti gentianæ, ʒij. M.

For twenty pills. One thrice daily in weakened digestion from over-fatigue.

746. R. Extracti nucis vomicæ,
Ferri sulphatis, ʒi gr. ss
Extracti colocynthidis compositi, ʒi. gr. iv. M.

This combination, taken early in the morning, generally induces gentle action of the bowels.

In prescribing the mineral acids, our author calls attention to the following general rule, stated by Dr. BENCE JONES, namely, that the influence of sulphuric acid is astringent, while that of muriatic acid promotes digestion, and of nitric acid secretion.

THOMAS KING CHAMBERS, M. D., CONSULTING PHYSICIAN AND LECTURER ON THE PRACTICE OF MEDICINE AT ST. MARY'S HOSPITAL, LONDON.

747. R. Acidi hydrocyanici diluti, ʒi
Infusi gentianæ, f.ʒvj. M.

A tablespoonful thrice daily in heartburn due to over-sensitiveness.

748. R. Zinci oxidi,
Pilulæ aloes et myrrhæ, ʒi ʒi ss. M.

Divide into twenty pills. One thrice daily, in the nervous trembling, indigestion of food and vomiting, arising from indulgence in spirit drinking, between meals and in the forenoon.

J. M. DA COSTA, M. D., PHILADELPHIA.

749. R. Acidi nitro-muriatici, f.ʒij
Vini pepsini, f.ʒij. M.

A teaspoonful three times a day, before or after meals.

In functional indigestion owing to a want of proper secretion of gastric juice. When there is constipation, add also:

750. ℞. Pulveris rhei, ℥j
 Quiniæ sulphatis, gr.x. M.
 Divide into ten pills. One to be taken at night. If this be not sufficient to produce a laxative effect, take one night and morning. Meat diet almost exclusively, avoiding starchy substances.

C. W. FRISBIE, M. D., EAST SPRINGFIELD, NEW YORK.

751. ℞. Hyoscyami, ʒj
 Argenti nitratis, ʒss
 Extracti nucis vomicæ, ʒss gr.xv
 Pulveris opii, ʒss
 Pulveris camphoræ, ʒss ℥j. M.
 Divide into sixty pills. Give one three times daily, from a half to one hour before eating, in painful digestion, over-sensibility of the stomach, etc.

THOMAS HAWKES TANNER, M. D., F. L. S., LONDON, ETC.

752. ℞. Acidi nitro-muriatici diluti, ℥ʒij
 Acidi hydrocyanici diluti, ʒxxv
 Tincturæ arnicæ, f.ʒj
 Tincturæ gentianæ compositæ, f.ʒj
 Infusum sennæ, q. s. ad. f.ʒiij. M.
 A tablespoonful two or three times daily in dyspepsia with sluggish action of the liver.

The efficacy of this prescription may often be increased by giving with each dose the following pill:

753. ℞. Zinci sulphatis, gr.j-ij
 Extracti gentianæ, gr.iv. M.
 754. ℞. Quiniæ sulphatis, gr.xij
 Pulveris ipecacuanhæ, gr.xij-xxiv
 Extracti gentianæ, gr.xxiv. M.
 Divide into twelve pills, and order one to be taken every day at dinner.

An excellent remedy in cases of slow indigestion.

PROFESSOR ROBINSON, BOWDOIN COLLEGE.

755. ℞. Extracti cimicifugæ fluidi,
 Tincturæ sanguinariæ,
 Syrupi sarsaparillæ, ʒss f.ʒj. M.
 Dose—One teaspoonful three times daily. Very useful in cardiac palpitation resulting from dyspepsia.

One of the finest preparations in dyspepsia with flatulence is the following:

756. ℞. Sulphatis sodæ, ʒj
 Tincturæ nucis vomicæ, f.ʒv
 Aquæ, f.ʒiv. M.
 A teaspoonful thrice daily, after meals.

SEASES OF THE DIGESTIVE SYSTEM.

Ferri sulphatis exsiccatæ,
 Extracti hyoscyami, ℞ ℥j
 Extracti nucis vomicæ, ℥j. M.
 For sixty pills. Give one half an hour before each meal, three times daily, in water.

R. Ferri redacti, gr. xxxvj-℥j
 Pepsinæ, gr. xxxvj
 Zinci phosphatis, gr. xvij
 Glycerinæ, q. s. M.
 Divide into twenty-four pills, silver them, and order two to be taken every day at dinner.

ia, etc., with view to the digestive organs.

PROF. T. G. LARD, S, NEW YORK.

759. R. M. ℥ij
 F. gr. xvj
 Aqua ℥. ℥j
 Oj. M.

Two table-spoonfuls in a tumbler of ice-water every morning upon arising, combined with a saline, is indicated.

Or,

760. R. Potassæ et sodæ tartratis, ℥ij
 Vini ferri amari, ℥. ℥ij
 Acidi tartaraci, ℥ij
 Aquæ, ℥. ℥xij. M.

Two table-spoonfuls in a tumbler of ice-water before breakfast. Should this dose be not sufficient, two or three may be taken daily, for the result will prove tonic and reparative as well as cathartic.

761. R. One rennet, washed and chopped.
 Vini rubri, Oj. M

Macerate for twelve days, and then decant, filter, and add:

Acidi nitro-muriatici diluti, ℥. ℥ij
 Tincturæ nucis vomicæ, ℥. ℥ij
 Bismuthi subnitratæ, ℥ij. M.

One table-spoonful in a quarter of a tumbler of water before each meal, as a digestive tonic.

This prescription embraces the tonic properties of *nux vomica* and the peculiar restorative influence of bismuth, with a fluid which resembles the gastric juice. In many cases of habitual indigestion our author has obtained from it the best results.

762. R. Quiniæ sulphatis, ℥ij
 Ferri sulphatis, ℥j
 Acidi sulphurici aromatici, gtt. x
 Mucilaginis acaciæ, q. s. M.

Divide into twenty pills. One to be taken three times a day, before each meal.

DR. WILLIAM BRINTON, LONDON.

This writer gives the following useful hints in regard to the salts of iron in dyspepsia. They are generally beneficial, not only in proportion to the anæmia and general derangement of nutrition present, but in proportion to the patient's deprivation of a due share of light, air and exercise, which is the cause of so much of the dyspepsia of civilized life. Hence iron is more useful in females than in males, more in the sedentary dyspeptic than in the florid and over-fed. Where great nausea and irritability exist, it should generally be avoided. It should always be given immediately after a meal, excepting after tea. The *effervescing citrate* will generally be borne by the most delicate stomach. Neither this nor any other salts of iron should be given in doses sufficiently large to cause nausea or flatulence. The *carbonate, phosphate, sulphate and chloride* form a scale of increasingly irritative preparations, and therefore demand not only a diminished dose, but an increased dilution. Thus, while we may give gr. x of the citrate as a common dose, gr. ij of the sulphate, and ℥vij-vij of the tincture of the chloride, with half a wineglassful of water, are as much as most dyspeptics will safely bear. The *oxide* and other comparatively insoluble preparations should be avoided. The efficacy of the salts of iron in dyspepsia often appears to be increased by conjoining them with the *sulphate or oxide of zinc*.

Cathartics, according to Dr. W. BRINTON, are of great service in dyspepsia in emergencies; of little service, almost hurtful, as prominent features in treatment, which ought always to aim at such a tonic effect as is incompatible with habitual purgation. They should be given in the smallest doses, on an empty stomach, either before dinner, in the shape of a slowly-acting pill, or early in the morning, in that of a more rapidly-acting liquid. The pill form is preferable, as a rule, especially when the aperient is often repeated, the liquid aperients, especially the saline, often acting injuriously on an irritable stomach. Castor oil, however, is in many constitutions an exception to this rule.

DR. HENRY GIBBONS, OF SAN FRANCISCO.

This physician strongly commends the use of five drops *chlorhydric acid* in a tablespoonful of water after eating, when the stomach feels burdened. Not only in his own case, but in a very large proportion of dyspeptic affections among patients, he has found it a most valu-

able remedy. From three to five drops is the proper quantity, and it may be taken either regularly before or after each meal, or on special occasions—*pro re nata*. It is the best thing he has ever given for cardialgia, or any affection of the stomach arising from excessive acidity. It should not be too much diluted, nor should it be sweetened.

DR. I. BURNEY YEO, LONDON.

In regard to the flatulent form of dyspepsia, this experienced practitioner considers that in the first place, it is necessary to maintain for some time a lax condition of the bowels. In order to get rid of the tendency to the accumulation of gas in the upper part of the intestinal canal, it is absolutely necessary that not even a temporary block should be allowed to exist in the lower regions; hence the value in such cases of a mild course of laxative mineral waters, as Carlsbad, etc., which secures two or three loose evacuations before any food is taken. Even in cases of organic constriction it often proves of the greatest service. There are some patients with whom no aperient produced so much relief as castor oil—the comfort of each day depending on a dessertspoonful of this medicine, taken in the early morning. The Hunyadi water also answers well, and is often efficient in small quantities. No breakfast should be taken until the bowels have been freely relieved.

With regard to food and drink—tea, coffee, cocoa, and all hot and sweet beverages must be entirely banished from the dietary. In such conditions, tea or coffee will almost immediately disturb the heart's action. Malt and sherry are also under the ban. Sound claret and water, or milk mixed with some alkaline effervescing water, are the safest beverages; but much fluid of any kind is hurtful. Oatmeal porridge is still better. Animal food should be restricted to roast or boiled mutton, the lighter kinds of fish, and a little broiled fat bacon. Fruit, jellies and marmalade, should take the place of butter.

Of drugs he has found great use in a pill of creasote, carbonate of magnesia, and extract of hop, taken immediately after every meal; and when this has failed, he has seen excellent results from a few grains of ox-gall made into a pill with powdered rhubarb, and taken after breakfast and dinner.

Dr. ELLIS, of Middlesex Hospital, London, speaks forcibly in a recent clinic of the necessity of examining *the teeth* in dyspeptic patients. Persons often suffer from lack of digestive power, and

pain in the form of spasms and cramps, brought on from defective mastication.

These symptoms are of very frequent occurrence in females, and are generally treated by anti-spasmodics, tonics and aperients. In the majority of instances, defective masticatory power, from decay or absence of the molar teeth, will be found to exist, and constitutes the *fons et origo mali*. Until this defect be remedied, medicine is powerless to prevent a recurrence of the symptoms. Defective mastication is responsible for far more suffering in women than is generally supposed. Sick headaches, neuralgia, dyspepsia, flatulence, diarrhoea, dysmenorrhœa, and many other symptoms, are often traceable to this cause. The insertion of a few artificial teeth will accomplish more than the most elaborate combination of the Pharmacopœia.

PROF. FONSSAGRIVES, MONTPELLIER, PARIS.

763. R.	Magnesiae,	ʒj	
	Liquor calcis,		
	Aquæ destillatæ,	āā	f.ʒij
	Syrupi aurantii florum,		f.ʒj. M.

A tablespoonful from time to time, in the intestinal colic of dyspepsia; cold enemata of the infusion of chamomile.

764. R.	Potassii bicarbonatis,	ʒj	
	Tincturæ cardamomi compositæ,		
	Tincturæ rhei,		f.ʒij
	Spiritus ammoniæ aromatici,		f.ʒj
	Aquæ menthæ piperitæ,		f.ʒijss
	Syrupi aurantii corticis,		f.ʒj. M.

Take two tablespoonfuls half an hour before each of the two principal meals, in flatulent dyspepsia.

DR. PARIS, PARIS.

765. R.	Magnesiae,	ʒss	
	Spiritus lavandulæ compositi,		f.ʒss
	Spiritus cari,		f.ʒijss
	Syrupi zingiberis,		f.ʒij
	Aquæ menthæ piperitæ,		f.ʒj. M.

Take one-half after the meal, when the digestion is accompanied with an abundant development of gas.

766. R.	Bismuthi subnitratæ,		
	Cinchonæ floræ pulveris,	āā	gr.xxv
	Calumbæ pulveris,		gr.xv
	Opii pulveris,		gr.vj. M.

Divide into ten powders. One an hour after each of the two principal meals, when there is atony of the stomach and pain during digestion.

DR. BONNET, PARIS.

767. R. Bismuthi subnitrat̄is, ʒv
 Morphiæ muriatis, gr.ʒ-iss. M.
- Mix carefully and divide into twenty powders. One immediately after each of the two principal meals, in two tablespoonfuls of sweetened water, in dyspepsia with a tendency to diarrhœa.

DR. GUIPON, PARIS.

768. R. Potassii bitartratis, ʒiij
 Magnesiæ, ʒj-ij
 Jalapæ pulveris, gr.xv-xxx. M.
- As a purgative in some cases of chronic dyspepsia ; to be given in one dose.

DR. MAYET, FRANCE.

769. R. Canellæ pulveris, ʒijss
 Piperis,
 Cardamomi, āā ʒss
 Cinchonæ, ʒj
 Krameriæ, ʒv
 Lunel wine, Oij. M.
- Bruise these substances and macerate them in the wine during several days ; then filter. A wineglassful morning and evening, to give tone to the stomach.

SWEDISH PHARMACOPEIA.

770. R. Sennæ, ʒiv
 Coriandri seminis,
 Fœniculi seminis, āā ʒij
 Vini serici, Oij.
- Bruise the senna leaves and the seeds, digest three days in the wine and add :
- Raisins, ʒiij.
- Macerate twenty-four hours and filter. A wineglassful in the morning, on an empty stomach, as a laxative and carminative, in flatulent dyspepsia.

DR. VANCE, FRANCE.

771. R. Extracti colocynthidis compositi, ʒiv
 Scammonii, ʒj
 Extracti rhei, gr.xj
 Saponis, gr.ivss
 Spiritûs canellæ, gtt.iv. M.
- Divide into twenty-four pills. One or two in the morning, on an empty stomach, to provoke bilious stools and increase the appetite.

RÉSUMÉ OF REMEDIES.

Aloes, in doses of gr. ij-iv, combined with ipecacuanha (gr. j-ij), two or three times a week, is useful in the dyspepsia of persons of a relaxed habit, or those debilitated by long illness, especially if it be probable that the duodenum is implicated.

Ammonii Carbonas is prescribed by Dr. AITKEN in weakened digestion from over-fatigue.

**Argenti Nitras* is useful in many obstinate cases of dyspepsia attended with morbid sensibility and hypochondriasis. The following formula may be used:

772. ℞. Argenti nitratis, gr. ss
 Extracti hyoscyami, gr. ij-iv. M.
 Make pill. Take every night.

The quantity of the nitrate may be gradually increased to grs. ij-ij daily, and this may be continued with safety for six or eight weeks, but not beyond that time. It may sometimes be advantageously combined with small doses of quinine. The diet should be carefully directed. Or the nitrate may be given in solution:

773. ℞. Argenti nitratis crystallini, gr. vj
 Aquæ destillatæ, f. ʒij. M.

A tablespoonful to be taken at bedtime, on an empty stomach, and repeated every night, or every second, third or fourth night, according to the severity of the symptoms.

Argenti Oxidum was much employed by Dr. GOLDING BIRD in gastralgia, gastrodynia, and in those forms of dyspepsia attended with irritable stomach and pain after food. He regarded it as a valuable sedative and tonic, possessing all the virtues without the inconveniences of the nitrate. Dr. J. EYRE used it with advantage in pyrosis. It must be remembered that it cannot, in these cases, be combined with creasote, for violent decomposition, attended with heat, and even flame, follows the mixture of these substances.

**Arsenic* is a valuable remedy in *gastrodynia*, particularly when of a neuralgic character. Fowler's solution should be given after a meal, commencing with small doses (ʒij), and gradually increasing them, adding a few drops of laudanum when large doses are reached, to prevent purging. Dr. RINGER recommends Fowler's solution (ʒj-ij), shortly before each meal, in many forms of chronic dyspepsia. He finds it very effectual in checking the morning vomiting of drunkards.

Aurantii Amari Cortex, in tincture or infusion, is an elegant tonic in dyspepsia.

Assafætida, in combination with bitter tonics and mild aperients, is useful in dyspepsia attended with hypochondriasis and other mucous affections.

**Bismuthi Subnitratis* is of great value in atonic dyspepsia. Dr. W. BRINTON finds it particularly useful in the "morbid sensibility of the stomach" of old writers. Dr. WILSON FOX especially recommends it in the milder forms of gastric inflammation. He finds that in *pyrosis*, when combined with opium, it seldom fails to relieve, but that in order to effect a cure a more direct astring-

ent, like kino, is required. Professor R. J. GRAVES considers it one of the best remedies we possess in gastrodynia.

Calcis Aqua, in doses of f.ʒij, in milk, is useful in dyspepsia connected with acidity of the stomach; also when the urine shows a strong acid reaction, and when vomiting is a prominent symptom.

Calcis Saccharas is a good tonic in obstinate dyspepsia.

**Calumba*, in infusion, is a valuable vegetable bitter tonic in atonic dyspepsia. It may be given at an earlier period than other remedies of the same class, and forms an excellent vehicle for other appropriate remedies.

Capsicum is especially useful in the atonic dyspepsia of hard drinkers and long residents in hot climates. The following formula may be employed:

774.	R.	Pulveris capsici,	gr.ij-iiij	
		Pilulæ rhei compositæ,	gr.v	
		Pulveris ipecacuanhæ radices,	gr.ss.	M.

Make two pills. To be taken daily, an hour before dinner.

**Carbo Ligni*, enclosed freshly prepared in gelatine capsules, is a valuable remedy in dyspepsia attended with obstinate flatulence and gastrodynia.

Cardamomum, in the form of the compound tincture, is highly serviceable in the dyspeptic affections of old persons.

Caryophyllum, in infusion, or volatile oil (gtt. iij-v), is of benefit in atonic dyspepsia attended with a sense of coldness in the stomach and much flatulence.

Cerii Oxalas was much employed by the late Prof. SIMPSON in irritable dyspepsia, attended with gastrodynia, pyrosis and chronic vomiting.

Colocynth is useful in some forms of dyspepsia and gastrodynia, when no inflammatory symptoms are present. The following formula may be employed:

775.	R.	Extracti colocynthidis compositi,	ʒij	
		Pilulæ rhei compositæ,	ʒj	
		Saponis,	gr.vj	
		Olei caryophylli,	gtt.iv.	M.

Make sixteen pills. Take one or two every half hour.

Ferrum. (See above, p. 343.)

Gallicum Acidum has been recommended in dyspepsia arising from a relaxed state of the mucous membrane of the stomach. It is useful in *pyrosis*, unaccompanied by organic disease of the stomach, or of the liver.

Gentian, in the form of tincture in an aromatic water, is a valuable stomachic in atonic dyspepsia and in the dyspepsia of gouty subjects.

Hydrargyri Pilula, in doses of gr.ij-iv, is useful in dyspepsia attended with hepatic derangement, or when the duodenum is supposed to be the seat of the disease. It may be combined with *ipecacuanha* (gr.j-ij) and with a sedative. Ptyalism must be avoided.

Hydrargyri Chloridum Mite is sometimes productive of marked benefit in dyspepsia characterized by hepatic derangement. But its habitual use, even as a purgative, is not without detriment, and its constitutional effects are mischievous.

Hydrocyanic Acid, in doses of ℥ij-iv, combined with infusion of columbo, is often signally useful in dyspepsia attended with gastric irritation. Dr. WILSON FOX states that in the irritative dyspepsia of phthisis it is a most effectual remedy.

Ipecacuanha, in doses of gr. ss-j, in the form of pill, with gr. iij-iv of rhu-barb, taken before meals, often proves serviceable in atonic dyspepsia, especially when the biliary secretion is deficient or vitiated.

Kino is useful in the incipient stages of follicular dyspepsia. It does not appear to constipate the bowels, if diarrhœa be not present. Sir T. WATSON recommends it highly in *pyrosis*, in the form of pulvis kino compositus:

776. R.	Kino,	ʒiv	
	Pulveris opii,	gr.xv	
	Cinnamomi,	ʒj.	M.

Divide into thirty powders. One thrice daily.

Dr. WILSON FOX also regards it as the best remedy in *pyrosis*.

**Lactic Acid*, first introduced as a remedy in dyspepsia by MAGENDIE, has been employed with success by Dr. C. HANDFIELD JONES in cases of irritative dyspepsia, when the digestion has been for a long time painful and imperfect. Its use is not advised at the commencement of a severe case, but only after the irritation is somewhat reduced. The dose is ℥xv-xx, in a tablespoonful of water, taken at meal-times. Its use may be extended to all cases where it is desirable to improve the tone and power of the stomach. But it is essential, in order to obtain good effects, that the acid should be pure and of good quality, which unfortunately is frequently not the case with that which is generally dispensed.

Magnesiæ Sulphas, in small doses, has been found very effectual in dyspepsia accompanied by costiveness. The following formula may be used:

777. R.	Magnesiæ sulphatis,	ʒj	
	Infusi quassiæ,	ʒiiss	
	Spiritus ammoniæ aromatici,	f.ʒij.	M.

Drink a wineglassful of this every morning, fasting.

Or the following may be employed:

778. R.	Magnesiæ sulphatis,	ʒvj	
	Magnesiæ carbonatis,	ʒiiss	
	Vini aloës,	f.ʒvj	
	Tincturæ humuli,	f.ʒij	
	Acidi hydrocyanici diluti,	℥xv	
	Infusi cascariillæ,	f.ʒvij.	M.

Take three tablespoonfuls thrice daily.

Manganesii Oxidum Nigrum, in doses of gr.x-xv thrice daily, has been recommended in certain irritable conditions of the stomach and forms of dyspepsia.

Morphia, subcutaneously injected, in doses of one-fourth grain, has been used with excellent success by Dr. CLIFFORD ALLBUTT (*Practitioner*, June, 1869,) in those forms of dyspepsia characterized by irritability or erethism, or such as is often associated with hysteria, or which arises from great mental exertion or depression.

Muriaticum Acidum Dilutum, in doses of ℥xv-xx, properly diluted, given immediately before, during, or directly after a meal, is highly recommended by Dr. WILSON FOX in atonic dyspepsia. It may be combined with vegetable bitters. In nervous disorder of digestion associated with diarrhoea, he combines the acid with tincture of nux vomica, and gives before meals.

Pepsine is especially indicated in dyspepsia connected with deficient secretion of gastric juice. It is particularly useful in gastric disturbances following the use of animal food, often enabling a patient who has not dared attempt it, to eat of it with impunity. The severest cases of *gastralgia* are relieved by it. If it fails after three or more doses, it is probable that the dyspepsia does not arise from a defect of the gastric secretion. Dr. WILSON FOX strongly recommends it, not only in atonic dyspepsia, but in irritative states of the gastric mucous membrane. It may be advantageously combined with muriatic acid at meal-times (a similar combination is recommended by Prof. DA COSTA). It may be combined with other medicines which do not impede its therapeutic action; thus, with muriate of morphia, to relieve violent pain of the stomach; with strychnia, to stimulate peristaltic movement; with subnitrate of bismuth, lactate or iodide of iron, etc.

Potassii Sulphuretum, in doses of gr.x, alone or combined with an aromatic, is useful when the mucous follicles are supposed to be implicated.

Potassii Sulphas, in doses of gr.xv-℥ij, alone or combined with rhubarb (gr.v-x) or aloes, is a safe and efficient aperient in dyspeptic affections.

Potassii Tartras is sometimes employed as a mild purgative in dyspeptic affections, attended with slight febrile action.

**Potassii Iodidum*, in small doses (gr.j-ij), with bicarbonate of potash (gr.vij-x), is recommended by Dr. W. BRINTON in flatulent dyspepsia, in which, whether from a too starchy diet, deficient or hasty mastication, decayed teeth, the abuse of tobacco or other causes, the salivary excretion seems either deficient in quantity or faulty (*i. e.*, acid) in quality. Two or three administrations will often induce a marked change.

Quassia, in infusion, combined with carbonate of soda, is recommended by TROUSSEAU in dyspepsia attended by acidity of the stomach, sour eructations, and marked especially by vertigo and a tendency to syncope. It is peculiarly useful in the dyspepsia of drunkards.

**Rheum* is often highly serviceable, as it is warm and carminative in its

nature, speedy, and neither stimulant nor drastic in its action. Eight grains made into pills with soap, and taken every night at bedtime, together with some mild bitter infusion, and an alkali in the daytime, is a very effectual mode of treatment. The following mixture is useful:

779. R.	Aloës,	ʒj	
	Rhei,		
	Glycyrrhizæ,	āā	ʒss
	Spiritus lavandulæ compositus,	f.ʒss	
	Aquæ calcis,	f.ʒviiij.	M.

Infuse for twelve hours and strain. Dose—Two tablespoonfuls two or three times daily.

The following formula is of benefit when acidity is a prominent symptom:

780. R.	Rhei,	ʒiss	
	Potassæ carbonatis,	ʒiij	
	Aquæ ferventis,	ʒxij.	M.

Macerate for twelve hours, strain and add:

Tincturæ cinnamomi compositus,	f.ʒij.	M.
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Dose—A tablespoonful to a wineglassful.

The old plan of chewing a piece of solid rhubarb is an excellent one, as by this means no more is swallowed than what is dissolved in the saliva, and this is frequently sufficient to keep the bowels regular, and impart tone to the digestive organs without producing subsequent constipation. Professor DA COSTA sometimes combines it with quinine.

* *Ricini Oleum*, in doses of a teaspoonful daily, given at bedtime, is one of the most valuable remedies in dyspepsia attended with inflammation or vascular excitement of the pylorus and duodenum. The nature of the morbid condition of the mucous membrane of the stomach is indicated by the effects of castor oil. In atonic dyspepsia it is borne with the greatest difficulty, causing nausea and vomiting; in irritable dyspepsia it acts severely, and with much griping; but in vascular excitement of the mucous membrane of the stomach it soothes most admirably, and produces the best effects when it has no aperient action. It may be combined with liquor potassæ, or administered in emulsion, in coffee, or in a mild carminative water.

Sapo, in combination with rhubarb and an essential oil, is useful in dyspepsia attended with acidity; also in *pyrosis*, given either alone or with opium.

Senna. A mixture of equal parts of the infusions of senna and gentian is often beneficial in atonic dyspepsia, especially when attended by constipation.

Serpentaria is recommended by Dr. A. T. THOMSON in dyspepsia when the skin is hot and dry.

Sinapis. White mustard seeds, in doses of two or three teaspoonfuls two

or three times a day, have been advised in some forms of dyspepsia.

**Sodii Bicarbonas*, in full doses (ʒij-ijj), combined with tincture of ginger (℥xxx) and aromatic spirits of ammonia (℥ʒss-j), is very useful in dyspeptic attacks attended with colic and gastric irritability, especially when consequent on the ingestion of unwholesome food. Dr. AITKEN combines it with nitrate of potash when there is excessive acidity and heartburn.

Sodii Hyposulphis is praised by Sir W. JENNER and Dr. W. BRINTON in flatulent dyspepsia. In doses of gr.x-xv, in infusion of quassa, it has proved successful in *sarcina ventriculi*.

**Strychnia* or *Nux Vomica* is useful in chronic dyspepsia in preventing distention by flatus. It is also serviceable in *pyrosis* and *heartburn*.

Tannic Acid, which may advantageously be combined with dilute nitric acid, is often very serviceable in dyspepsia, the symptoms disappearing under its use, the appetite improving, and the bowels, far from being constipated, often becoming more free.

Taraxacum is much used where the liver is implicated, and in the indigestion of gouty subjects. The following formula may be employed :

781.	R.	Extracti taraxaci, Potassii nitratis, Spiritus ætheris nitrosi, Infusi auranti,	ʒij ʒss ℥ʒj ℥ʒvj.	M.
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Take two tablespoonfuls thrice daily,

Zinci Sulphas is recommended by Dr. GOLDING BIRD in dyspepsia associated with irritability of the nervous system.

Zinci Oxidum has, according to Dr. WILSON FOX, the advantage over the sulphate in irritable conditions of the nervous system associated with dyspepsia, when given at bedtime, in doses of gr.ij-ijj, for procuring sleep.

Electricity. In cases of nervous dyspepsia, or where dyspepsia is one of the prominent symptoms of nervous disease, as hysteria, neurasthenia, neuralgia or paralysis, the prognosis under electrical treatment is exceedingly favorable. Not only are the purely dyspeptic symptoms relieved, but there is great improvement in sleep, appetite and general strength. In all such cases the faradic current is preferable to the galvanic. Drs. BEARD and ROCKWELL remark on this subject: "It may be safely said that we know of no treatment more sure to relieve the leading and concomitant phenomena of dyspepsia than general faradization and central galvanization."

GASTRALGIA.

PROF. F. NIEMEYER.

782. R. Tincturw nucis vomicw,
Tincturw castorei, ℥ss f.ʒj. M.
Twelve drops during the attack of gastralgia, in a small cupful of infusion of valerian. Warm applications to the epigastrium.

DR. GALLARD, PARIS.

783. R. Morphix muriatis, gr.iss
Aquæ lauro-cerasi, f.ʒiss. M.
One drop on a piece of sugar, immediately after each meal, to persons affected with gastralgia.

784. R. Tincturæ aconiti, ℥xl
Sodii carbonatis, Div
Magnesii sulphatis, ʒiss
Aquæ, f.ʒv. M.
A tablespoonful to relieve the pains of gastralgia.

785. R. Extracti belladonnæ, gr.vij
Quinix sulphatis, ʒj. M.
Divide into thirty pills. One thrice daily, in the treatment of gastralgia.

DR. MILLET, FRANCE.

786. R. Bismuthi subnitratiss, ʒiss
Morphix muriatis, gr.ij
Rhei pulveris, Div
Syrupi, q. s. M.
Divide into thirty pills. One morning and evening, an hour before meals, to persons suffering from painful digestion.

787. R. Aluminii et potassii sulphatis, ʒj
Extracti opii, gr.iiij
Confectionis rosæ, ʒij. M.
Divide into forty pills. From four to six a day, in painful digestion.

788. R. Extracti belladonnæ, gr.v
Quinix sulphatis, gr.xxx
Extracti valerianæ, q. s. M.
Divide into fifteen pills. One thrice daily, in gastralgia.

789. R. Extracti hyoscyami, Div
Argenti nitratiss, gr.vj
Bismuthi subnitratiss, gr.xxx. M.
Divide into forty pills. One morning and evening, in the variety of gastralgia which intervenes frequently during the course of chronic gastritis. Counter-irritation to the epigastrium.

DR. CALVO, FRANCE.

790. R. Morphie muriatis, gr. j
 Bismuthi subnitratiss, gr. xij
 Crete preparata, gr. vij
 Tragacanthæ, q. s. M.
 Divide into ten pills. One an hour before each of the principal meals.
791. R. Bismuthi subnitratiss, ℥ij
 Magnesie, ℥iv
 Opii pulveris, ℥ij
 Ipecacuanhe pulveris, āā gr. vj. M.
 Divide into twenty powders. From one to three a day, an hour before meals.

RÉSUMÉ OF REMEDIES.

- **Argenti Nitras*, in doses of gr. $\frac{1}{2}$ -ss twice or thrice daily, in combination with taraxacum, is particularly useful in those cases which present a combination of nervous irritability with chronic or passive congestion of the stomach.
- Argenti Oxidum* is recommended by Dr. GOLDING BIRD as possessing all the good qualities of the nitrate without its inconvenience.
- Bismuthi Subcarbonas*. This salt, as well as the subnitrate of bismuth, is useful in those cases attended with laborious digestion, putrid or acid eructations, and a tendency to diarrhœa and spasmodic vomiting.
- **Hydrocyanicum Acidum Dilutum* is a highly useful remedy, which may be given in combination with bismuth.
- **Pepsine* sometimes affords relief in the severest cases of **gastralgia**.

GASTRITIS.

DR. A. L. COX, OF NEW YORK.

792. R. Nucis vomice pulveris, ℥ss
 Argenti oxidi, gr. xv
 Extracti gentianæ, ℥iiss. M.
 Divide into forty pills. One thrice daily in chronic gastritis.
793. R. Bismuthi subnitratiss, ℥j
 Calumbæ pulveris, ℥iij
 Acaciæ, ℥ij. M.
 Divide into twenty lobules. One thrice daily in chronic gastritis.
794. R. Magnesie, gr. vij
 Sodæ bicarbonatis, āā gr. iv. M.
 Canellæ pulveris, āā
 Divide into six powders, of which give one several times a day to children, where dejections are green and acid.

J. M. DA COSTA, M. D., PHILADELPHIA.

795. R. Bismuthi subnitrat̄is, gr. x-xxx
Sodæ bicarbonatis, gr. x. M.
For one powder, to be taken after meals, when there is acidity.
796. R. Bismuthi subnitrat̄is, ʒss
Acidi hydrocyanici diluti, ℥xxiv
Misturæ acaciæ, f.ʒiij. M.
A teaspoonful after meals.

When there is pyrosis, the following is useful :

797. R. Olei succini rectificatæ, f.ʒss
Misturæ acaciæ, f.ʒijss. M.
Teaspoonful after meals.

RÉSUMÉ OF REMEDIES.

**Argenti Nitras* is one of the most effectual remedies in chronic gastritis. The injection into the stomach of the crystallized nitrate, dissolved in distilled water, has been advised.

Bismuthi Subnitras is especially useful in the milder forms of gastric inflammation.

Hydrargyrum. Mercurial purgatives are excellent remedies in acute gastritis. Three to four grains of calomel, followed by castor oil or a saline, may be given to an adult, vigorous patient. Blue pill, with a little colocynth and ipecacuanha, followed by seidlitz powder, may be given when active effects are undesirable.

**Hydrocyanicum Acidum Dilutum* is often serviceable in subacute gastritis, given in an ordinary effervescing draught. Prof. DA COSTA sometimes combines it with bismuth.

Morphia is a valuable palliative in chronic gastritis, though generally considered inferior to hydrocyanic acid. Drs. BARDSLEY and STOKES advise it in doses of gr. $\frac{1}{2}$, twice the first day, three times the second, and so increasing the quantity until the patient takes one to one and a half grains in the twenty-four hours. When there was an abundant secretion of mucus, it was found particularly serviceable.

Opium is recommended by Dr. WILSON FOX in subacute inflammation of the stomach, when great nervous irritability and atony co-exist, in which cases it may often be combined with nitrate of silver.

Turpentine, applied hot in stupes, is of great benefit.

Veratrum Viride has been praised by some practitioners.

Ice is an invaluable remedy in acute gastritis; indeed, often worth more than all other means combined. Small pieces may be taken and swallowed whole, and this repeated every few minutes during the day.

GASTRIC ULCER.

PROF. H. ZIEMSEN, OF ERLANGEN.

This writer (*Medicinische Central Zeitung*, April, 1872,) recommends the use of alkalies, especially Carlsbad water, continued several months. Most vegetable, and fatty, and saccharine matters are injurious. A *milk diet* has proved of benefit in numerous instances; but veal, chicken, ham, white bread and light claret are harmless. Morphia, hypodermically, must be employed to combat the cramps in the stomach.

As regards the consequences of gastric ulcer, especially of stricture of the orifices, the indications are, return of the gastric catarrh, retention of the contents of the stomach with acid fermentation, vomiting after meals, constipation, sinking of the hypogastrium, dilatation of the stomach, which is capable of physical proof, etc. These symptoms require the due application of sounds and of the stomach pump. The so-called system of dry diet may be adopted with advantage for the obstinate constipation so commonly remaining, even for years, as the consequence of gastric ulcers. M. ZIEMSEN recommends the use of rhubarb before going to bed, to which, if any pain follows its employment, or if great atony exists, he adds a tenth of a grain of extract of belladonna, or of the extract of *nux vomica*.

J. M. DA COSTA, M. D., PHILADELPHIA.

798. R.	Argenti nitratis,	gr.v	
	Extracti opii,	gr.x.	M.

For twenty pills. One thrice daily.

The following is an excellent combination for the pain and vomiting, when opium is inadmissible:

799. R.	Bismuthi subnitratis,	ʒij	
	Acidi hydrocyanici diluti,	f.ʒss	
	Mucilag. acaciæ,		
	Aquæ menthæ piperitæ,	ʒiij.	M.

A tablespoonful thrice daily.

DR. FENWICK, LONDON.*

This author states that in ulcer of the stomach, whenever the pain is very severe and is attended by frequent vomiting, we may

**Diseases of the Stomach and Duodenum*, London, 1868.

be sure that inflammation is going on, and the case must be treated as one of subacute gastritis. Perfect rest should be enjoined. A few leeches to the epigastrium are sometimes required; but, generally, the use of poultices, turpentine fomentations, or dry cupping, is alone necessary.

The main point in the treatment is the regulation of the diet. Usually, small quantities of farinaceous food may be given at frequent intervals. Arrow-root, milk, and gruel, agree best. The frequent use of ice often relieves the pain, and obviates the necessity of larger quantities of liquids. Sometimes, as when dangerous hæmatemesis has previously followed a severe attack of pain, the patient ought to be supported by an enema.

For the more acute stages of the complaint, *morphia* and *hydrocyanic acid*, combined with small doses of nitrate of potass—or, if there be much acidity, with magnesia or soda—are the best medicines.

As the pain lessens and the vomiting becomes more rare, the patient may be allowed to take a little exercise. Rather more liberal quantities of food may be given, but of a liquid nature. Blisters to the epigastrium generally alleviate the sufferings, and the raw surface may be dressed with *morphia*. When the pain is moderate, bismuth with magnesia and *morphia*, and lime-water with milk, are beneficial. As the case improves, tonics may be given. If the urine deposits phosphates, the mineral acids, with calumba, may be prescribed. Later, *iron*—the citrate or the reduced, and afterwards the sulphate—may be given. Dr. FENWICK has often prescribed the *nitrate* or *oxide* of *sinc*, and the salts of copper or zinc, with very good results. During convalescence a little brandy or pale sherry may be given. In very obstinate cases residence abroad sometimes affords relief.

M. SIREDEY, PARIS.

This author recommends that all alcoholic liquids be abstained from, and, if the case is severe, liquids of all kinds. Thirst may be assuaged by swallowing small pieces of ice. Raw meat mixed with wine of pepsin can be taken when other food is not well borne. When bread is vomited, disastase, gr. x, may be given with it. The extract of malt is often found to be a valuable form of nourishment. When milk is used, it is best given in small quantities, diluted with Vichy or other mild alkaline water. A rigorous milk diet is often sufficient of itself in uncomplicated cases.

RÉSUMÉ OF REMEDIES.

Argenti Nitras, though generally considered of value in ulcer of the stomach, is believed by Dr. W. BRINTON to be, as generally prescribed, absolutely inert, so far as the gastric ulcer is concerned. He prefers bismuth. Professor DA COSTA sometimes prescribes the nitrate with opium.

Arsenic is recommended by Dr. RINGER, who gives one to two minims of Fowler's solution before each meal.

**Bismuthi Subnitratis* is highly spoken of by Dr. W. BRINTON, who gives gr. x-xx every six or eight hours, either alone or combined with gr. v-x of pulvis kino compositus. It relieves pain and vomiting, as well as diarrhoea, when present.

Calumba, in infusion, combined with iodide of potassium and bicarbonate of potash, is recommended by Dr. W. BRINTON for the relief of vomiting, painful nausea, and flatulence of ulcer of the stomach.

Cannabis, in extract, often answers admirably as a sedative, and would replace opium entirely were its effects more uniform.

**Opium* is highly recommended by Dr. W. BRINTON in ulcer of the stomach. In his opinion, its efficacy in this affection is not due to its sedative or anodyne properties, but rather to its supporting the strength, buoying up the nervous system, and checking the waste or expenditure of the tissues generally. When vomiting is moderate, or where diarrhoea is prominent, pulvis kino compositus is a convenient formula. But when vomiting is excessive, and resists a combination of this powder with bismuth, opium is best borne in a solid form. Thus given, its effects are often very striking. Large and frequently-repeated doses are of great service in perforating ulcer of the stomach.

Plumbi Acetas often allays the severity of the symptoms.

Ricini Oleum, in a moderate dose, may often be given in the ordinary way without increasing the pain or vomiting. When the latter is frequent, however, the oil is best given in enema.

**Turpentine* stupes often relieve the pain. When, however, the strength is exhausted by constant vomiting, *dry cupping* is preferred by Dr. W. BRINTON, as a more effectual means of relieving the pain. In comparatively recent cases in the young and well-nourished, *blisters* are to be preferred.

**Enemata*. Life may be prolonged, and even in some cases preserved, in those ulcerous conditions of the stomach in which it is unadvisable or impossible to give food by the mouth, by the persevering use of enemata of beef-tea, milk, raw eggs, cod-liver oil, wine, and, in extreme cases, even diluted brandy or opium. The quantity of each should be as small as possible, and should rarely be repeated in less than three or four hours.

**Ice*, in small lumps and raspings, greatly relieves the pain and vomiting.

Leeches to the epigastrium often relieve the pain, but their use is of doubtful propriety in the weak and cachectic.

HÆMATEMESIS.

DR. JACCOUD, PARIS.

There is no better treatment than that by ice, internally and externally. The mineral acids or alum may be given, but their efficiency is neither as rapid nor certain as that obtained from ice. Dry cups on the limbs and trunk are useful when the hemorrhage is copious.

FREDERICK T. ROBERTS, M. D., M. R. C. P., LONDON.

The judicious rules laid down by this author, in his treatise on *Practice*, are: bodily rest, and nutrition by enema, if the case is severe; small lumps of ice should be swallowed at intervals, and a light ice poultice to the epigastrium, followed by sinapisms if the vomiting is violent. It is of the utmost importance to check the emetic efforts, and if the means just mentioned are insufficient, recourse should be had to a few drops of dilute hydrocyanic acid in cold mucilage; morphia internally or by subcutaneous injection; or an enema containing tincture of opium. Should there be signs of sinking, stimulants are called for, and should be given by enema. The most efficient medicines are gallic acid or acetate of lead, in full doses, combined with opium; or oil of turpentine.

RÉSUMÉ OF REMEDIES.

Alum, in doses of gr. viij-xij, in combination with opium, thrice daily, is useful, though inferior to sugar of lead.

Ammonii Chloridum is sometimes employed with advantage.

Argenti Oxidum, in doses of gr. ss-j, thrice daily, is highly recommended by Sir J. EYRE.

* *Ergotine* has been successfully employed by Mr. CHARLES STEWART (Edinburgh *Medical Journal*, December, 1871), in hypodermic injections of gr. iij.

* *Ferri Nitratis Liquor*, in large doses, is very efficacious.

* *Gallicum Acidum*. Dr. W. BRINTON recommends the following formula:

800.	℞.	Acidi gallici,	ʒij	
		Acidi sulphurici diluti,	ʒxl	
		Aquæ,	f.ʒij.	M.

Dose—A tablespoonful in a little water.

* *Ipecacuanha* often appears to exercise a powerful influence. It should be given in the manner recommended in hæmoptysis.

Magnesia Sulphas. Dr. BARLOW considers that in hæmatemesis and melæna it is advisable to clear out the bowels before resorting to astringents. For this purpose he employs the following formula :

8oz.	℞.	Magnesiæ sulphatis,	ʒj-ij	
		Acidi sulphurici diluti,	℥x	
		Aluminis,	gr.x	
		Syrupi papaveris,	f.ʒss	
		Infusi rosæ compositi,	f.ʒxj.	M.

Make a drink. Take every four hours.

Matico has been advised.

**Plumbi Acetas* in doses of gr. ij-ijj, combined with acetate of morphia gr. $\frac{1}{4}$ -ss, is very useful in controlling hæmorrhage from the stomach, whether idiopathic or from ulceration. The auxiliaries are the external application of cold, acidulated drinks, perfect rest, and antiphlogistic diet.

**Sulphuricum Acidum Dilutum*, alone or combined with gallic acid, is a very efficient remedy.

Tannicum Acidum, in doses of gr. iii-vj, three or four times a day, is a useful astringent and tonic, only contra-indicated by the presence of inflammatory symptoms.

Turpentine deserves a trial after the failure of less nauseous remedies.

**Ice*, in lumps, coming in contact with the bleeding vessels, acts as a powerful astringent.

HEPATITIS.

PROF. W. C. MACLEAN, M. D., LONDON.

This distinguished surgeon strongly opposes the usual treatment of acute hepatitis by venesection, mercurials and purgatives, and recommends in place of it *ipecacuanha*, in large doses, gr. xx-xxx, repeated every few hours until the symptoms subside :

8oz.	℞.	Pulveris ipecacuanhæ,	ʒj	
		Mucilaginis acaciæ,	q. s.	M.

Make four pills. The whole to be taken every sixth hour, day and night.

Dr. ALFRED A. WOODHULL, U. S. A., has recently published some cases corroborating the value of this treatment. Dr. MACLEAN considers *ipecacuanha* in hepatitis almost as valuable as in dysentery.

DR. WILLIAM AITKEN.

In acute parenchymatous inflammation of the liver, this writer prescribes antimonii et potassæ tartras, gr. $\frac{1}{8}$ — $\frac{1}{4}$ every two or three hours, providing it can be given within the first three days, when there is much vascular excitement and a full-bounding unyielding pulse, with a dry hot skin and scanty urine. General blood-letting may be adopted if there be evidence of obstruction to venous blood-flow through the right side of the heart. Local depletion by leeches over the liver and also round the anus must be at once resorted to, followed by fomentations and linseed-meal poultices, with or without mustard or laudanum, over the hepatic region. Saline purgation and alkalies, with or without colchicum, are also to be freely administered. Hot turpentine epithems are most beneficial.

In the chronic form, iodide of potassium with taraxacum is of great service. Alcoholic stimulants and fermented drinks must be absolutely forbidden, and the diet restricted to mild nutriment, such as milk, beef-tea, and farinaceous food generally.

J. M. DA COSTA, M. D., PHILADELPHIA.

In chronic hepatitis, a certain amount of drain should be kept up from the portal circulation. For this purpose, very small doses of *podophyllin*, *cream of tartar*, or *Rochelle salts*, now one and now another, are useful. A very good pill is the following:

803. ℞.	Podophyllin,	gr.vj	
	Capsici,	gr.iv	
	Pulveris rhei,	gr.xij.	M.

For twelve pills; one on alternate nights.

In order to reduce the state of induration or enlargement of the liver, the *mineral acids* may be employed. Or, when the case is not chronic, the salts of soda, as in the following formula:

804. ℞.	Sodæ bicarbonatis,	$\frac{3}{4}$ ss	
	Infusi gentianæ,	f.ʒvj.	M.

A tablespoonful three times a day, after or between meals.

Should this fail, employ *nitro-muriatic acid baths*. *Sulphur baths* are of advantage; or those of *sulphuret of potassium*; or the use of *sulphur ointment*, followed by warm baths.

SIR RANALD MARTIN, LONDON.

Nitro-muriaticum acidum is employed, both externally and inter-

nally, with great advantage in chronic hepatitis, and in the advanced stages of acute hepatitis and congestion of the liver. It is most serviceable in the form of a *bath*, for which the following directions are given (*Lancet*, December 9th, 1865,) by Sir RANALD MARTIN: 1. The proportions of acid are given by the following formula:

805.	℞.	Acidi muriatici,	f.ʒiij	
		Acidi nitrici,	f.ʒij	
		Aquæ,	f.ʒv.	M.

2. Two gallons of water (about ten bottles) may suffice for a bath. 3. To each gallon of water, add f.ʒiij of the above acid mixture. 4. The bath thus prepared will keep in use for three days, by adding f.ʒss of the acid mixture and Oj of water, morning and evening, to make up for the waste by evaporation. 5. A portion only of the bath to be heated for use, after which it is to be added to the remainder, so as to make the whole of a comfortable warmth (96°-98°). 6. Let both feet be placed in the bath, while the inside of the legs and thighs, the right side (over the liver), and inside of both arms, are sponged alternately. This should be continued for ten or fifteen minutes, morning and evening. 7. While using the bath, a gentle aperient should be taken every morning. 8. Earthenware or wooden vessels should be preferred for foot-baths, and all the sponges and towels should be kept in cold water, as the acid corrodes them. 9. In urgent cases, a general bath, to envelop the whole body, may be used. 10. If the acid bath create much irritation of the skin, the quantity of the acid may be diminished. 11. The influence of the acid is not in the least degree counteracted by opium, even when exhibited in the largest doses.

RÉSUMÉ OF REMEDIES.

Colchicum is advised by Dr. COPLAND, to increase the biliary secretion in chronic inflammation or enlargement of the liver, and to promote the resolution of the former and the diminution of the latter state.

Hydrargyri Bromidum has been administered with relief in chronic hepatitis with enlargement.

Hydrargyri Iodidum Rubrum, in ointment, is recommended by Dr. W. C. MACLEAN in malarial enlargements of the liver and spleen, to be rubbed in for ten minutes in the morning, and the patient exposed to the powerful heat of a fire as long as he can endure it.

Hydrargyri Chloridum Mite. Mercury is much less employed than

formerly in chronic hepatic affections, it having been superseded by nitro-muriatic acid and iodide of potassium.

Iodine and its preparations are beneficial in chronic hepatic affections, but their indiscriminate use is to be avoided.

Nitricum Acidum, with sarsaparilla or taraxacum, is often productive of good in chronic hepatitis, especially of old persons, where mercurials have been largely used. Nitro-muriatic fomentations and baths may be employed at the same time.

**Potassii Iodidum*, combined with taraxacum, is of value in chronic inflammation and enlargement of the liver. Dr. COPLAND has found that it is chiefly when enlargement, obstruction or torpor of the liver occurs after periodic fevers, or in the scrofulous diathesis, that iodide of potassium, employed internally or externally, or both, and in conjunction with other deobstruents, as liquor potassæ, or alternated with purgatives, is of most benefit.

**Taraxacum* is an efficient remedy in chronic inflammation of the liver; where mercury is advisable, rendering it more efficient, and under certain circumstances taking its place advantageously. Sir RANALD MARTIN has found in indolent enlargements of the liver, accompanied with torpid action of the viscus, that mercury is of little service, and that he has derived more advantage from the following formula, conjoined with a spare diet and the external application of cantharides:

8o6.	℞.	Extracti taraxaci,	gr. xxxvj	
		Extracti aloës,	gr. xij	
		Extracti acetici colchici,		
		Pulveris ipecacuanhæ,	āā	gr. vj. M.

Make twelve pills. Take two every night.

INTESTINAL WORMS.

(TÆNIA—TAPE WORMS.)

The varieties of tape worms are often so difficult to dislodge, that the therapeutic resources of the physician are severely tasked. The principal remedies are mentioned below.

PROFESSOR ARNOLD HELLER, OF KIEL.

Before commencing treatment the intestinal tract should be cleared out by mild laxatives and enemata for two days. The diet should be limited and concentrated. As onions and salt herrings are unpleasant to the worm, the patient may partake freely of these. On the morning of the third day he should take ℥v of *koosso*, and two hours after this an ounce of castor oil. Instead of

the bulky kousso itself, its alkaloid *koosin* may be used; of this a dose is gr. xxx.

DR. CARRE, OF FRANCE.

807. ℞.	Pulv. kousso,	℥vij
	Olei ricini (hot),	℥iss.
Strain and	pour on the residuum,	
	Aquæ bullientis,	℥iss.

Filter and combine the two percolates by means of yolk of egg in an emulsion, and add gtt. xl. ether sulphuric. Sweeten and aromatize. For one dose.

DR. TILLESEN, OF GREIFSWALD.

This writer (in the *Deutsche Medicinische Wochenschrift*, Nos. 46 and 47, 1876,) speaks of the method of treating tænia in the Greifswald medical clinic. It consists essentially in clearing out the intestine with castor-oil and enemata, followed by the exhibition of liquids containing substances supposed to be distasteful to the parasite, such as herring brine, and so forth. In addition, a considerable amount of water is given, which is supposed to distend the tænia and separate it from the intestinal wall. The increased weight of the parasite, together with the peristaltic action of the intestine, suffices to remove the worm. Several cases are reported, and in each the head was brought away.

PROFESSOR MOSLER.

The chief characteristic of this practitioner's treatment is the injection of large quantities of warm water into the colon, after the administration of the anthelmintic. The diet is first regulated, food being given which is supposed to be distasteful to the tapeworm—bilberry tea, herrings, sour cucumber, salted meats. The intestine having been, as far as possible, emptied by laxatives, a dose of the extract of pomegranate bark is administered, prepared from the fresh bark, and then a large quantity of warm water is injected into the rectum. The theory is that the worm, previously brought down into the colon, is prevented by the water from attaching itself to the wall, and is brought away by the liquid on its escape. It is asserted that in every case in which this treatment was adopted the head of the worm was removed.

DR. M'PHAIL, OF VA.

After keeping the patient on a light diet for the preceding twenty-four hours, give from ℥ss to ℥j of the oil of male fern in ℥ij of thin mucilage, and ten minutes afterwards, a goblet of sweet milk. Two hours after the above dose give ℥j castor oil, combined in mucilage, with ℥j to ℥iv of spts. turpentine. This always does the work, and with remarkably little discomfort to the patient. (*Virginia Medical Monthly*, 1876.)

SIR THOMAS WATSON, M. D.

This eminent physician gives the preference to *oil of turpentine* in large doses—℥℥ss-ij, in combination with castor-oil; or castor-oil may be administered afterwards, to assist its purgative effect. The patient should take it in the morning fasting, and no drink should be admitted into the stomach until the medicine begins to operate, lest sickness and vomiting should be provoked. The worm generally is voided dead within an hour or two. The bowels should be kept open with castor-oil, so long as the urine retains the violet smell which indicates the presence of the turpentine in the circulation.

MR. A. J. SCHAFIRT, WASHINGTON, D. C.

In a number of cases this pharmacist employed no preliminary provisions beyond forbidding the patient to breakfast the day of treatment and giving him a full dose of Rochelle salts the preceding night. At ten o'clock in the morning following, was taken at one dose:

808. R.	Granati radice,	℥ss	
	Peponis seminum,	℥j	
	Extract. filicis ether.,	℥℥j	
	Pulv. ergotæ,	℥ss	
	Pulv. acaciæ,	℥ij	
	Olei tiglij,	gtt.ij.	M.

The pomegranate-bark and pumpkin-seed were thoroughly bruised, and, with the ergot, boiled in eight ounces of water for fifteen minutes, then strained through a coarse cloth. The Croton oil was first well-rubbed up with the acacia and extract of male fern, and then formed into an emulsion with the decoction. In each case, the worm was expelled alive and entire within two hours. No unpleasant effects followed. In each case, the worm was passed with the head firmly fastened to the side of its body at

about the widest part, from which it was with difficulty removed ; and the worm was twisted and doubled into various knots.

DR. WILLIAM BRINTON, LONDON.

809. R.	Ext. ether. filicis maris,	f.ʒiiss	
	Pulv. kameelæ,	ʒij	
	Mucilag. acaciæ,		
	Syrupi simplicis,	q. s.	
	Aquæ cinnamomi,	ad. f.ʒiij.	M.

Half to be taken at bedtime and half at 2 A. M. He believes this superior to all other combinations for the ejection of tenia.

RÉSUMÉ OF REMEDIES.

Ailanthus Glandulosa. The powdered bark, gr.vij-xx, is an active anthelmintic in tape-worm.

Alumen, given in milk, is a remedy of some avail.

Benzine has been tried with success by Dr. MOSLER and other German physicians. Dose, 60 to 100 drops in capsules. The after effects are sometimes unpleasant.

Carbolicum Acidum has been used by Dr. RUMBOLD, of St. Louis.

810. R.	Acidi carbolicæ,	gr.xx
	Aquæ destillatæ,	f.ʒviij.

One-third every two hours.

Others have not found the worm affected by this agent.

Creasotum. This is recommended by Dr. HENRY BRICKWELL, of England, in doses of gtt.j-ij, three times a day for a week, followed by a brisk purge.

Eupatorium Perfoliatum. The decoction of this plant is reported by Dr. H. S. WILKINS (*Medical and Surgical Reporter*, April, 1874.) to have expelled promptly a tape worm.

Ether Sulphuricus. Dr LORTET in 1867 suggested ether, f.ʒv at a dose, followed in two hours by olei ricini, f.ʒj. He, and various observers since, report successful cases.

Filix Mas. An old and esteemed remedy. The fresh root must be used.

811. R.	Extr. filicis maris æth.,	
	Pulv. rad. filicis,	āā gr.xxx.

Make 30 pills. Take ten at night, ten the next morning, and an hour after, the remainder. (KRAUS.)

TROUSSEAU'S method was to place the patient on a milk diet for a day; the next morning he prescribed ʒj of the oleo-resin in four equal doses a quarter of an hour apart; the third day the same quantity, followed by a brisk purgative.

Granati Radicis Cortex. The pomegranate enjoys a wide recognition against tape worm.

812. R. Granati rad. cort., ξiij
 Sodæ bicarb., $\mathfrak{z}j$
 Aquæ, \mathfrak{Oj} . M.
 Macerate six hours, and boil to Oss.

Take in the morning, fasting, in three equal doses, following the last with olei ricini, $\mathfrak{z}j$. Or,

813. R. Extr. granati rad. cort., $\mathfrak{z}v$
 Extr. fil. maris æther, $\mathfrak{z}ij$. M.
 Make 30 capsules. Take them within two hours.

The bark of the pomegranate root is objectionable on account of the abdominal pain it causes in many persons.

Kameela. This product of the *Rottlera tinctoria* is used in doses $\mathfrak{z}j$ - ijj . It is an effective remedy, but liable to gripe.

Kouso (*Brayera anthelmintica*). The reputation first enjoyed by this tæniacuge has somewhat diminished of late. It is disagreeable to take, and produces much intestinal distress. The dose is about $\mathfrak{z}ss$. According to Dr. ALOIS MONTI, of Vienna, the compressed pastilles of kouso flowers, from Erlangen, are unsurpassed in usefulness. He has found no difficulty in their employment; and ten grammes he thinks infallible. The alkaloid *koossine*, if quite pure, is more convenient, because the dose required is smaller; two grammes to five grammes, according to the age of the child, are sufficient. With these two, there is no need for any preparatory treatment; and if the head of the tænia does not come away the first time, they may be repeated the next day. Children take them as if they were sugar-plums, and they do not cause nausea or vomiting, nor are they followed by persistent diarrhœa.

Nux Vomica and its alkaloid *Strychnia* has been reported upon favorably, both in Europe and America. Dr. A. R. KILPATRICK, of Texas, uses the following:

814. R. Strychniæ sulphatis,
 Arsenici,
 Hydrarg. chlor. corrosiv., $\bar{a}\bar{a}$ gr. $\frac{1}{12}$. M.
 For one pill. One three times a day.

Dr. MASSE publishes in the *Montpellier Medical*, 1877, some observations on a case in which he procured the expulsion of three tape worms by the administration of the tincture of nux vomica.

Peponis Semina, pumpkin seeds, are unquestionably both a powerful and a pleasant remedy in tape worm. From two to four ounces of seeds should be pounded in a mortar, then mixed with milk or water, strained, and the fluid taken on an empty stomach. If the bowels do not act in a few hours, castor oil should be given. The dose should be repeated daily until the worm is expelled.

Potassæ Picronitras. This has been recommended by some German physicians.

815. ℞. Potassæ picronitratis, gr.xxviiij
 Pulv. jalapæ, ʒix
 Extr. glycyrrhizæ, q. s. M.
 Make 30 pills. One three times a day.

It is efficient, but apt to be followed by general malaise.

Saoria, the ripe fruit of the *mæsa picta*, an Abyssinian tree, has long enjoyed a good reputation as a tænicide. The dose is ʒss-j; as

816. ℞. Saoriæ, ʒj
 Zingiberis, ʒij
 Cassiæ, gr.xv
 Aquæ, Oj. M.

Strychnia. See *Nux Vomica*.

Terebinthinæ Oleum. Recommended by Dr. WATSON (see above) in large doses. Others prefer ʒss twice a day, continued for some time. Sometimes it is combined with castor oil.

817. ℞. Olei terebinth., āā f.ʒss
 Olei ricini, āā f.ʒss
 Mucilag. acaciæ, q. s.
 Make an emulsion. For one dose, fasting.

ASCARIS LUMBRICOIDES—LUMBRICI—ROUND WORMS.

DRS. MEIGS AND PEPPER, PHILADELPHIA.

These writers consider that as the diagnosis of lumbrici is nearly always doubtful, it is best never to risk the irritating vermifuges unless worms have actually been passed. In slight and doubtful cases they prefer small quantities of *worm-seed oil* to anything else. It may be given in doses of gtt. iv to children of two years, three times a day for three days, followed on the fourth day by some castor oil or syrup of rhubarb. The following is a good formula to disguise its taste:

818. ℞. Olei chenopodii, gtt.lx-f.ʒj
 Mucilag. acaciæ, ʒij
 Syrupi simplicis, f.ʒj
 Aquæ cinnamomi, f.ʒij. M.

Give a dessertspoonful three times a day for three days, and repeat after several days.

In giving the *pink root* it is best to combine it with some cathartic substances, as in the following formula of Dr. G. B. WOOD:

819. ℞. Spigeliæ,
 Sennæ, ℞℞ ℥ss
 Magnesiæ sulph., ℥ij
 Fœniculi, ℥j
 Aquæ ferventis, Oj. M.

Macerate for two hours in a covered vessel. Dose—A tablespoonful to a child two years old once or twice a day, or every other day, so as to procure two or three evacuations in the twenty-four hours.

The *fluid extract of spigelia and senna* is also a very acceptable combination.

PROF. J. LEWIS SMITH, M. D., OF NEW YORK.

The long-popular American remedy for worms is the pink root, *spigelia marilandica*:

820. ℞. Fluidi extracti spigeliæ, f.℥j
 Fluidi extracti sennæ, f.℥ss. M.
 One teaspoonful to a child of three to five years.

Or,

821. ℞. Fluidi extracti spigeliæ et sennæ, f.℥j
 Santonini, gr.viij. M.
 One teaspoonful to a child of five years.

“This is probably the best anthelmintic that can be employed for the destruction of the round worm in uncomplicated cases, and it is also very useful in treating the *ascaris vermicularis*.”

In some cases of protracted intestinal disease, attended by an increased and vitiated secretion, there is nothing so good as *turpentine*. The following is Dr. CONDIE's formula:

822. ℞. Mucilaginis acaciæ, f.℥ij
 Sacchari albi, ℥j
 Olei terebinthinæ,
 Spiritus ætheris nitrosi, ℞℞ f.℥iiij
 Magnesiæ, ℥j
 Aquæ menthæ, f.℥j. M.
 A teaspoonful to a child of five years.

DR. EUGENE BOUCHUT, PARIS.

823. ℞. Hydrargyri chloridi mitis, gr.ij
 Santonini, gr.iss
 Sacchari lacti, gr.xv. M.

To be given in one dose, as a vermifuge, in a teaspoonful of honey, to an infant two years old.

DR. GIORDANO, FLORENCE.

824. ℞. Sulphuris loti, ʒss
 Magnesiæ, ʒj. M.

Divide into four powders. One to be given morning and evening to children who have passed worms, in order to prevent their reproduction.

DR. G. CALDERWOOD, OF ENGLAND.

Of all remedies for lumbrici undoubtedly the best is *santonin*. In regard to its administration, this writer remarks (*British Medical Journal*, February, 1875), that it should always be given for three or four days continuously before a purgative is prescribed. To give it with, or only once before, a cathartic, does not accomplish the work completely. It acts toxically, and must have time to do its work. The worms are passed like other fecal matter, when dead; and so long as they are alive, no amount of purging will bring them all away.

DR. F. T. ROBERTS, OF ENGLAND.

This author prescribes an aperient, limits the diet to liquids for a day, and then employs santonin in doses of from one to three grains every morning for two or three days, in sugar or syrup, or made up into lozenges, or with gingerbread. It is more efficacious when mixed with castor-oil; and Kückenmeister advises that from two to four grains be dissolved in ʒj of the oil, and ʒj taken every hour until it acts. Troches of santonin, each containing half a grain of the principle, can now be obtained from all druggists.

DR. ROBERTS BARTHOLOW.

825. ℞. Olei chenopodii, gtt.x
 Fld. extract. spigel. et sennæ, f.ʒj. M.

For one dose. An excellent combination.

ASCARIS VERMICULARIS—OXYURIS—THREAD WORMS—SEAT WORMS.

DR. T. SPENCER COBBOLD, OF LONDON.

This helmenthologist calls attention to the true residence of the seat worm. (*British Medical Journal*, Feb., 1874.) He maintains that the entire length of the colon is the territory inhabited by the threadworm, the cæcum itself constituting the parasites' true headquarters. Knowing this, therefore, to be the case, and likewise understanding, as we now do, how these entozoa originally gain access to their human bearers, it is clear that we are in a position to treat the threadworm helminthiasis on thoroughly rational prin-

ciples. Injections cannot be conveniently employed to wash out the contents of the arch of the colon and cæcum, and therefore we must, in the main, rely upon the operation of medicines taken by the mouth. He therefore, employs injections only for the purpose of dislodging such oxyurides as have been driven down to the lower bowel.

When it comes to the question of the choice of drugs, a great variety of medicinal agents may be used with good effect. Some seem to answer better in particular cases than in others. Speaking generally, he gives a preference to active saline cathartics repeated for several days in succession, followed by the use of cold water enemata. Small doses of chloric ether and sulphate of iron are eminently serviceable additions, and the same may be said of aloes, with or without assafoetida. In cases where these drugs are objected to, he has employed various active mineral waters with good results. Bitters of all kinds are useful, and patients who object to salines will swallow any reasonable amount of the infusion of gentian and other pure vegetable tonics. As a rule, oxyurifuges should be administered in the form of copious draughts, and the oftener they are repeated, for a short interval, the more effective will they prove in the end. The rapid passage of the drugs through the bowel will, if several times repeated, carry most of the parasites sufficiently low down to be within reach of the clysters; and the prevention of the return of the parasites to the upper part of the colon is one of the practical points worth looking to. The employment, therefore, of enemata, after the exhibition of remedies by the mouth, cannot fail to prove beneficial.

MR. WILLIAM DATE, LONDON.

826. ℞. Infusi quassiae, Oj
Sodii chloridi, ℥ij. M.
Use as an injection once a day.

When this fails to dislodge them completely, give :

827. ℞. Ferri sulphatis,
Quiniæ sulphatis,
Pill. aloes cum myrrha,
Pill. galbani compos., āā gr. j.
One such pill thrice daily.

This treatment in a fortnight will completely destroy the parasites.

PROF. W. H. VAN BUREN, M. D., NEW YORK.

828.	℞.	Acidi carbolici,	gtt.x-xx	
		Glycerinæ,	ʒj	
		Potassæ chloratis,	ad. saturandum.	
		Aquæ,	f.ʒviij.	M.

Use as an enema in thread worms, *oxyuris vermicularis*.

It is sometimes necessary to increase the amount of carbolic acid.

DR. F. WEBB, OF MICHIGAN.

This practitioner has stated (*Michigan Medical Journal*, November, 1871,) that in cases of ascarides the *hyposulphite of soda*, in doses large enough to produce slight catharsis, given three times a day, has availed to expel ascarides when other vermifuges and various enemata have failed.

Along with whatever other treatment is used for thread worms, it is important to anoint, with mercurial or other parasiticide ointment, the anus and adjacent parts, from time to time, in order to destroy the ova of the worm, which are frequently deposited external to the rectum.

DR. GUICHON, PARIS.

829.	℞.	Santonini pulveris,	ʒj	
		Resinæ jalapæ,	gr.ij	
		Chocolate,	ʒj.	M.

Divide into thirty lozenges. Give one in the morning, on an empty stomach, to an infant two years old; two or three to older children.

830.	℞.	Aloës barbadensis,	ʒss	
		Potassii carbonatis,	gr.xv	
		Decocti amyli,	f.ʒx.	M.

To be given as an injection in ascarides of the rectum.

DR. WILLIAM AITKEN.

831.	℞.	Pulv. scammon. comp.,	gr.iv	
		Pulv. aromatici,	gr.v.	M.

For one dose at night.

The day after taking this purgative the patient ought to be kept on low diet, with solid food. On the day succeeding the purgative from five to ten grains of the ethereal extract of santonin, or from three to four grains of santonin itself, may be given. Injections of infusion of quassia, or of steel and quassia and aloes, or a solution of common salt in gruel, or a similar quantity of lime-water, are useful in the expulsion of the *ascaris vermicularis*. Half an ounce of the compound decoction of aloes, taken in the morning

fasting, once or twice a week, and three ounces of infusion of quassia, may be taken every morning that the aloes are not taken.

RÉSUMÉ OF REMEDIES.

Adeps. Anointing the anus and sphincter with lard destroys the ova, and is a useful adjuvant, as it is believed that the ova are only set free in the rectum near the anus.

Asarum Canadense. As an internal remedy the Canada snake-root has been found valuable by Dr. S. S. BOND, of Philadelphia (*Medical Times*, September, 1874), and others. It may be given in infusion, or syrup, or children may chew it as they would liquorice root.

Aqua Calcis in injections has been commended.

Argenti Nitras, gr. i-iiij to aquæ ʒj, as an enema.

Carbolicum Acidum is one of the most effectual remedies which can be employed. (F. 828.)

Ferri Chloridi Tinctura, ʒss to aquæ Oj, is said to be a very efficient enema.

Fuligo Ligni. An infusion of soot has been strongly recommended in *ascarides* by Dr. HEWSON, of Philadelphia. It is made by adding a cupful of soot to a pint of boiling water and straining. Half or a fourth of this quantity should be thrown up the rectum daily for one or two weeks.

Hydrargyri Chloridum Corrosivum, gr. j to aquæ Oj, has been used in obstinate cases by Dr. NIEMEYER.

Hydrargyri Chloridum Mite. M. VALLEIX was accustomed to anoint the anus and lower bowel with :

832.	R. Hydrarg. chlor. mitis,	ʒiv	
	Axungiaë,	ʒvj.	M.

Hydrargyri Unguentum. Anointing the anus and sphincter with mercurial ointment is very useful in destroying the worms there located and their ova. It may also be introduced on a bougie.

Potassii Sulphuretum, in the proportion of ʒss-j to aquæ Oj, is an efficient injection.

Santonin has been employed for the oxyuris, but does not seem to affect it materially.

Soda Hyposulphis is stated by Dr. F. WEBB to be a valuable agent in obstinate cases (p. 372).

Sodii Chloridum. Common salt, thrown up in strong solution, is a popular remedy, and will prove successful in mild cases. It may advantageously be combined with a bitter. (F. 826.)

Sulphur. A dose of sulphur taken every morning aids in dispelling the parasites.

Terebinthinae Oleum, ʒss to milk Oj, may be used as an enema. It is an excellent vermicide.

JAUNDICE.

ROBERTS BARTHOLOW, M. D., CINCINNATI.

Excellent results have been obtained by this practitioner in malarial and catarrhal jaundice by the use of manganese :

833. ℞. Chinoidin, ʒj
Manganesii sulphatis exsiccatae, ʒij. M.
For twenty pills. One three times a day, in malarial jaundice.

834. ℞. Fel bovini purificati, ʒj
Manganesii sulphatis exsiccatae, ʒij
Resinæ podophylli, gr.v. M.
For twenty pills. One three times a day, in catarrhal jaundice.

In similar cases he also finds the following of great use :

835. ℞. Quiniæ sulphatis, ʒij
Ferri sulphatis exsiccatae, ʒj
Acidi arseniosi, gr.j. M.
To make twenty pills. One thrice daily, in malarial jaundice.

PROF. WILLIAM PEPPER, M. D., PHILADELPHIA.

In simple jaundice—acute congestion of the liver—the indications are to check vomiting, to relieve the congestion, and to start the bile. To accomplish the first, give hydragogue cathartics, elaterium, bitartrate of potash, etc.; or, if the stomach is too irritable, administer an enema of croton oil, gtt. ij, in emulsion. The congestion of the stomach and liver can be relieved by counter-irritation, as by a large blister over the epigastrium. This is very effective to arrest the vomiting. By the mouth, give the following:

836. ℞. Hydrargyri chloridi mitis, gr.ijj
Pulveris opii, gr.ij
Bismuthi subnitratris, ʒijss. M.
Make six powders. One to be given every three hours.

This combination powerfully aids the mercurial in relieving the hepatic congestion, and stimulating the gastro-intestinal glands. The diet in such cases should be restricted to milk. (*Medical and Surgical Reporter*, November 27th, 1875.)

PROF. A. GUBLER, FACULTÉ DE MEDECINE, PARIS.

837. ℞. Aloës socotrinæ,
Gambogiæ,
Hydrargyri chloridi mitis, ʒss gr.xv
Syrupi, q. s. M.

Divide into ten pills. Order one or two a week, to keep the bowels soluble, in icteric disease of the liver.

MIDDLESEX HOSPITAL, LONDON.

838. R. Pilulæ hydrargyri, gr. xxx
 Digitalis pulveris,
 Scillæ pulveris, ʒss gr. v. M.

Divide into ten pills. One morning and evening, in icterus, to eliminate the coloring matter of the bile from the blood.

RÉSUMÉ OF REMEDIES.

Aloes has been used with benefit in jaundice.

Ammonii Chloridum, in doses of gr. xx every five hours, has, in the hands of Dr. ANSTIE, restored the biliary secretion, in a few doses, when it has been suppressed by a powerful nervous shock or mental perturbation. In his opinion, it is one of the most powerful of all biliary functional restoratives.

Benzoicum Acidum has recently attracted attention as a remedy in jaundice due to suppression of the biliary secretion.

Colchicum, in small doses, combined with mild mercurials, or soap, or alkalis, or with magnesia or the neutral salts, according to circumstances, has been prescribed by Dr. COPLAND with benefit. It must be continued for a considerable time, and carefully watched. If there be much debility, or if it produce depression, it should be combined with camphor.

Ether, from its power of dissolving cholesterine and its anti-spasmodic properties, has been recommended as an internal remedy in jaundice depending on the presence of gall-stones.

Hydrargyri Chloridum Mite. Jaundice sometimes yields rapidly to a calomel purgative (gr. v), followed by a saline, which, however, proves useless when the affection is connected with obstruction by gall-stones, or organic diseases of the liver.

Magnesii Sulphas. The following formula is sometimes useful in severe forms of jaundice :—

839. R. Magnesii sulphatis, ʒss-j
 Magnesii carbonatis, gr. xv
 Spiritus ammonii aromatici, ℥xxx
 Aquæ, f.ʒx. M.

Make a drink. Take thrice daily.

Nitro-muriaticum Acidum Dilutum is useful both internally, and externally in the form of a bath. It is contra-indicated if there be inflammatory action present.

**Podophyllin* is often a very reliable remedy in jaundice.

Potassii Chloras, combined with carbonate of soda, is useful in chronic or asthenic jaundice, accompanied by a torpid state of the liver.

Potassii Sulphas is recommended by Dr. A. T. THOMSON, as more useful than other saline purgatives in jaundice.

Sanguinaria, in the form of the powder (gr.ij-v), or the infusion, has been employed with advantage in jaundice and torpor of the liver.

Taraxacum, combined with small doses of colchicum, has been found serviceable in jaundice depending upon hepatic disease.

**Cathartics*. Dr. GROSS states that in jaundice depending upon hepatic derangement, after bilious evacuations have been produced, an active aperient, every second or third day, for the space of ten days or a fortnight, should never be omitted, so as to carry off the remains of the disease, and prevent a relapse. This is a simple but successful practice which should not be neglected.

TORPIDITY AND FUNCTIONAL DERANGEMENT OF THE LIVER.

CHARLES MURCHISON, M. D., LL.D., F. R. S., LONDON.

In the "Croonian Lectures" of 1874, this eminent authority discussed the functional derangements of the liver and their treatment. Commencing with *diet*, he recommends one chiefly of stale bread, plainly cooked mutton, white fish, poultry, game, eggs, a moderate amount of vegetables, and weak tea, cocoa, or coffee. In severe cases, potatoes, rice, sago and fruits have to be given up; milk suits some, not all. The principal meal should be in the morning, and the quantity not beyond the needs of the system. All alcoholic drinks should be prohibited. *Cholagogues*: great advantage is derived from aperient medicines; salines are the best, as sulphate of magnesia, sulphate of soda, tartrate of potash and soda, Friederichshall, Pullna, or other saline water; as to the benefit of mercury, our author says that the skepticism of the most doubting physician would be removed should he unfortunately find it necessary to test its efficacy in his own person. Calomel is the form he prefers. Podophyllin he regards as less certain in its action and more liable to cause griping. Colchicum is a useful adjunct to other aperients. *Taraxacum*, he thinks, has no specific action, but is useful as a mild aperient, and may be advantageously combined either with alkalies or mineral acids. *Alkalies*: these are next in importance. One grain of carbonate of lithia, or of carbonate of ammonia, nearly equals a grain and a half of carbonate of soda, or two grains of carbonate of potash. It is well to suspend their use occasionally,

as, when long continued, they derange gastric digestion. *Chloride of ammonium* has a great and well-deserved reputation in hepatic congestion and other functional derangements of the liver:

840. B.	Ammonii chloridi purificati,	℥ss	
	Aquæ menthæ piperitæ,	f.ʒiij.	M.

Dessertspoonful three times a day.

It may be combined with either alkalies or mineral acids. The last-mentioned remedies our author considers of minor value in these complaints. *Tonics* are apt to disagree in many cases of functional hepatic derangement. Neither iron nor quinine acts well. Gentian, chiretta, cascarilla, serpentaria and nux vomica are preferable to preparations of cinchona. *Arsenic* suits some patients. *Opium* is contra-indicated except in those functional hepatic troubles which arise in diabetes.

RÉSUMÉ OF REMEDIES.

Ammonii Chloridum is worthy of trial when there is want of biliary action.

Hydrargyri Pilulæ. Abenerthy's practice, in bilious derangements, of giving, almost indiscriminately, five grains of blue pill at night and a senna draught in the morning, is still continued by many practitioners.

* *Ipecacuanha*, in small and long-continued doses, is frequently productive of great benefit in functional derangement of the liver.

Iridin is a cholagogue aperient, gentler in its action than podophyllin. It is very useful in a sluggish state of the bowels arising from torpidity of the liver, or when the stools are pale, particularly in the intervals of overt attacks in gouty persons.

Leptandrin is useful in torpidity of the liver, in which case it is said to be a valuable adjunct to podophyllin and iridin.

Nitricum Acidum is especially valuable in cases of long standing hepatic congestion and torpidity, and where mercurials have been used to excess.

* *Podophyllin* is now much employed in torpor of the liver.

Sanguinaria has been used with evident advantage in torpidity of the liver, the powder (gr. ij-v) or infusion being preferred to the tincture.

Senna, in infusion (f.ʒj-ijj), either alone or combined with sulphate of magnesia (ʒij-iv), or tartrate of potash (ʒij-ʒij), is an efficient purgative in bilious derangements.

* *Taraxacum* is a valuable remedy in torpor of the liver.

Turkish Baths are sometimes of great advantage as excitants of the liver.

PYROSIS.

PROF. PIORRY, PARIS..

841. ℞. Sodii bicarbonatis, ʒiiss
 Aquæ destillatæ,
 Syrupi aurantii florum, ʒʒ f.ʒj
 Olei anisi, ʒʒ gtt.j. M.

For one dose, in pyrosis.

842. ℞. Quiniæ sulphatis, gr.xxij
 Pepsinæ, ʒvss
 Extracti absinthii, q. s. M.

Divide into forty pills. Two before each meal, in functional derangements of the stomach, particularly pyrosis, flatulence and gastralgia after eating.

843. ℞. Sodii bicarbonatis, gr.xiv
 Tincturæ columbæ, f.ʒj
 Aquæ destillatæ, f.ʒiij
 Syrupi gentianæ, f.ʒj. M.

To be taken during the day, in the same manner as the above formula.

844. ℞. Magnesiæ, ʒss
 Sodii carbonatis, ʒj
 Cretæ præparatæ, ʒiv
 Sacchari, ʒijss. M.

Divide into ten powders. One before each of the two principal meals, in acid dyspepsia.

845. ℞. Magnesiæ, gr.iiss
 Bismuthi subnitratæ, gr.iv-vij
 Opii pulveris, gr.ss. M.

For one dose, to be taken before eating, in acid dyspepsia.

DR. GUIPON, PARIS.

846. ℞. Ferri redacti, ʒijss
 Magnesiæ,
 Rhei pulveris, ʒʒ ʒss. M.

Divide into ten powders. One to be taken before each of the two principal meals, in acid dyspepsia of chloro-anæmic women.

847. ℞. Cretæ præparatæ,
 Rhei pulveris, ʒʒ ʒij
 Opii pulveris, gr.iv. M.

Divide into twelve powders. One half an hour before each of the two principal meals, to stimulate the appetite and quiet dyspeptic pain.

848. ℞. Bismuthi subnitratæ, ʒvij
 Magnesiæ carbonatis, ʒiijss
 Calcii carbonatis præcipitatæ, ʒv
 Sacchari, ʒiij
 Acaciæ pulveris, ʒj
 Mucilaginis acaciæ, f.ʒij
 Aquæ rosæ, q. s. M.

Divide into one hundred troches. Two or three after the principal meals, in acid dyspepsia.

RÉSUMÉ OF REMEDIES.

Alum, in doses of ℥j thrice daily, in the form of an electuary, has been strongly recommended.

Argenti Nitras is an excellent remedy.

Argenti Oxidum has been employed with marked benefit. It must not, in these cases, be combined with creasote, as the combination causes violent decomposition and the development of great heat, and even flame.

**Benzoin*. A fluid drachm of the tincture, with mucilage, is said to be efficacious in many cases.

Bismuthi Subnitras, combined with opium, seldom fails to afford relief.

Carbolicum Acidum has been employed with success by Dr. PODMORE JONES (*Practitioner*, November, 1868), in the following formula :

849. R. Acidi carbolici,	gr. j	
Alcoholis,	f. ʒj.	M.

Twenty-five drops in a wineglassful of water, an hour before each meal.

Gallicum Acidum is of benefit in cases accompanied by organic disease of the stomach, or by disease of the liver.

**Kino Pulvis Compositus* is said by Sir T. WATSON to be an admirable remedy in this affection, in doses of gr. x thrice daily.

Liquor Ferri Nitratis, in doses of gtt. x-xv thrice daily, is useful in those cases where tonics and astringents are indicated.

Lupuli Extractum has been found serviceable.

Magnesia Carbonas is occasionally an effectual remedy.

Muriaticum Acidum, taken in small medicinal doses (gtt. iij of the dilute acid in water), shortly before meals, is an excellent preventive.

Nitricum Acidum, taken in the same manner as recommended for muriatic acid, is very highly spoken of.

**Nux Vomica* is very useful in many cases. Dr. BARLOW recommends the following formula :

850. R. Extracti nucis vomicæ,	gr. iiss	
Argenti nitratis,	gr. ij	
Extracti lupuli,	gr. xij.	M.

Divide into six pills. One thrice daily.

**Opium*, in combination with gentian, frequently affords speedy relief.

**Sulphurosum Acidum*, in the hands of Dr. LAWSON (*Practitioner*, September, 1868), has produced the best effects, in doses of f. ʒss-j thrice daily, shortly before meals, in plain distilled water.

VOMITING.

RÉSUMÉ OF REMEDIES.

- Ammonii Citras* has been recommended in the vomiting attendant on ulcer of the stomach, but Dr. W. BRINTON considers that the salts of ammonia do more harm than good in these cases.
- Ammonii Chloridum* is said to relieve the vomiting attendant on scirrhus of the stomach more promptly and uniformly than any other remedy.
- Armoraciæ Radix*. Dr. TILT recommends in vomiting connected with uterine affections, a small portion of horse-radish scraped and moistened with vinegar.
- Arseniosum Acidum*, in the form of Fowler's solution, is advised by Dr. RINGER, in the morning vomiting of drunkards.
- Bismuthi Subnitrat*, especially when combined with hydrocyanic acid, often speedily allays vomiting in connection with stomach diseases, but in sympathetic vomiting (*e. g.*, from uterine disorder) it has little or no effect.
- Calci Aquæ* sometimes succeeds when hydrocyanic acid and other remedies fail. It has less influence on sympathetic vomiting than on that connected with functional derangement of the stomach.
- **Calumba* is useful in many forms of vomiting, especially in that of pregnancy. Its efficacy is greatly increased by combination with hydrocyanic acid.
- Carbolicum Acidum*, in drop doses of the crystallized acid liquefied by heat, in mucilage, thrice daily, is recommended (*British Medical Journal*, March 13th, 1869) in the vomiting of pregnancy and other forms of sympathetic vomiting.
- Carbonic Acid*, in the form of an effervescing draught, is often an effective remedy.
- Cerii Oxalas* appears to be an uncertain remedy, but is sometimes effective in the sickness and vomiting of uterine disease.
- ³*Chloroform*, in doses of a few drops, is often very useful in obstinate vomiting. Sir C. LOCOCK recommends (*British Medical Journal*, August 22d, 1868,) chloroformization, almost to insensibility, in obstinate vomiting in pregnancy.
- Cinnamomum* in aqueous infusion, is often of benefit in continued nausea and vomiting.
- Creasotum* is considered by many as an overrated remedy in vomiting. Dr. RINGER considers the principal cause of its failure as due to its being given in too large doses. He obtains the best effects by adding just sufficient creasote to water to make it taste distinctly, but not strongly of the medicine, and administering of this a dessertspoonful frequently. He finds it effectual given in this manner, in allaying nausea and retching, though some consider it to have less power over actual vomiting.
- **Hydrocyanicum Acidum*, given in an effervescing draught, is a very efficient remedy in vomiting arising from any morbid conditions.

* *Ipecacuanha* is considered by Dr. RINGER to have few equals in checking some forms of vomiting. In numerous instances he has found drop doses of the wine administered every hour or thrice daily, according to the urgency of the case, check vomiting of pregnancy, the morning vomiting of drunkards, the vomiting which accompanies general weakness after acute diseases, and that of acute catarrh of the stomach, in children. That form of vomiting after meals in which there is no nausea or pain, or even discomfort, is quickly stopped by these small doses of ipecacuanha. Even in vomiting from cancer of the stomach he has sometimes succeeded with it after the failure of other remedies. Dr. C. D. PHILLIPS states (*Practitioner*, November, 1859), that its beneficial operation is clearly discernible in most cases of continued and obstinate retching, or vomiting where the stomach is not primarily affected, but disturbed by sympathy with some other organ or part of the body, whether the primary affection be acute or chronic. Dr. C. FULLER bears testimony also (*Lancet*, December 4th, 1869,) to its value in the vomiting of pregnancy. He found single drops of the wine in a teaspoonful of water every hour, to arrest obstinate vomiting in the course of two days. But it failed in his hands in the treatment of vomiting of drunkards.

Magnesia, in doses of gr.xv-xx, is sometimes given with advantage in sympathetic vomiting.

Magnesii Carbonas also occasionally affords relief in sympathetic vomiting, especially in that of pregnancy.

Opium. A few drops of laudanum, given in beef tea, as an enema, and repeated as necessary, is sometimes useful in the vomiting of pregnancy. Dr. GRAILY HEWITT recommends in those cases an opiate liniment rubbed over the hypogastric region, or morphia applied endermically. Hypodermic injections of morphia are also serviceable.

Sodii Carbonas is beneficial in vomiting arising from acidity of the stomach.

Nux Vomica, in the form of the tincture, is recommended in the vomiting of pregnancy. Dr. DOUGLAS POWELL states (*Practitioner*, November, 1868,) that the tincture in doses of ℥x, will often arrest the vomiting of phthisis. Dr. BARLOW recommends, in vomiting connected with malignant disease of the stomach, the following formula :

851. R.	Extracti nucis vomicæ,	gr. j	
	Extracti conii,	gr. xij.	M.

Make six pills. Take one three times a day.

Strychnia. Dr. TILT recommends in vomiting connected with uterine disease, the following formula :

852. R.	Strychniæ,	gr. ʒ	
	Tincturæ zingiberis,	f. ʒvj	
	Aquæ,	f. ʒiv.	M.

Dose—A teaspoonful every one or two hours.

Sulphurous Acid, in doses of mxxx , thrice daily, has been employed by Dr. DRYSDALE, with success (*Lancet*, July 24th, 1869,) in constant vomiting and eructation.

Tartarici Acidum, in effervescing draughts, sometimes succeeds in allaying vomiting.

Blisters. A small blister over the epigastric region frequently effectually checks vomiting arising from functional or nervous disorder of the stomach, and also that consequent on fevers.

Ice in lumps, or minute quantities of iced brandy and water, or champagne, given every hour, is useful in severe vomiting attendant on pregnancy or uterine disease.

Leeches. Dr. TILT states that in vomiting connected with uterine affections, after the failure of ordinary measures, he has, on several occasions, seen it suddenly checked by the application of six leeches to the pit of the stomach, although there was no sign of inflammation there, and the patient's debility was such as not to justify loss of blood. The same procedure sometimes succeeds in idiopathic vomiting.

V. DISEASES OF THE URINARY SYSTEM.

Albuminuria — Bright's Disease — Diabetes Insipidus — Diabetes Mellitus — Dropsy — Hematuria — Incontinence of Urine — Nephralgia — Nephritis.

ALBUMINURIA.

WILLIAM AITKEN, M. D., EDINBURGH.

853. ℞. Acidi gallici, ʒij
 Acidi sulphurici diluti, f.ʒss
 Tincturæ lupuli, f.ʒj
 Infusi lupuli, f.ʒvj. M.

A tablespoonful three times a day.

Said by the author to check the waste of albumen, especially in the more acute and recent forms of albuminuria.

J. M. DA COSTA, M. D., PHILADELPHIA.

854. ℞. Ammoniæ muriat., ʒij
 Tincturæ ferri chloridi, f.ʒjss
 Aquæ, f.ʒvj. M.

A tablespoonful thrice daily, in anæmic albuminoid degeneration of the kidneys or liver.

This author considers the muriate of ammonia one of the best agents we possess to counteract the tendency to albuminoid degeneration in any organ.

JOHN W. MARTIN, M. D. DUBLIN.

This author gives, in the *Medical Press and Circular*, December, 1874, a typical case of his plan of treatment. It consisted of hydragogue purgatives, diuretics, and tonics, as follows:

855. ℞. Pulveris jalapæ compositæ, ʒj-vij. . .
 One to be taken at bedtime.

856. ℞. Pulveris scillæ,
 Pulveris digitalis, āā gr.j.
 Make pills. One to be taken three times a day.

DR. F. DE HAVILAND HALL, LONDON.

In the treatment of acute albuminuria, such as is a frequent sequela of scarlet fever, this author condemns the usual procedure (in England) of "hard purging and sweating." (*Practitioner*, Aug., 1876.) He has achieved much better results from the following plan:

Directly any albumen was detected in the urine, the patient was ordered the *perchloride of iron*, and was allowed no solid food except a little bread and milk, and as much water as he liked to drink; this treatment, together with keeping the skin gently acting, sufficed in the majority of cases, but in a certain number the urine was almost suppressed, and in some there were uræmic symptoms. Whenever either of these contingencies occurred, he forbade all food for twelve hours, the child to have nothing but water and a drink made as follows:

857. B.	Acid tartrate of potash,	℥j
	Lemon syrup,	ʒi
	Water,	Oj.

If, at the end of this time, the kidneys were beginning to act, he allowed a little milk, but not more than a pint in the twenty-four hours; if, however, the uræmia continued with little or no urinary secretion, he persevered with the water and bitartrate of potash; and, in severe cases, nothing else has been given for thirty-six hours. Dry cupping, mustard poultices over the loins, and a purgative, were the only additional remedies employed.

The explanation of the good effects of abstention from solid food, and especially meat, during the course of acute desquamative nephritis, is, that if a patient is entirely deprived of nitrogenous food, the work of the kidneys is lessened and the urine is rendered less irritating, and the mild diuretic action of the bitartrate of potash seems to be useful.

He sums up the treatment of acute Bright's disease in the following words:

1. Milk and water with arrowroot, no solid food.
2. Mild diuretics, such as the citrate or bitartrate of potash with a free supply of water.
3. The skin kept just moist.
4. A daily evacuation of the bowels.

858. R. Potassæ iodidi, ʒj
 Ferri citratis, ʒj
 Spiritus chloroformi, ʒij
 Spiritus ammonii aromatici, ʒij
 Aquam, ad. ʒxij. M.

Two tablespoonfuls to be taken three times a day.

859. R. Linimentum terebinthinæ, ʒvj.
 To be applied over the kidneys twice or thrice daily.

A flannel binder to be worn round the loins.

RÉSUMÉ OF REMEDIES.

**Antimonii et Potassii Tartras* is recommended by Dr. BARLOW in the acute forms of albuminuria. He considers it indicated by the nature of the affection, and calculated to equalize the circulation, subdue the inflammatory action and restore the functions of the skin. But he does not employ it to the exclusion of other remedies, as moderate venesection, hydragogue cathartics, the warm bath, and the application of large linseed-meal poultices to the loins.

Arsenicum. In some cases of albuminuria, seemingly dependent on imperfect digestion, Dr. T. L. BRUNTON has derived excellent results from Fowler's solution, gtt. iij, with meals. (*Practitioner*, June, 1877.)

Belladonna will, in the opinion of Dr. HARLEY, prove very serviceable in chronic albuminuria, provided that the kidney has not passed into the degenerative state bordering on fatty degeneration.

Cantharis, internally, has, it is said, been employed with benefit in purely chronic cases, but must be used with great caution.

**Ferri Iodidum* is often beneficial, particularly in old broken down constitutions.

Ferri Chloridi Tinctura is one of the most generally useful preparations of iron in albuminuria, possessing diuretic as well as chalybeate properties.

Gallicum Acidum, in doses of gr. x, thrice daily, has been successfully employed.

Potassii Sulphuretum has been recommended in the following formula, to establish free diaphoresis :

860. R. Potassii sulphureti, gr. v
 Tincturæ guaiaci ammoniatæ, f.ʒss
 Liquoris ammoniæ acetatis, f.ʒss
 Aquæ, f.ʒj. M.

For one dose, to be taken at bedtime, followed by a pint of hot whey.

Sodii Carbonas has been recommended in albuminuria, on the ground that alkalescence is a necessary condition of the blood ; that the free alkali is soda ; that when this constituent is deficient, the result is coagulation of blood in the capillary vessels and ensu-

ing inflammation, and the potash or soda (uncombined or as carbonates), taken into the stomach, have the power of rendering the urine alkaline and dissolving fibrine. The following formula may be employed :

861.	℞.	Sodii carbonatis,	ʒij	
		Liquoris potassæ,	f.ʒij	
		Decocti chondri crispi,	f.ʒviij.	M.

A tablespoonful every two hours, in milk. *Tartrate of iron* may be added when anæmia is very marked.

Tannicum Acidum, in from gr. xxx–lx per day, has been advised in the anasarca accompanying albuminuria.

Tiglii Oleum is one of the best hydragogue cathartics which can be given in albuminuria, as it produces copious evacuations with less sickness and discomfort than elaterium.

BRIGHT'S DISEASE.

ALFRED L. LOOMIS, M. D., OF NEW YORK.

This author is convinced that the diaphoretic and cathartic plan of treatment is wrong, and its apparently good results deceptive, and prefers the following :

In the acute stage of parenchymatous nephritis, whatever may have been the exciting cause, the patient must be kept in bed, in a large, well-ventilated apartment, with a temperature of 75° Fah.; milk should be his only article of diet. Dry cups should be applied over the kidneys, followed by poultices of digitalis leaves, and the infusion of digitalis leaves should be administered at the rate of half an ounce every two hours for twenty-four hours, after which it may be continued at longer intervals, so long as uræmic symptoms are urgent. When the flow of urine commences, the digitalis should be discontinued, and diluent drinks freely administered to keep up the diuresis. If renal secretion is not restored within twenty-four hours after the commencement of this treatment, warm baths, or hot air baths, should be used in addition; and if the symptoms remain urgent, hydragogue cathartics may be given.

In the later stages, those commonly known as chronic Bright's disease, the plan of treatment is essentially tonic. Iron and cod-liver oil are the two great remedial agents, and should be daily

administered if they do not disturb the stomach. Milk should be the principal article of diet, and the patient should seek a warm and equable climate. The milk may be taken cold or hot, from a half pint to a pint at a time. Wine, in moderation, may be taken with the food. No depletory remedies should be employed in this stage, except in times of an emergency, when, from some sudden renal congestion, the remaining healthy portion of the kidney is impaired, and active uræmic symptoms present themselves. At such times, a hot air bath, hydragogue cathartics, or stimulating diuretics are to be employed, but with great caution.

WILLIAM AITKEN, M. D., EDINBURGH.

862. ℞.	Acidi gallici,	ʒj-ij	
	Acidi sulphurici diluti,	f.ʒss	
	Tincturæ lupuli,	f.ʒj	
	Infusi lupuli,	f.ʒvj.	M.

A tablespoonful three times a day when the urine is "smoky," or when blood is seen on microscopic examination.

The objection to these remedies is the constipation they are apt to induce. Two or three movements from the bowels should be secured daily. For this purpose the medicine most generally useful is:—

863. ℞.	Pulveris jalapæ compositi,	ʒss-j	
	Pulveris zingiberis,	gr.ij.	M.

For one dose. To be taken in the morning, fasting, in a wineglass of water.

When, by repetition, this loses its effect, and elaterium be not deemed advisable, the following saline draught may prove efficient:

864. ℞.	Magnesizæ sulphatis vel,		
	Sodæ sulphatis,	āā	ʒj-ij
	Ætheris sulphurici,		ʒx
	Acidi sulphurici diluti,		ʒx
	Ferri sulphatis,		gr.j-ij
	Aquæ menthæ viridis,		f.ʒiij-iv.

For one dose. To be taken the first thing in the morning, once or twice a week. It ought to produce two or three loose and watery evacuations.

When dyspeptic symptoms predominate, the following pill is useful (recommended by Dr. GOODFELLOW):

865. ℞. [Ferri sulphatis, gr. j
 Extracti nucis vomicæ, gr. ss-j
 Pilulæ galbani compositæ, gr. ij-iiij. M.
 For one pill. To be taken twice or thrice daily.

If there be co-existent bronchitis, order :

866. ℞. Spiritûs ætheris nitrosi, f. ℥iiss-iiij
 Oxymellis scillæ, f. ℥ss
 Liquoris ammoniæ acetatis, f. ℥iv. M.
 A tablespoonful to be taken immediately with the above pill.

If much nausea prevail, add to the prescription :

867. ℞. Acidi hydrocyanici diluti, ℥xxiv.
 And apply mustard to the stomach.

For the want of sleep often complained of, henbane should be given instead of opium, which will constipate.

If diarrhœa occur, it must not be too suddenly checked.

Order :

868. ℞. Spiritûs ammoniæ aromatici,
 Tincturæ kino, āā f. ℥j. M.
 A teaspoonful in water after every loose stool.

This in general will be all that will be found necessary.

Mercurial preparations are dangerous in Bright's disease, because of the tendency to salivation. The following may be used instead :

869. ℞. Podophyllin, gr. ¼-j
 Extracti hyoscyami, gr. j. M.
 For one pill.

The following is also serviceable as an occasional mild aperient pill :

870. ℞. Pilulæ rhei compositæ, gr. ij-iiij
 Extracti nucis vomicæ, gr. j
 Pilulæ galbani compositæ, gr. ij. M.
 For one pill.

THOMAS KING CHAMBERS, M. D., ETC., LONDON.

871. ℞. Tincturæ ferri chloridi, f. ℥ij
 Potassæ nitratis, ℥ij
 Aquæ camphoræ, f. ℥iv. M.
 A tablespoonful in water thrice a day, and a hot-air bath every night.

J. M. DA COSTA, M. D., PHILADELPHIA.

For the treatment of an acute case, following scarlatina :

872. ℞.	Pulveris ipecacuanhæ compositi, Potassæ nitratis,	gr.ijj gr.v.	M.
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For one powder. To be taken at night.

And,

873. ℞.	Liquoris ammoniæ acetatis, Spiritus ætheris nitrosi, Syrupi tolutani, Tincturæ digitalis,	f.ʒijj ℥xx ℥xxxvij ℥ijj.	M.
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For one dose, thrice daily.

The skin should be made to act freely by means of hot baths and a few drachms of Rochelle salts, administered on alternate days. The diet should be mild and unirritating, all stimulants being avoided.

874. ℞.	Tincturæ ferri chloridi, Acidi acetici,	f.ʒss f.ʒss	
	Mix and add, Liquoris ammoniæ acetatis, Curacoæ,	f.ʒv ʒij.	M.

Teaspoonful thrice daily.

This recipe, a modification of Basham's mixture, is useful in chronic Bright's disease, and in all those cases in which the union of a chronic and diuretic effect is desired.

DR. FELIX VON NIEMEYER, PROFESSOR UNIVERSITY OF TÜBINGEN.

The loss of albumen from the blood being the immediate cause of most symptoms of the disease, the most important task of the physician is to cover the loss of albumen by a diet rich in protein substances and by appropriate medication. Soft-boiled eggs, milk, strong meat broths and roast beef, in as large quantity as the patient is able to digest, are probably the best preventives of the dropsy. Besides this, a moderate quantity of beer or good wine should be prescribed, as by the use of these the waste of tissue is retarded and nutrition promoted. Quinine and iron are the most suitable medicines. Our author has obtained most brilliant results where all other treatment had failed, by putting the patients upon an exclusive diet of milk. They took no medicine whatever, but drank five or six pints of cow's milk daily. After the "cure" had

been continued in this manner for about five weeks, some of the patients, who, prior to the treatment, had been in the most wretched condition, had got rid of their dropsy, recovered an appearance of health, and regained so much strength as even to be able to perform hard labor.

If the above measures fail in averting or allaying the dropsy, active diaphoresis is strongly to be recommended. Patients in an advanced state of dropsy often rid themselves of it completely in a few weeks by the daily use of a hot bath, of a temperature of 80° to 100° F., followed by sweating for two hours in woolen blankets. Debilitated patients sometimes, however, suffer so much from this treatment as to compel its discontinuance.

Whatever the theoretical objections to the employment of diuretics may be, yet, in desperate cases, recourse should always be had to them. Squills and other stimulating diuretics must not be employed without the utmost caution. But there are certain salts, particularly cream of tartar, which are decidedly beneficial in their effects. The free use of buttermilk, conjoined with the employment of cream of tartar and small doses of Dover's powders, will prove serviceable.

The drastic cathartics should only be resorted to in cases of extreme need, since the patient is liable to be affected by them, and since, by their persistent use, the digestion becomes impaired. Those most frequently employed are colocynth and

875. ℞. Elaterii, gr. $\frac{1}{8}$ - ss.
For one dose, as occasion requires.

THOMAS HAWKES TANNER, M. D., ETC., LONDON.

876. ℞. Salicini, ℥ij
Glycerinæ, f. ℥j
Tincturæ aurantii corticis, f. ℥ij. M.

A teaspoonful in a wineglassful of water, night and morning.

Often useful in imparting a temporary sense of renovation.

So also is:

877. ℞. Ferri et ammoniæ citratis, ℥ss
Spiritus vini gallici, f. ℥j
Vini pepsinæ, f. ℥ss
Aquæ, f. ℥ijss. M.

One-half to be taken every day at dinner.

For the administration of elaterium, when indicated, our author employs the following formulæ:

878. R.	Elaterii,	gr.iss	
	Pulveris capsici,	gr.lx	
	Hydrargyri chloridi mitis,	gr.xij	
	Extracti hyoscyami,	gr.xviii.	M.

For twelve pills. Two to be taken at a dose.

The capsicum prevents the nausea which the elaterium often produces. If a very active purgative is required, the dose may be doubled.

879. R.	Elaterii,	gr.j	
	Spiritus ætheris nitrosi,	f.ʒss	
	Liquoris ammoniæ acetatis,	f.ʒj	
	Syrupi zingiberis,	f.ʒiij.	M.

One small teaspoonful in a wineglassful of water, every two hours, until the bowels are freely acted on.

FRANCIS SIBSON, M. D., D. C. L., ETC., OF LONDON.

In a review of the therapeutics of Bright's disease (*British Medical Journal*, February, 1877,) this eminent practitioner lays down the following principles:

The employment of *narcotics* in any form in cases of Bright's disease directly adds poison to poison of the like kind, and narcotics are, therefore, to be strenuously forbidden in every case of Bright's disease. This axiom does not rest upon physiological considerations only, which, if rightly interpreted, never can lead us wrong, and are, therefore, the true peculiar guide in the treatment of disease; for we have also direct evidence of the deadly effect of narcotics in Bright's disease. Death has occurred again and again, from the subcutaneous injection of moderate doses of morphia in those affected with Bright's disease. Neither opium, chloral, chloroform, hyoscyamus, belladonna nor stramonium should ever be exhibited.

For the extreme restlessness, we must give the *bromides* of ammonium and potassium, and Hofmann's anodyne ether, and a few drops of ether may safely be inhaled, as well as in the cases with excessive distress of breathing. The bromides may be pushed to large and extreme doses, and their effect ought to be carefully watched, so that if drowsiness be induced by them, in addition to the poison of the disease, iodide of potassium, coffee, and rousing and anti-narcotic means may be freely resorted to.

The danger to combat is from the narcotic poison in the blood, which is not eliminated by the kidneys. To meet this indication the patient should be encouraged to take exercise in the open air,

DISEASES OF THE URINARY SYSTEM.

faculties active; they should be roused by strong
and tea, by the society of friends, and by the business of
day life.

the respiration is greatly distressed and suspended by
the proper treatment is steadily to eliminate the poison, and,
same time, to rouse the powers, either by a small quantity
a, strong coffee, or whisky; by stimulants externally; and by
aining the power by means of iron and food. These cases
ery formidable, and generally die; but not unfrequently they
ts recover from the emergency, and even live for years.
a coma and sopor are relieved by the hot-air bath and external
ulants, the strongest camphor treatment analogous to that
deep opium-poisoning, but directed according to the necessities
the case, must be pursued; and sometimes succeeds.

BELLE HOSPITAL, NEW YORK.

The following is a summary of the mode of treatment recommended,
at the Bellevue Hospital, New York:

Diet. This class of patients should abstain as much as possible
from meat. The opinion has been expressed that the excessive
animal diet accounts for the great prevalence of the disease in
America. Milk should be substituted for meat, and should be
associated with lime. Butter may be used; eggs if they agree,
and fresh fish in the morning. Fried fats should be carefully
excluded, but cream may be taken without stint. Vegetables and
fruits are *always* good, but those should be selected which contain
the least amount of woody fibre. Rice and potatoes, therefore,
may be used; but asparagus, turnips, cabbage, and notably beans
which contain woody fibre in large quantities, should be assidu-
ously avoided. Onions may be eaten with impunity, and are
rather beneficial.

For the Anæmia. Iron should be administered from first to last
and by preference, the tincture of the chloride. This prepara-
tion is assimilated with difficulty, hence should not be given alone
but combined with nux vomica, and to this spirits of nitre may
added to assist the determination towards the kidneys. For
ample, ten drops of the tincture of the chloride of iron, ten drops
of tinct. nucis vomicæ, and one drachm of sweet spirits of
may be given three times a day. Cod-liver oil increases the
corpuscles of the blood, because it is digested by the liver, and

product enters into them as an ingredient. The irritability of the stomach may make it troublesome to take, but it should be relied upon as much as in the treatment of phthisis.

To Combat the Disease Itself. We have one agent which may be regarded as a specific against increase of connective tissue in the body, wherever the interstitial inflammation may occur, and that is the *bichloride of mercury*. It should be given in small doses, one-twentieth of a grain is the usual amount, and should be combined with a diuretic to make it act upon the kidneys. For example, one-twentieth of a grain of the bichloride, one grain of digitalis, and one grain of quinine may be given three times a day, with the result of producing a specific action upon the kidneys, and will raise the specific gravity of the urine,

Attention to the Condition of the Skin will materially assist the embarrassed kidneys, and to do this we may have recourse to two things. If excessive œdema is present, the pressure produced shuts off the circulation to a great extent and prevents removal of the fluid by diaphoresis. It is much better then to make punctures in the distended skin of the legs, and let the water drain away at once. No apprehension need be had with reference to this trifling operation, if the limb, when the punctures have been made, is wrapped with cloths wet in a solution of carbolic acid in water, to which has been added essence or oil of cinnamon. The latter is to correct the smell of the carbolic acid, and is also equally antiseptic. The second thing is, to rub the patient all over once a day with sweet oil. If extra diaphoresis is desirable, it can be best obtained by placing a blanket in an empty bucket, pouring hot water upon it, for in this way much less water is required, and then wringing it out and quickly applying it around the body and covering it with a dry blanket. The skin should be well oiled before the blanket is applied.

RÉSUMÉ OF REMEDIES.

Aconitum. Dr. RINGER recommends that after scarlet fever, the temperature be taken night and morning, and on the slightest rise being noted, aconite be given, to prevent nephritic inflammation.

Aqua. On the use of water in the early stages of Bright's disease, see *Nephritis*.

Arsenicum. According to Dr. S. V. PAP, (*Wiener Medicinische Presse*, No. 13, 1875,) arsenic is useful in most cases. Its beneficial influence is manifested in the lighter forms more rapidly, certainly, and distinctly, than in the more severe forms, with a greater

proportion of sugar than four per cent. In the former, the sugar may entirely disappear, which is but rarely the case in the latter. The diminution, or the disappearance of the sugar secretion, also takes place with a mixed diet. The maxim remains undisputed, however, that the amylaceous foods should, at least temporarily, be limited as far as possible. After the cessation of the use of arsenic, months may pass before the disease returns.

Auri Chloridum. Dr. BARTHOLOW calls especial attention to the use of the salts of gold in chronic Bright's disease, granular and fibroid kidney. He has observed remarkable improvement follow the use of the chlorides of gold in these affections. They are best given in pill form and in small doses, $\frac{1}{20}$ — $\frac{1}{30}$ of a grain three times a day. They are, of course, not adapted to the acuter forms of Bright's disease.

Cannabis Indica is spoken of by Dr. RINGER as having a high reputation in acute and chronic Bright's disease, especially when the urine is bloody.

Elaterium is a useful purgative when there is much dropsy, but it is best to combine it with hyoscyamus, as it sometimes causes exhausting diarrhoea, especially if given after symptoms of uræmic poisoning have set in.

Ferri Chloridi Tinctura. As a chalybeate diuretic this form of iron is not surpassed by any.

Gallicum Acidum. Dr. H. C. WOOD, JR., states that in certain forms of Bright's disease, when there was an abnormally large secretion of highly albuminous urine, he has found gallic acid to lessen very materially the albumen.

Guaiacum, in tincture or decoction, is regarded by Dr. COPLAND as the best diuretic in Bright's disease, especially when the skin is cool as well as dry.

Ipecacuanha, in the form of Dover's powder, (gr. v—viij, thrice daily,) is not only a useful diaphoretic in Bright's disease, but also allays pain and irritability, especially if assisted by a warm bath every other evening, or oftener.

Jaborandi has been suggested on theoretical grounds in this disease. A largely increased elimination of urea by the skin is one of the results of its administration.

Potassii Bitartras is recommended as a diuretic by Prof. NIEMEYER. It must be used with caution.

Potassii Iodidum is said by Dr. RINGER to prove sometimes of signal service, even when the dropsy has been extensive and the urine very scanty.

Scoparius, in decoction, combined with nitric ether, is recommended by Dr. BARLOW, when the renal secretion is very deficient. A pint of the infusion may be given.

Tannicum Acidum has been proved by experiment to diminish the loss of albumen in Bright's disease. Its value, however, in a remedial sense, is yet uncertain.

Diuretics. Drs. BRIGHT, OSBORNE, WATSON, and others, condemn the use of diuretics, particularly those which are stimulating, in inflammatory dropsy, attendant on granular disease of the kidneys. Dr. CHRISTISON believes, however, that they can be used without risk, and advises the following formula :

880. R.	Pulveris digitalis, Potassii bitartratis,	gr. j-ij ʒj-ij.	M.
	Ter in die, ex aq.		

Diuretics may be sometimes employed, with good results, by the *endermic* method.

Skimmed Milk. From six to eight pints should be used daily and the diet restricted to it. The good effect should be seen inside of a week.

EXTERNAL MEASURES.

Camphorated Vapor Baths. At the Queen's hospital; Birmingham, (England), these baths are used with good effect for the relief of Bright's disease. They are also said to produce very free perspiration, and are given every evening in the following manner: the patient is seated upon a cane-bottomed chair, with a large blanket pinned around his neck. Half an ounce of camphor is placed upon a tin plate under the chair, and above the flame of a small spirit-lamp, by the heat of which the camphor is slowly vaporized. This plan of treatment is also employed in some cases of convalescence from acute or sub-acute rheumatism, when the action of the skin is defective, and when some pain and stiffness of the joints remain.

Electricity. Dr. H. J. PRATT, of Colorado, reports a case of Bright's disease where the galvanic current applied over the dropsical abdomen, and general faradization, resulted in relief of the dropsy, and in a diminution of the amount of the albumen.

DIABETES INSIPIDUS, POLYURIA, POLYDIPSIA.

M. BOUCHARDAT, OF PARIS.

The Hygienic Treatment. This is always essential to success. The excretions should be regular and complete, the bladder thoroughly emptied every six hours at least. Exercise should be taken regularly, and to a considerable amount; chilliness after it being carefully avoided. A sponge bath should be taken every morning, followed by long and quick flesh-rubbing. The following may be added to the bath to increase the action of the skin:

881. R.	Potassæ carbonatis, Essentiæ lavandulæ, Tincturæ benzoin.,	ʒijss gtt. xxx ʒj.	M.
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The diet is of the utmost importance.

Food should be taken sparingly, well cut and thoroughly masticated. Tomatoes should be forbidden, and also asparagus and beans if their use cause renal pain or slight deposit in the urine. Meat of all kinds may be allowed, but only moderately; still more sparingly must we allow eggs, fish, lobsters, shrimps, shell-fish, and old cheese; milk is often useful. Almost all seasonable vegetables are good, particularly spinach, endive, lettuce, artichokes, celery, carrots, parsnips, and potatoes. The last named are useful, and should take the place of some of the bread with the meal. Radishes may be advantageously used daily. The daily use of cresses or salad is indicated. All fruits, if the stomach bear them well, may be served daily. Olives, almonds, walnuts, hazelnuts, and pistachio nuts must be served moderately. Good chocolate is allowable. If coffee provokes urinary secretion, it may be advised. Brandy and liquors should be avoided; very little beer allowed, and for alcoholic drink, a light white or red wine diluted freely with water. White sparkling wines are contra-indicated, as well as gaseous drinks, as soda water. On waking, going to bed, and with meals, sufficient watery drink should be taken to give about three pints of urine. This watery drink should consist of pure water, or better still, a litre of water in which is dissolved one or two teaspoonfuls of powdered Seignette salt (tartrate of potash and soda).

DR. J. M. DA COSTA.

One of the very few cases of complete cure from this generally fatal disorder is reported by this author in the *Transactions of the College of Physicians of Philadelphia*, 1875. The treatment was by ergot, ℥.ʒ of the fluid extract being given at the outset thrice daily, increased in a few days to ℥.ʒij three times a day. The cure was accomplished in about two months, and was permanent.

In the volume of the *Transactions* for the following year, Dr. JAMES TYSON reported a case in which he administered ergot with temporary benefit, but not with actual success. He then prescribed *gallic acid*, gr. xv, four times a day, with rapid and he believed permanent improvement.

PROF. A. TROUSSEAU, OF PARIS.

In some instances Professor TROUSSEAU derived advantage from *valerian*; it should be administered in full doses, extracti valerianæ, gr. xv, thrice daily.

Dr. BOUCHARD considers that the action of valerian is to spare waste of tissue, and in support of this view he mentions that certain Indians of Lower California and Mexico are accustomed to go through a course of it for a month before they enter upon a severe expedition, so that they may be better able to bear fatigue. He gives it in frequent small doses, and gradually increases the amount taken until he has in some cases reached a dose of thirty grammes in twenty-four hours. (*Medical Times and Gazette*, May 23, 1874.)

RÉSUMÉ OF REMEDIES.

Creasotum has been employed with some advantage.

Ergota has been highly praised by Dr. DA COSTA (above).

Gallicum Acidum, combined with opium, is spoken of by Dr. H. C. WOOD, JR., as the most generally successful remedy in this disease.

Jaborandi. This drug was used in this disease by Professor T. LAVCOCK, of Edinburgh, in 1875.

Opium, with tannic or gallic acid, is valuable.

Valeriana was introduced by TROUSSEAU. Its effects are valuable. (p. 396.) The doses must be large and increasing. Failures are attributed to its too timid use.

DIABETES MELLITUS.

WILLIAM AITKEN, M. D., EDINBURGH.

The whole *materia medica* has been exhausted in search of a remedy for this disease. It may be said nearly every patient dies whose treatment is left entirely to drugs. A full and generous diet is unquestionably useful in these cases; but the patient soon gets disgusted with mutton or beef, or both, for breakfast, dinner, and supper: he consequently nauseates a meat diet, and abandons it altogether. A diet of salt fish has been attempted, but the patient in a short time so loathes it that it has to be given up. A mixed diet, therefore, if contra-indicated by some theories, is at least the best to adopt in practice, if only regulated and aided by other means. It will be evident, however, that vegetables which contain a large amount of saccharine matter should be avoided in some degree, as potatoes, grapes, or other very ripe fruit, and, *a fortiori*, sugar itself. But milk and eggs may be taken, if biliary

derangement is not induced by them, and fish is a most important article with which to vary the monotony of the dietary. Milk also may be indulged in occasionally, as it is not found that the sugar it contains is readily converted into glucose. Its influence, however, requires watching. It should be combined with half its bulk of lime-water, or be used in the form of buttermilk. If it be found desirable or necessary to employ alcoholic drinks, a selection should be made from those wines and spirits which are freest from sugar. Of these, clarets may be chemically considered the best, then Burgundy. The so-called "fruit wines" must be interdicted, and of all alcoholic beverages, *weak* brandy-and-water is the safest. The amount of brandy should always be *measured*. A teaspoonful in a tumberful of water is generally sufficient for an ordinary dinner drink. No diabetic need expect to recover or continue well who cannot exercise self-control, and make up his mind to be temperate *in all things*. Tea and coffee without sugar may be permitted. If cocoa agrees, it may be taken, prepared *from the nibs only*. When soups are allowed, they ought to be really good, and flavored with aromatics and onions, to the exclusion of carrots, turnips and peas. They may be thickened with some bran, *finely* powdered. Pickles in small quantities may be permitted to convalescents. Lettuces agree well when used sparingly with oil and vinegar, or with a little salt only, if the vinegar is likely to disagree.

The great value of *bran cakes*, as a substitute for bread in cases of diabetes, has now been established by the experience of so many individuals that its use ought to be insisted upon. The bran should be *thoroughly washed*, so that it may be as free from starch as possible, and *finely powdered*, so that it may not irritate the susceptible mucous membrane of the intestines.

GEORGE W. BALFOUR, M. D., M. R. C. P., ETC.

Our author highly recommends the *milk treatment* in diabetes. This treatment does not exclude the employment of opium, of iron, or quinine, or any other remedies otherwise considered appropriate to such cases; indeed, they may be very properly conjoined: in some patients they need not be given, because not required. From two to three months is the period usually stated as sufficient to cause the complete disappearance of sugar from the urine; and then the diet may, if desired, be rendered more solid by the detrac-

tion of some of the milk, and the addition of butcher's meat and green vegetables. It is doubtful, however, whether diabetic patients, even though apparently cured, can ever return to ordinary diet. Present experience of such cases is too limited to afford any data at all in regard to this. When the milk diet is employed in the cure of other forms of ill-health, it is often conjoined, after the first few days, with a small amount of solid food; and what such patients relish most is plain bread with salt, or a salt herring, the mawkish sweet taste of milk inclining them this way. In diabetes, the thirst present usually makes it better to give the patient his full allowance of milk, and let him divide it over the day as he pleases.

A. BOUCHARDAT, PROFESSOR OF HYGIENE TO THE FACULTY OF MEDICINE, PARIS, ETC.

Our author has proved, by the comparison of the articles of food which a diabetic may take without prejudice, that it is quite possible to keep up a sufficient degree of variety in the character of the meals. The list of articles which he permits is about as follows: All sorts of meat, roasted, stewed, and even dressed with spices, but not with flour; fresh-water fish and marine fish, in eating which the want of bread is less felt than in eating meat; oysters, muscles, crabs, lobsters, etc.; eggs in all forms known to the culinary art; rich, good cream, but no milk; of vegetables, spinach, artichokes, asparagus, green beans, the different varieties of cabbage; of the salads, water-cresses, endives, lettuce; of fruits, strawberries and peaches. Although the loss of sugar is augmented by a very free supply of liquid, and decreased by a privation of it, yet it is not advisable to forbid the patient to quench his thirst.

THOMAS KING CHAMBERS, M. D., ETC., LONDON.

882. B. Pulveris opii, gr. j.
In pill. To be taken every night.

In some cases opium seems to diminish the secretion of water, and our author has never distinctly traced any harm to its action. Cinchona, however, which, like opium, lessens the flow of urine, has, in Dr. C's hands, produced coma and death. He therefore shuns it, even when he wishes to give tonics to increase the appetite. He prefers iron and strychnia.

DISEASES OF THE URINARY SYSTEM.

R. Potassii iodidi, ℥v
 Aquæ, f.ʒvj. M.

A tablespoonful three times a day.

This drug was prescribed on purely empirical grounds. During administration the patient continued to gain weight and strength, and did not exhibit any of the usual symptoms of intoxication by iodine.

Patients may drink as much as they feel disposed; for the gratification of the thirst provides the normal outlet for the abnormal constituent of the blood.

J. M. DA COSTA, M. D., PHILADELPHIA.

884. R. Pulveris opii, gr.ss.
 For one pill, thrice daily.

The *opium treatment*, Dr. DA COSTA has found to be productive of the most good in his hands. He cannot explain the rationale, but he does know that it has the most influence in lessening the thirst, the excretion of sugar and the general waste of flesh. The only objection to its use is the risk which is run of accustoming the patient to taking this powerful drug.

885. R. Ammonia carbonatis, ℥ij-iv
 Aquæ cinnamomi, f.ʒvj. M.

A tablespoonful three or four times a day. This, in addition to a moderately restricted diet, forms a very good treatment.

886. R. Tinctura ferri chloridi, gtt.xx-lx.
 For one dose, in water, thrice daily.

This will often do good when nothing else proves of service. The *pepsin* and *rennet treatments* amount to nothing. Dr. DA COSTA has tried them faithfully, and merely lost time.

Diet. Although substances containing a great deal of sugar, and still more those containing a great deal of starch—which is readily converted into sugar—are poisonous to diabetic patients, yet it is not advisable to put them on a strictly animal diet. Such a regimen is irksome in the extreme, and will not be followed out. After all, it is not the saccharine substances which go into the body that cause diabetes; they merely add to it. It is simply impossible to avoid giving food capable of being converted into sugar.

Bran bread is perfectly unobjectionable; but a small quantity of ordinary bread should be permitted. Cakes made from *almond-*

flour are favorites with English physicians. Fruits should be interdicted, and potatoes sparingly used.

Bran baths (two or three handfuls of bran in the bath) are very serviceable in relieving the dryness of the skin, which is so troublesome.

887. R. Infusi cascarillæ, Oj.
A wineglassful three or four times a day.

The use of this light bitter lessens the thirst. Of course, water must be allowed beside: but the infusion will take the place of a good deal of water.

THOMAS HAWKES TANNER, M. D., F. L. S., LONDON, ETC.

888. R. Ferri ammoniæ citratis, ℥j
Spiritus ammoniæ aromatici, f.ʒvj.
Potassæ bicarbonatis, ℥ij
Infusum calumbæ, q. s. ad. f.ʒiij. M.

A tablespoonful to be taken twice a day, with one tablespoonful of lemon juice, in a little water.

This recipe often proves very valuable. It should be taken for two or three weeks at a time, then discontinued, and recommenced according to the general strength.

889. R. Pulveris opii, ℞ gr. j. M.
Quiniæ sulphatis, ℞ gr. j. M.
For one pill, thrice daily. Useful in some cases.

890. R. Creasoti, ℥xx
Pulveris aromatici, ℥iv
Mucilaginis acaciæ, q. s. M.
Divide into twenty pills. One to be taken three times a day.

It is believed that this remedy tends to check the conversion of the food into sugar.

PROF. S. D. GROSS, M. D., OF PHILADELPHIA.

A very successful treatment suggested by this eminent surgeon is recorded in the *Medical and Surgical Reporter*, Aug., 5, 1871, and March 16, 1872. The drugs used are opium, tannic acid, and ergot internally, and the application of ointment of veratria to the spine. The following prescriptions may serve as illustrations of the manner in which they may be used:

891. R. Acidi tannici, gr. v
Opii pulveris, gr. ss. M.

To be taken three times a day, between meals, and tincturæ ergotæ f.ʒj, in water before each meal.

892. ℞. Veratriæ, ʒj
 Unguenti cetacei, ʒi. M.

For an ointment. A piece the size of a cherry, to be well rubbed along the spine morning and evening.

The patient should be directed to abstain as much as possible from animal food, to confine himself to a simple vegetable diet, and to procure lager beer or ale to drink instead of water. If either of these becomes nauseous, he can use weak tea or whisky and water.

The tannic acid should be increased gradually until twenty or thirty grains, three or four times a day, are administered. The quantity of opium and ergot need not, however, be increased in like proportion. The combination may be :

893. ℞. Acidi tannici, ʒj
 Opii pulveris, gr. j
 Tincturæ ergotæ, ℥.ʒiij. M.

This quantity three or four times a day.

Under the judicious use of this treatment, even severe cases of this very grave disease have recovered in three or four months, and have remained free from relapses.

DR. A. S. DONKIN, OF DUBLIN.

This writer (*Dublin Journal of Medical Science*, Nov., 1875,) believes that the *dietetic* treatment is the only one of real value in this disease. He does not wish it to be inferred that medicinal treatment is useless, or unnecessary, for the various complications which may arise during the progress of the disease. In considering the dietetic treatment of diabetes, he excludes all simple cases of glycosuria, whether permanent or intermittent, from deficient assimilation of starch and sugar occurring in subjects at an advanced period of life, and laments that the plan of treatment he advocates is too often brought into disrepute by the careless, slovenly, and imperfect manner in which it is applied.

His rules for employing the skim-milk treatment are that the skim-milk *regimen must be exclusive*; that the quantity of skim-milk—*properly prepared by the careful removal of the cream*—beginning with four, five, or six pints on the first day, must be increased more or less gradually, according to circumstances, to eight, nine, ten, eleven, or twelve pints in the twenty-four hours, according to the age, sex, size, and condition of the patient. No rule as to quantity

can be laid down to suit individual cases; it must be regulated to suit the requirements of each, *but in no instance should it exceed twelve pints*. Not more than seven or eight pints should be taken in the natural fluid condition. When a larger quantity is necessary, the surplus should be made into curd by the essence of rennet, and taken at separate meals. The skim-milk may be taken cold, or warmed to a temperature of 100° or so, but it must not be boiled, because a temperature of 212° alters the physical properties of casein, and greatly impairs its therapeutic properties. The specific gravity of the skim-milk used should never be below 1035; that of the best quality is 1040. The daily allowance must be divided into regular meals. The constipation which this diet generally produces must be carefully remedied by the frequent administration of castor-oil, or of some mild saline aperient. The author does not parade this method of treatment as a panacea; his experience of it has led him to the conclusion that if there is no progressive reduction of the specific gravity of the urine and of the sugar it contains after the expiration of a week (all rules having been observed) that it may as well be discontinued.

DR. J. HOAG, INDIANA.

This writer claims, in the *Journal of Materia Medica*, September, 1874, to have achieved uniform success with the following treatment: The patient is forbidden all fruits and vegetables save bread of unbolted wheat flour, and this in the most limited quantities. Tea, coffee, liquors, and all drinks except pure water and milk diluted with lime-water, at meals, are also forbidden. The diet should be fresh meats, cream, cheese, butter, soft eggs, fish, oysters and small quantities of bran bread. The entire body is sponged daily with an alkaline bath, and the following ordered:

894. R.	Antimonii sulphurati, Pulveris ipecacuanhæ et opii, Ammoniac carbonatis, Pulveris opii,	℥j ℥ij ʒj gr.x.	M.
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Make twenty powders. One to be taken morning and night.

Also,

895. R.	Tincturæ cinchonæ, Tincturæ ferri chloridi, Tincturæ digitalis, Spiritus lavandulæ compositi,	f.ʒij f.ʒiv ʒj f.ʒj.	M.
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A teaspoonful daily, at noon.

DR. ORSON MILLARD, MICHIGAN.

896. ℞. Tincturæ ferri chloridi, f.ʒij
 Olei morrhuæ, f.ʒiv
 Acidi carbolici, f.ʒiss. M.

A teaspoonful before each meal. Said by this writer (*Michigan University Medical Journal*, January, 1872,) to bring about the disappearance of the sugar promptly in uncomplicated cases.

RÉSUMÉ OF REMEDIES.

Alkalies and Alkaline Waters have, according to Professor SEEGEN, proved themselves the best remedies in diabetes. The natural waters, such as Carlsbad in Europe: in the United States, Bedford Springs, Perry Springs, Congress Springs, etc.

Ammonii Carbonas is regarded by Dr. BARLOW (*Guy's Hospital Reports*, vol. x), in doses of gr. v-vij, with a few drops of tincture of opium, in a light bitter infusion, every six hours, as a most efficient remedy. Animal food, together with cruciferous vegetables, as greens, broccoli, turnip tops, etc., should, at the same time, be freely taken.

Ammonii Citras, conjoined with the use of Dover's powder or ipecacuanha, is considered by Dr. W. PROUT as one of the best of diaphoretics in diabetes.

Ammonii Phosphas is recommended by Dr. BASHAM (*British Medical Journal*, April 10th, 1869,) combined as follows:

897. ℞. Ammonii phosphatis,
 Ammonii carbonatis, āā gr.x
 Spiritūs ammoniæ aromatici, ℥xxx
 Aquæ, f.ʒj. M.

Add this to the juice of a fresh lemon, and order to be taken thrice daily. It use must be persevered in.

Arsenicum renders good service when the patient is thin, and assimilation defective; but in fat subjects it should not be exhibited. (BARTHOLOW.)

Belladonna, in full doses, in connection with sulphur baths, has been recommended by Professor GUENEAU DE MUSSY.

Calcii Sulphidum has been recommended in diabetes by Dr. RINGER, gr. $\frac{1}{8}$, thrice daily. It has also been very favorably reported on by other physicians, and deserves a careful trial.

Carbolicum Acidum has been used successfully in Germany.

898. ℞. Acidi carbolici, gr.xv
 Aquæ menthæ piper., f.ʒx. M.

One-third of this quantity, in divided doses, each day, increased gradually to one-half the quantity daily.

Codeia is preferred by Dr. F. W. PAVY (*Guy's Hospital Reports*, 1870,) to opium and morphia, as being equally effectual in controlling the disease without exerting the same narcotic effect. The proper commencing dose is gr.ʒss thrice daily, which may be gradually increased to gr.ij-ijj.

Creasote has been recommended by Sir T. WATSON and Dr. T. H. TANNER. It will in some instances relieve the extreme thirst, especially when the quantity of sugar is small.

Ferrum. Preparations of iron are nearly always useful:

899. R.	Tincturæ ferri choridi,	f.ʒvj	
	Acidi nitro-muriatici,	gtt.lxxx.	M.

Twenty drops three times a day.

Glycerina has been administered in Germany:

900. R.	Glycerinæ puris,	f.ʒvj-vij	
	Acidi citrici,	ʒiiss	
	Aquæ,	Oij.	M.

To be drunk at intervals through the day.

Hydrogen Peroxide has been tried successfully by Dr. JOHN DAY. (*Lancet*, January, 1868.)

901. R.	Tinct. hydroger. perox. ether,	f.ʒss	
	Aquæ,	f.ʒj.	M.

This amount three times a day.

Iodinium is said by Dr. MAYER to be useful in relieving the thirst.

**Ipecacuanha Pulvis Compositus* is a useful remedy, highly recommended by Dr. W. PROUT, in combination with full doses of reduced iron.

Lacticum Acidum. Some cases have been reported decidedly benefited by this agent, but its utility is still doubtful.

Opium and its preparations are well borne and very valuable in diabetes. From gr. vi-xij daily are required to produce a decided impression. Yet it cannot be said to be curative. Of the various alkaloids, Dr. F. W. PAVY (*Guy's Hospital Reports*, vol. xv.) finds that opium, morphia, and codeine, all possess the power of checking the elimination of sugar in the urine. Of the three he considers codeine to be the best. Dr. PAVY begins with half a grain of the last, and gives it, by gradually increasing doses, to the extent of ten grains three times a day. He says it is superior to all other medical agents in its controlling influence over the disease, none other giving the same immediate and striking effects. It should be given in full doses and persevered in, diabetic patients being very tolerant of its use. It produces its best effects in old cases occurring in the aged.

Phosphoric Acid, largely diluted, lessens the inordinate thirst more effectually than any other acidulated drink.

Potassii Bromidum. Dr. AUSTIN FLINT (*American Practitioner*, January, 1870,) relates three cases treated by bromide of potassium in doses of fifteen to twenty grains three times a day, combined with ordinary diabetic diet. In each there was a rapid diminution of thirst, a decrease in the specific gravity of the urine, and an improvement in the general health.

Quinia et Morphia Bromidum. This combination has been used in diabetic phthisis by Dr. BENJAMIN W. RICHARDSON, of London. He states that under its influence the quantity of sugar and of urine notably decreases, the cough is lessened, the appetite and digestion are improved, and the recurrent hectic is held in abeyance more certainly than by any other remedy with which he is conversant.

Quinia Sulphas will diminish the sugar in most instances.

Rheum is praised by Dr. COPLAND, not only as a useful aperient in diabetes, but as a promoter of the digestive and assimilative processes.

Soda Citras. Recent journals have called attention to a recommendation by M. GUYOT DARMECY, of citrate of soda in the treatment of diabetes, given in daily doses of half a drachm to one drachm. Analysis has shown that sugar disappears from the urine when this salt is used with the food instead of common salt.

Soda Phosphas is regarded by Dr. W. PROUT as one of the few saline purgatives admissible in this disease.

Sodii Salicylas. Dr. MULLER WARNER, in the Berlin *Klinische Wochenschrift*, Jan., 1877, gives the following conclusions: 1. Salicylate of soda can completely remove the symptoms of diabetes mellitus, yet its action does not appear to be lasting in many cases. 2. The symptoms of diabetes are made to disappear the quicker by salicylate of soda, the greater the dose in which it is used and the longer it is borne by the patient. 3. The first action of medium daily doses, ℥ii-℥iiss, on diabetes, appears gradually to abate, while large doses, ℥iv in a day, act on patients progressively. 4. Salicylate of soda can be borne in chronic diabetes mellitus in large daily doses for a long time without special disturbance of the general condition.

DROPSY.

FREDERICK T. ROBERTS, M. D., M. R. C. P., LONDON.

This esteemed authority remarks that far too little heed is usually given to the question of *rest* and *position* in the treatment of dropsy. The part affected should be maintained in an elevated posture: the legs, for instance, if anasarcaous, placed higher than the body. *Pressure* should be applied by bandages or adhesive strips, and is a very valuable adjunct. All external dropsical parts should be kept clean and dry. A decided diminution of drinks and liquid articles of food is adapted to dropsical accumulations in serous cavities. The only *diaphoretic* he considers of much practical value is some form of bath which promotes perspiration, such

as the warm, vapor, hot-air, or Turkish bath. They are most valuable in renal dropsy. The best *purgatives* are extract of elaterium (gr. $\frac{1}{2}$, gradually increased to gr. ss), jalap (\mathfrak{D} j to \mathfrak{J} j), and cream of tartar (\mathfrak{J} j to \mathfrak{J} ij). For a diuretic, the following :

902. R.	Extracti elaterii,	gr.v	
	Pulveris scillæ,	gr.xx	
	Pulveris digitalis,	gr.xx	
	Extracti hyoscyami,	gr.xxx.	M.

To make twenty pills. One to be given every other night.

PROF. NATHAN S. DAVIS, M. D., OF CHICAGO.

It is well ascertained that in a pathological sense, dropsy is not a disease, but a symptom directly dependent either on inflammation, mechanical obstruction of blood vessels, or altered composition of the blood. Its rational treatment must, therefore, be guided by an appreciation of these causative changes. Where, as in many cases, we are called upon to strengthen a weak heart and produce efficient action of the kidneys, we can accomplish this by combining digitalis and scutellaria, as :

903. R.	Extracti fluidi scutellariæ,	f. \mathfrak{J} iiss	
	Tincturæ digitalis,	f. \mathfrak{J} j	
	Tincturæ hyoscyami,	f. \mathfrak{J} ss	
	Potassii nitratis,	\mathfrak{J} ij.	M.

A teaspoonful every three hours.

Where there is dyspnea from effused fluid, a blister to the chest aids in relieving this symptom. When diuretic remedies do not act efficiently in such cases, the system will respond to their action promptly by the use of a proper nerve tonic, as :

904. R.	Strychniæ sulphatis,	gr. $\frac{1}{15}$	
	Ferri citratis,	gr. $\frac{1}{15}$.	M.

For one pill. One three times a day.

DR. WALSHE.

This author believes that the abstraction of a small quantity of blood, either by venesection or by cupping of the chest, facilitates the action of hydragogue remedies when a clogged condition of the heart's cavities co-exists with pulmonary congestion and anasarca of more or less acute course, and the general vigor is as yet unimpaired to any serious degree. Of hydragogue purgatives, elaterium, gamboge, bitartrate of potass., and the pulvis jalapæ comp., are the most valuable of the class. The following is a useful formula :

905. ℞. Extracti elaterii, gr.ʒi
 Creasoti, gt.ʒ
 Extracti hyoscyami, gr.ʒj. M.
 For one pill. To be repeated as required.

Diuretics, uncertain in their effects, are often rendered much more active by preliminary cupping or dry-cupping of the renal regions. Of the numerous diuretic agents the *infusion of digitalis* has appeared to Dr. WALSHE the most active, and no amount of apparent weakness of the heart is, *per se*, an absolute contra-indication to its use. Hydragogue purgatives often prevent the action of more direct diuretics; and small doses of blue pill occasionally, at bed-time, are very useful adjuvants.

Diaphoretic drugs are of very little utility, but the free diaphoresis produced by the vapor or hot-air bath is sometimes strikingly beneficial. If there be any tendency to bronchitis, bronchial discharge should be encouraged by the free use of expectorants. Removal of anasarca fluid by mechanical means becomes necessary, if medicines fail in controlling its increase; and if inflammatory changes in the skin appear imminent, scarification is dangerous, being not un-often followed by erysipelas, while *acupuncture* over the insteps, or at the upper and inner parts of the thighs, is not attended with the same danger.

C. MURCHISON, M. D., F. R. S., ETC., LONDON.

906. ℞. Pulveris scillæ, gr.ʒss
 Pulveris digitalis, gr.ʒss
 Pilulæ hydrargyri, gr.ʒj. M.
 For one pill, two or three times a day.

This is a pill which has enjoyed a long and merited reputation for treatment of dropsy in the Middlesex Hospital.

Diuresis will also sometimes be induced by fomenting the abdomen with an infusion of digitalis of about four times the usual strength.

907. ℞. Potassæ acetatis, gr.ʒxx
 Spiritus ætheris nitrosi, f.ʒss
 Decocti scoparii, f.ʒjss. M.
 To be given with each dose of the above pills.

At the same time, an ointment composed of equal parts of blue ointment and ointment of belladonna is to be applied over the abdomen. This treatment is a successful one in cases of ascites due to cirrhosis.

ROBERT J. GRAVES, M. D., DUBLIN.

908. ℞. Potassii nitratis,
 Potassii carbonatis, ʒʒ ʒj
 Tincturæ scillæ,
 Tincturæ digitalis, ʒʒ gr. xxx
 Mellis despumati, f. ʒij. M.
- For an electuary. To be taken in teaspoonful doses, in the course of three or four days, in order to increase the activity of the kidneys, in various forms of dropsy.
909. ℞. Oxymellis scillæ, f. ʒiss
 Potassii bitartratis, ʒij. M.
- Dose—A tablespoonful, as a diuretic, in various forms of dropsy.

DR. GUIBERT, PARIS.

910. ℞. Tincturæ scillæ,
 Tincturæ digitalis,
 Tincturæ colchici, ʒʒ f. ʒijj
 Linimenti camphoræ, f. ʒvj
 Aquæ ammoniæ, f. ʒiss. M.
- To be rubbed well into the abdomen and thighs in dropsy.

DR. PORCHER, PARIS.

911. ℞. Sodii sulphatis,
 Potassii bitartratis, ʒʒ ʒj
 Spiritus ætheris nitrosi, f. ʒijss.
 Syrupi, f. ʒj
 Aquæ, f. ʒvss. M.
- A tablespoonful twice daily, in dropsy accompanied with an active, full circulation. It procures an abundant alvine evacuation, and often, at the same time, a copious secretion of urine.
912. ℞. Tincturæ cantharidis, f. ʒiss
 Spiritus ætheris nitrosi, f. ʒvj
 Syrupi aurantii corticis, f. ʒj
 Aquæ fœniculi, f. ʒviiij. M.
- A tablespoonful two or three times a day, in different forms of dropsy.

PROF. A. GUBLER, FACULTÉ DE MEDECINE DE PARIS.

913. ℞. Tincturæ digitalis,
 Extracti ergotæ fluidi, ʒʒ f. ʒss
 Acidi gallici, ʒj
 Potassii bromidi, ʒij
 Aquæ lauro-cerasi, f. ʒij
 Syrupi, f. ʒijj
 Oxymellis scillæ, f. ʒiv. M.
- A tablespoonful in water, for a diuretic infusion, two or three times a day, in various forms of dropsy.
914. ℞. Scillæ pulveris,
 Digitalis pulveris,
 Scammonii, ʒʒ ʒiv
 Syrupi, q. s. M.

Divide into one hundred pills. From one to five a day; in various forms of dropsy.

ST. MARY'S HOSPITAL, LONDON.

915. R. Elaterii, gr.iss
 Extracti hyoscyami,
 Extracti gentianæ, āā gr.ix. M.

Divide into ten pills. From one to three as a drastic purgative in certain forms of dropsy.

HENRY WILLIAM FULLER, M. D., LONDON.

916. R. Scillæ pulveris,
 Digitalis pulveris, āā ℥j
 Potassii nitratis, ℥v. M.

Divide into fifteen powders. One or two a day, in various forms of dropsy.

917. R. Potassii sulphatis,
 Potassii bitartratis,
 Potassii nitratis, āā ℥iss
 Digitalis pulveris, gr.xv. M.

Divide into twenty powders. From one to three a day, in œdema of the lower limbs. Repeated purgatives.

DR. W. R. BASHAM, LONDON.

918. R. Liquoris ammoniæ acetatis, f.℥j
 Acidi acetici diluti, f.℥ijss
 Tincturæ ferri chloridi, f.℥ij
 Aquæ, f.℥viij. M.

Mix the acetate of ammonia and acetic acid first; then add the iron. The resultant should be of a bright sherry-red color. Dose—two tablespoonfuls three or four times daily. This is the original "Basham's mixture," which has stood the test of the fullest experience.

DIURETICS AND CATHARTICS.

Diuretics are of much service in dropsical affections. In *passive dropsies* they may be combined with tonics and mild stimulants. Their operation is greatly aided by previous depletion, if the patient be not much debilitated. Dr. J. HOPE finds diuretics of the highest service in *dropsy connected with disease of the heart*, especially when accompanied by a scanty secretion of high-colored urine. He recommends particularly in these cases, digitalis, squills and acid tartrate of potash. The dyspnœa, palpitation and cough decrease as the quantity of the urine increases. In *inflammatory dropsy attendant on granular disease of the kidneys*, the use of diuretics, particularly those of a stimulating character, is generally condemned. The administration of diuretics by the *endermic method* is sometimes effectual in removing dropsies. The diuretics

usually employed in the treatment of dropsies are digitalis and digitalin, sweet spirits of nitre, juniper, acetate of potash, nitrate of potash, cream of tartar, squills, broom tops. The following formulæ have been recommended:

919. R. Digitalin, gr. ¼
 Pulveris scillæ,
 Pulveris scammon., āā gr. lxxv
 Mucilaginis, q. s. M.
- Make one hundred pills. Of these two, then four, and lastly six, are to be given daily, according to the effect produced.
920. R. Potassæ nitratis, ℥iij
 Baccar. juniper., ℥xv
 Vini albi, Oiss. M.
- Dose—f. ℥iij daily.
921. R. Potassæ bitartratis,
 Juniper baccar. contus., āā ℥ss
 Aquæ ferv., Oj. M.

This infusion is considered by Prof. STILLÉ to have few superiors in the idiopathic forms of general dropsy.

922. R. Scoparii (seeds), ℥ij
 Alcoholis, f. ℥viiij. M.
- Macerate for ten days. Dose—f. ℥i-ij thrice daily.

If it cause diarrhœa, five or six drops of laudanum may be added; if the patient is much debilitated, iron or quinine may be added. This formula is of service in all forms of dropsy excepting ovarian.

Cathartics, particularly elaterium, gamboge and cream of tartar, are of great service in dropsical affections, but they are to be used with great caution when the patient is nearly debilitated, and, as a rule, to be avoided in dropsy connected with heart disease. Dr. CHRISTISON recommends gamboge in doses of gr. v-vij, every other day, finely powdered and combined with cream of tartar, as a certain and easily managed cathartic in reducing dropsy. *Colocynth* may be employed in dropsical affections connected with disease of the liver, but is inferior to elaterium. *Croton oil* is sometimes useful when given with great caution in small and only gradually increased doses, but is inadmissible if the patient is old or debilitated. *Elaterium* is a very efficient cathartic in dropsy, anasarca and œdema arising in connection with disease of the heart. Dr. J. HOPE gives it in the form of a pill, in the dose of gr. ⅛-¼, com-

bined with capsicum, to prevent griping, and with a grain of calomel, to prevent its emetic effects. One of these pills should produce six or eight watery evacuations, and may be repeated two or three mornings in succession, or every second or third morning, according to the patient's strength. The dose of elaterium may be carried, with caution, to two grains. The effects of this remedy, according to Dr. HOPK, are sometimes truly astonishing, removing an extreme universal anasarca in three or four days; but as it is apt to be violent in its operation, it should be given to strong subjects only. The following formulæ are also valuable:

923. ℞. Elaterii, gr.ij
 Extracti gentiani, gr.xx. M.
 Divide into four pills; order one every hour till it causes free evacuations. Repeat every two or three days for a fortnight, and then suspend for a short time.

924. ℞. Elaterii, gr.j
 Extracti colocynthis compositi, gr.xl
 Extracti hyoscyami, gr.xij. M.

Divide into twelve pills. Take one every night.

925. ℞. Pulveris jalapæ compositi, gr.xx-xxx
 Potassæ bitratis, gr.v-x-xv
 Olei carui, gtt.ij
 Aquæ, f.ʒiiss. M.

For one dose, to be repeated, so as to keep up an unremitting discharge from the bowels. This formula is recommended by Dr. CHAPMAN.

RÉSUMÉ OF REMEDIES.

Ammonia Murias and *Benzoas* are useful in dropsy dependent upon hepatic disease, and also in ovarian dropsy. Dr. COPLAND recommends these combinations with warm diuretic effusions.

Apocynum Cannabinum. This plant, *vulgò* milk weed, has a specific power in dispelling dropsical effusions. It was first brought forward by Dr. JEWETT in an article in the *New York Medical Society's Transactions* for 1869, and later Dr. HUTCHINS reported to the Kings County Society very remarkable results from its use. For instance, in forty-eight hours a man described as frightfully distended, was reduced to a skeleton, and any disposition to accumulation of water was rapidly relieved by an infusion of this drug. If not carefully given it may produce vomiting or diarrhœa, both of which are to be avoided. Dr. JEWETT's mode is to put half-an-ounce in a pint of gin, add an infusion of two ounces of juniper-berries in a pint of water, and give from one to four teaspoonfuls, as the stomach will tolerate it, every four hours until the effect is obtained. He expresses unbounded confidence in it after an experience of thirty years, but he

warns us that, although the *root* is officinal in the United States Dispensatory, it is only the *bark of the root* which is active. A fluid extract is prepared, the dose of which is ten drops.

Armoraciz Radix. Horse-radish was much employed as a diuretic by SYDENHAM and the older physicians, in dropsical affections.

Cannabis Indica has been used (℥xx of the tincture every four hours) as a diuretic in dropsy.

Copaiba. Dr. S. WILKS (*Lancet*, March 21, 1873,) speaks with the greatest confidence of the resin of copaiba as a diuretic. It is particularly useful in cases of dropsy from cardiac or hepatic disease. Fifteen or twenty grains in mucilage and flavored water should be given, three or four times a day.

**Digitalis* is much employed in dropsical affections, alone or combined with squills, mercury, carbonate of ammonia or tincture of the chloride of iron. Sir H. HOLLAND recommends a combination of digitalis and tincture of the chloride of iron in the dropsy following scarlet fever. The same combination is useful in many other forms of dropsy attended with anæmia. Diuresis is sometimes induced by the external application of digitalis to the abdomen, either by fomentation with an effusion of about four times the usual strength, or by frictions with an embrocation of equal parts of tincture of digitalis and soap liniment, or by poulticing with a warm linseed poultice, to which a fluid ounce of the tincture has been added.

Ferri et Potassii Tartras has been found useful as a tonic and diuretic in cases of anasarca connected with disturbed action of the heart, in which it would be dangerous to give any stimulating tonic.

Phosphoricum Acidum Dilutum, diluted with oil and acid, as an embrocation over the abdomen, has been employed with benefit in some cases of dropsy.

Rheum, in small doses, or in infusion as a vehicle for the saline diuretics, squills, juniper or colchicum, is regarded by Dr. COPLAND as a useful medicine in dropsies.

Sinapis is sometimes beneficial, because of its diuretic and stimulant qualities. It is best given in the form of whey, made as follows:

926. B. Bruised mustard seeds, ℥ss. M.
Boil in Oj of milk and strain. The whole to be taken daily in divided doses.

Terebinthinæ Oleum, in doses sufficient to act freely on the bowels and kidneys, is occasionally useful in ascites, unconnected with renal disease or with great gastric irritability or inflammatory action.

Acupuncture is sometimes a useful palliative in anasarca, the needles not being introduced more deeply than to pierce the cutis.

Calcii Chloridum has been found serviceable in ovarian dropsy.

Ferri Iodidum is favorably reported upon by Dr. COPLAND, who conjoins with its internal use the external application of iodine to the inner sides of the thighs, or over the abdomen.

Iodine, employed in the form of injections into the ovarian cysts in cases of ovarian dropsy, is a form of treatment in regard to the safety and propriety of which there is much discussion in the profession. The experience of Dr. WEST and Sir J. T. SIMPSON is in favor of the operation, but Dr. TYLER SMITH reports adversely.

EXTERNAL MEASURES.

Acupuncture is the introduction of needles into the body to relieve or cure disease, and is often needful in dropsical affections. It is performed by running five or six fine steel needles, two or three inches long, right into the dropsical part. The needles are furnished at the blunt end with a knob of sealing-wax or ivory. They should be introduced by a slight pressure combined with a semi-rotary motion between the thumb and forefinger, and withdrawn with the same motion. Ordinarily, no fluid escapes on the withdrawal of the needles, but occasionally a drop of blood follows. Gentle pressure will suffice to restrain any hemorrhage, which exceptionally may occur. The pain is quite trifling and often scarcely noticed. The needles may be introduced into muscular, aponeuritic and tendinous parts, but not into serous cavities. They should be inserted to the depth of one-fourth of an inch to two or three inches, according to the thickness of the muscles.

In regard to the period of sojourn of the needles in the part, Dr. ELLIOTSON remarks that one needle allowed to remain an hour or more is often more efficacious than several speedily withdrawn. The pain sometimes ceases instantly. The operation may require repetition several times; usually, however, twice is sufficient.

HÆMATURIA.

DR. CHARLES HORION, PARIS.

927. ℞.	Ergotæ pulveris,	gr.xv	
	Acidi tannici,	gr.ijj	
	Digitalini,	gr.ʒ.	M.

Divide into ten pills. Give five a day, in hæmaturia. Prolonged cold injections into the bladder, cold compresses to the perineum and pubis.

DR. W. LANGE, ERLANGEN.

928. ℞.	Extracti ergotæ fluidi,	℥xxv	
	Acidi tannici,	gr.xxx	
	Aquæ destillatæ,	f.ʒvj	
	Syrupi,	f.ʒj.	M.

The whole to be given in tablespoonful doses, in the course of the twenty-four hours, in hæmaturia. Cold compresses to the hypogastrium, ice by the mouth, cold enemata.

PROF. S. D. GROSS, M. D., D. C. L., PHILA.

929. R.	Olei terebinthinæ,	ḡā	f.ʒj	
	Acidi sulphurici diluti,		gr. xxx	
	Acidi gallici,		f.ʒss	
	Mucilaginis acaciæ,		f.ʒj.	M.
	Aquæ,			

A dessertspoonful every three hours.

In all cases ice to the hypogastrium and in the rectum or vagina is serviceable; rest in the recumbent posture, the pelvis elevated, and the room cool, are important accessories.

RÉSUMÉ OF REMEDIES.

Alumen injected into the bladder, in a solution of the strength of gr. xx to aquæ Oj, sometimes arrests the discharge in hæmaturia after the failure of ordinary remedies. As an internal remedy in hæmaturia, alum is less effectual than gallic acid.

Argenti Nitras, in very weak solution, injected into the bladder in hæmaturia arising in connection with vesical tumor, is recommended by Sir H. THOMPSON.

Ferri Chloridi Tinctura, in doses of ℥x-xx, several times a day, is a valuable remedy in hemorrhage from the bladder.

**Gallicum Acidum*, alone or combined with sulphuric acid, opium or digitalis, is an excellent astringent in hæmaturia. Dr. W. BRINTON recommends the following formula:

930. R.	Acidi gallici,	gr. x	
	Acidi sulphurici diluti,	℥x	
	Aquæ,	f.ʒj.	M.

For one dose.

**Ipecacuanha* is a valuable remedy in hæmaturia. It should be given in the manner recommended for hæmoptysis.

Krameria, in scruple doses of the extract, is highly commended by Sir T. WATSON, after all ordinary remedies have failed.

**Matico*, in infusion, doses f.ʒij every two or three hours, is regarded by Sir H. THOMPSON as equal to gallic acid or lead in hæmaturia.

**Plumbi Acetas*, in doses of gr. ij-iv, combined with gr. ss-j of opium, is a well-known and effectual remedy.

Tannicum Acidum, in the form of a pill, is an effectual astringent in hemorrhage from the bladder.

Terebinthinæ Oleum is employed with benefit where there is debility, relaxation and anæmia. Prof. BARTHOLOW commends the following formula:

931. R.	Olei terebinthinæ,	f.ʒiij	
	Extracti digitalis fluidi,	f.ʒj	
	Mucilaginis acaciæ,	f.ʒss	
	Aquæ menthæ piperitæ,	f.ʒj.	M.

A teaspoonful every three hours.

INCONTINENCE OF URINE.

DR. BRÜGELMANN, COLOGNE.

Our author relates (*Berliner Klinische Wochenschrift*, February 10, 1873,) a case of well-marked incontinence of urine in a girl aged thirteen, very nervous, and distinctly anæmic, where the administration of syrup of iodide of iron afforded marked relief in eight days. After persevering with it for another fortnight, she was completely cured.

PROF. S. D. GROSS, OF PHILADELPHIA.

In the nocturnal incontinence of children, there should be a bland and unirritant diet, late suppers should be avoided, no drink taken after supper, and the bladder emptied on retiring. The position in bed should be upon the side or belly, to prevent the urine from irritating the neck of the bladder. The internal remedies of most use are as follows:

932. ℞.	Strychniæ,	gr. j.	
	Pulveris cantharidis,	gr. ij.	
	Morphiæ sulphatis,	gr. iiss.	
	Ferri pulvis,	ʒj.	M.

Make forty pills. Give one three times a day to a child ten years old.

The cold shower-bath once or twice a day is a valuable auxiliary.

NEPHRALGIA. (RENAL COLIC.)

Nephralgia as a symptom may be regarded, as expressive of a gravelly or lithic acid diathesis; it arises from the irritation of gravelly particles of lithic acid (amorphous), or of crystalline grains of lithic acid or lithates, detained in the renal tubes, and, till washed out by the urinary stream, giving rise to the group of symptoms known as renal colic.

Bearing this pathological fact in mind, the remedial agency of *diluents*, of alkaline *citrates* and *tartrates*, or any agent which, while it dilutes the urine and increases its quantity, also renders the uric acid more readily excreted, will readily be admitted. Nephralgia arising from the above causes is recognized without much difficulty,

and its temporary relief easily and promptly obtained. The potash salts, as effervescing citrates, mild mercurial alteratives and saline purgatives, especially the Carlsbad or Friederichshall waters, speedily effect the desired relief.

As nephralgia is symptomatic of a gravelly irritation of the urinary passages, so, if the gravelly condition continues unrelieved, nephralgia becomes the sign of a calculous disease of the kidney. The general treatment of *Lithiasis* is a question which is considered under Surgical Therapeutics.

The immediate treatment of nephralgia must be by *opium* in large doses, preferably either by enema or by the hypodermic injection of morphia.

Active counter-irritants over the seat of pain also aid in giving relief.

See further in Surgical Therapeutics, under LITHIASIS.

NEPHRITIS.

ALFRED L. LOOMIS, M. D., OF NEW YORK.

Incipient nephritis, or active renal congestion, can, in most cases, be speedily relieved by the following treatment: First, place the patient in bed, in a room with a temperature above 75° Fah., then apply a dozen dry or wet cups over the lumbar region. Let the patient drink freely of diluent drinks, and administer one or two drastic purgatives. Induce moderate diaphoresis, and avoid carefully all stimulants.

In passive renal congestion, which is generally associated with some cardiac disease, digitalis is the most serviceable remedial agent.

DR. AUSTIN FLINT, OF NEW YORK.

In cases of acute tubal nephritis, this practitioner has derived great advantage from the free use of *water*, or milk and water, when there is a demand for nourishment. His plan is to administer the fluid in small quantities very frequently, a teaspoon or a tablespoonful every few minutes, so that from four to six ounces are taken hourly, or more if it can be given without disturbing the stomach.

A similar plan is highly recommended by Dr. W. H. DICKINSON. He combined with copious draughts of water, repeated doses of digitalis (inf. digit. f. ʒj to f. ʒiv ter die), the real object being to increase the secretion of water at the kidney itself, and thus flush out the choked-up tubules. In the majority of cases thus treated, the urine will increase, the dropsy diminish, and the patients pass into convalescence without the occurrence of the various secondary evils which tend to swell the mortality of the disease.

RÉSUMÉ OF REMEDIES.

- Belladonna* is recommended FARLEY in acute nephritis.
- Colchicum*, conjoined with magnesi useful in the nephritis of gouty subjects.
- Opium* is a remedy of great value, when assisted by diluents, the hip-bath, and large flaxseed poultices over the lumbar region.
- **Baths*. The hot bath, or the hot hip-bath, is a useful soothing remedy.
- Enemata* of three or four quarts of water, at blood heat, will, it is said, sometimes cut short an attack of nephritis. The first injection usually brings away with it much fecal matter; the second, to be given immediately after the return of the first, is usually retained without difficulty.
- **Poultices*. Large light flaxseed poultices not only afford present relief, but arrest the progress of the disease.

VI. DISEASES OF THE BLOOD.

Anæmia—Cerebro-spinal Meningitis—Dengue (Break-bone Fever)—Gout—Hemorrhagic Malarial Fever—Intermittent Fever (Ague, Chills)—Milk Sickness—Purpura Hemorrhagica—Relapsing Fever—Acute Rheumatism—Chronic Rheumatism—Typhoid Fever—Typho-Malarial Fever—Variola.

ANÆMIA.

JULIUS POLLOCK, M. D., M. R. C. P., LONDON.

This writer (in the *Medical Times and Gazette*, 1877), discussing more especially the form of anæmia so often seen in girls and young women, observes that *steel* is the medicine upon which we chiefly rely to effect a cure, but to be successful in the treatment requires some care and discrimination.

If the tongue is coated and the digestion much impaired, the more astringent forms of iron, such as the *sulphate* or the *perchloride*, are often not tolerated at first; and the *ammonio-citrate*, the *mistura ferri co.*, or the *ferrum redactum*, will be the best to begin with. In a large number of cases he has found nothing so successful as a combination of the ammonio-citrate of iron and rhubarb in suitable doses, with equal parts of some bitter infusion and peppermint-water. Sometimes the addition of two or three grains of the carbonate of ammonia seems to be useful. He insists on the rhubarb, although it is so disagreeable to take, as it much assists the action of the steel, especially when the stomach is out of order. If the patient is very nervous, ten grains of the bromide of potassium may be added with advantage to each dose of the mixture. If the rhubarb in the mixture does not act enough upon the bowels, it will be necessary to prescribe some aperient pill to be taken at bedtime. Preparations containing *aloës* are of service, and may be combined with steel. *Pepsine* is often useful with the meals. The diet should be light and simple; beer had better be avoided in most cases, and a glass or two of light claret may take

Dr. CHAMBERS has found this bath to confer muscular strength, even when employed alone. When used in cases of anæmia, while iron is being given internally, it gives an impetus to the improvement of the patient; more iron is taken up, and the blackening of the fæces ceases.

J. M. DA COSTA, M. D., PHILADELPHIA.

TONIC INHALATION.

936. R. Ferri lactatis, gr.ij-ij
 Aquæ destillatæ, f.ʒj.
 For one inhalation. To be administered (by means of any form of steam atomizer throwing a fine spray) two or three times a day. Useful in anæmia, when iron given by the stomach is not assimilated. Also in cases of gastric ulcer, when the constitutional effect of this agent is called for, while it is desirable to spare the stomach.
937. R. Ferri pyrophosphatis, ʒj
 Aquæ bullientis, f.ʒss.
 Mix and add,
 Extracti gentianæ fluidi, f.ʒss
 Curacoæ, f.ʒiiss
 Vini, q. s. ad. fiat f.ʒiv. M.
 Teaspoonful thrice daily.

This preparation, known as *elixir gentianæ ferratæ*, is much used and highly esteemed in this city.

PROF. EASTON, UNIVERSITY OF GLASGOW.

The following formula of our author has become very popular in England since its first publication in AITKEN'S "Practice of medicine," as a general tonic in anæmia and cachexia. It is known as the *Syrupus Ferri, Quiniæ et Strychniæ Phosphatum*:

938. R. Ferri sulphatis, ʒv
 Sodæ sulphatis, ʒvj-ʒj
 Quiniæ sulphatis, gr.ccxij
 Acidi sulphurici diluti, q. s.
 Aquæ ammoniæ, q. s.
 Strychniæ, gr.vj
 Sacchari albi, ʒxiv
 Acidi phosphoricæ diluti, f.ʒxiv.
 Dissolve the phosphate of iron in one ounce of boiling water, and the phosphate of soda in two ounces of boiling water. Mix the solution and wash the precipitated phosphate of iron till the washings are tasteless. With sufficient dilute sulphuric acid dissolve the sulphate of quinia in two ounces of water. Precipitate the quinia with ammonia water and carefully wash it. Dissolve the phosphate of iron and quinia thus obtained, as also the strychnia, in the diluted phosphoric acid; then add the sugar and dissolve the whole, and mix without heat.

The above syrup contains about one grain phosphate of iron, one grain phosphate of quinia, and one thirty-second of a grain of phosphate of strychnia in each drachm. *The dose* might, therefore, be a teaspoonful three times a day.

The amount of phosphate of quinia might be increased according to circumstances; and if eight grains of strychnia were employed in place of six, as in the above, the phosphate of strychnia would be in the proportion of one-twenty-fourth of a grain in every fluid drachm of the syrup. A much larger dose should scarcely be ventured upon.

PROFESSOR S. D. GROSS, M. D., PHILADELPHIA.

939. R. Tincturæ ferri chloridi, f.ʒj
Quiniæ sulphatis, gr.ʒxx. M.
Twenty drops thrice daily, in sweetened water, through a tube.

He prefers the tincture of the chloride to all the other preparations of iron.

Prof. CHARLES D. MEIGS considered *reduced iron* (*ferrum redactum*) to be the most efficient of the chalybeates, in two-grain doses three times a day, after each meal, on a full stomach.

DR. JOHN FORSYTH MEIGS, M. D., PHILADELPHIA.

940. R. Ferri et quiniæ citratis, Div
Extracti gentianæ fluidi, ʒʒ f.ʒij
Spiritus lavandulæ compositi, ʒʒ f.ʒvj
Alcoholis, f.ʒivss. M.
Aquæ,

A tablespoonful thrice daily.

PROF. ELLERSLIE WALLACE, M. D., PHILADELPHIA.

941. R. Ferri pyrophosphatis, ʒij
Curacoæ, f.ʒss
Aquæ, f.ʒijss. M.

A teaspoonful four times a day.

RÉSUMÉ OF REMEDIES.

Ferrum. Chalybeates, given until the blood contains its normal amount of iron, are productive of the best effects in anæmia. If given too long, however, they produce plethora, indigestion and general derangement.

Ferri Mistura Aromatica. The following formula is an excellent one:

942. R. Pale cinchona bark, powdered, ʒj
Calumba root, in coarse powder, ʒss
Cloves, bruised, ʒ¼
Fine iron wire, ʒss.

Macerate in peppermint water, f.℥xij, for three days, agitating occasionally. Filter, add peppermint water, q. s. ad. f.℥xijss; then add compound tincture of cardamoms, f.℥ij; and tincture of orangepeel, f.℥ss, and preserve in a well-stoppered bottle. Dose—f.℥j-ij.

Ferri Peroxidum Hydratum. Dr. S. ASHWELL recommends the following formula, as one which will often agree when other ferruginous compounds cause irritation :

943. R.	Ferri peroxidi hydrati,	gr.viiij	
	Pulveris ipecacuanhæ radicis,	gr.j	
	Hydrargyri cum cretâ,	gr.ij.	M.

Make powder. Take one twice a day.

Ferri Sulphas is a very effective salt of iron in anæmia. It may be combined with gentian; with quinine and strychnia; with a sedative, as conium; with an aperient, as rhubarb or aloes; with hops, as advised by Dr. S. ASHWELL.

944. R.	Ferri sulphatis,	gr.j-ij	
	Extracti humuli,	gr.ij-ijj.	M.

Make pill. Three to be taken daily.

Magnesii Oxidum Nigrum has been employed with success in simple anæmia, instead of iron.

**Oleum Morrhuæ* is a valuable remedy in all forms of anæmia, its efficacy being increased by combination with a ferruginous salt.

Oxygen inhalations have been found of benefit in anæmic conditions.

CEREBRO-SPINAL MENINGITIS.

J. LEWIS SMITH, M. D., NEW YORK.

This author, in speaking of this disease, especially as it appears in children, disapproves of blood-letting, even by leeches. The one drug he relies upon is *bromide of potassium*, in doses of gr.v-vj every two, three, or four hours, to a child of five years, according to the urgency of the case. After the first week it should be given less frequently, and finally omitted. Small doses of hydrate of chloral are best to relieve the pain. Quinia is of no service. Bismuth, in large doses, controls most effectively the nausea. Frequent counter-irritation along the spine by dry cups or an irritating liniment is useful from the first, and also vesication of the nucha later in the disease. Sustaining measures should be commenced early.

DR. J. B. HAMILTON, NEW YORK.

In the *New York Medical Journal*, February, 1875, this writer gives his treatment as follows: For the first twenty-four or forty-eight hours:

945. R. Extracti ergotæ fluidi, $\overline{\text{ʒ}}\text{j}$.
 Spiritûs ammoniæ aromati, $\overline{\text{ʒ}}\text{ij}$. M.
 A teaspoonful in a little water every four hours.

946. R. Potassæ acetatis, $\overline{\text{ʒ}}\text{xij}$.
 Aquæ camphoræ, $\overline{\text{ʒ}}\text{v}$. M.
 A tablespoonful every two hours, until diuresis is produced.

In addition to these remedies at a warm bath, followed by wrapping in flannel, or rubbing with dry mustard, every three, four, or six hours, according to the urgency of the case. Stimulants may be necessary from

As soon as the symptoms begin to ameliorate, the ergot mixture may be diminished in quantity, and at the third or fourth day discontinued. Quinine in large doses will then be found of advantage, and a more stimulant diuretic, as spiritûs ætheris nitrosi, may be substituted for the potassa acetate; and for the sequelæ nothing has proved more serviceable than iodide of potassium, as occasion demanded. This writer considers the bromide of potassium treatment "utterly worthless."

DR. WILLIAM READ, BOSTON, MASS.

One of the most rational and also successful methods of treatment of this disease is described by Dr. READ (*Medical and Surgical Reporter*, vol. xxx, page 469). He usually commences with a full dose of castor oil, or other mild laxative, and then prescribes:

947. R. Ergotinæ (Bonjean's), gr. x.
 Extracti belladonnæ, gr. j-ij. M.
 Make ten pills. One every three hours.

Croton oil is applied to the nucha until a copious eruption is produced, and if the spine is tender it is blistered. Concentrated nourishment is ordered.

PROFESSOR VON ZIEMSEN, GERMANY.

The treatment of this accomplished physician comprises leeches behind the ears, and ice-bags to the head, neck and back; the inunction of fifteen to thirty grains of mercurial ointment twice daily;

SIR. J. FAYER, M. D., K. C. S., ETC.

This distinguished practitioner, speaking of the treatment of dengue as he has observed it in India, (*The Practitioner*, Dec., 1876,) expresses his opinion that neither emetics nor active purgatives are necessary. They do no good, but increase the weakness and aggravate the suffering by the muscular movements necessarily induced. Moderate action of the bowels, followed by a warm carminative aperient, with an occasional dose of calomel, rhubarb, or colocynth, especially if they remain confined, to which there does not appear to be any peculiar tendency, though the alvine evacuations are dark and often slimy and confined at the outset; salines, such as the acetate of ammonia, citrate of potash, with nitro-æther, combined with aconite, are good in the pyrexia. In cases of very high temperature, 105°, 106°, 107°, cold sponging is beneficial.

Belladonna seems to confer great relief in this disease; ten to fifteen drops of the tincture may be given, and two or three such doses, given at intervals of an hour, will sometimes produce excellent effects and give much relief. The extract may be given if prepared in doses of one-third of a grain; or the juice in similar doses to those of the tincture.

For the pains and nocturnal restlessness, morphia or Dover's powder may be given; and, as external applications, liniments containing opium, belladonna, and chloroform are serviceable, rubbed on the spine, back and joints.

Tonics, and a carefully regulated nutritious diet, are also indicated, and all spoliative or depletive measures must be avoided. The tonics should be of the bitter vegetable kind, such as gentian and calumba; with these may be combined a small quantity of quinine, with some mineral acid; and, in some cases, the dilute phosphoric acid, combined with nux vomica or small doses of strychnine, may prove useful.

As to wine, good claret is probably the best, but others may be given if preferred.

Quinine is given more for its tonic than its antiperiodic effects; though, where there is a tendency to relapses, the judicious administration of five or even ten-grain doses may be beneficial in arresting them. Bromide of potassium is recommended by some authorities, and especially when convulsions occur in children. Alkalies, colchicum, and other remedies in use in rheumatism

GOUT.

DR. HENRY W. FULLER, LONDON.

For the purpose of clinical instruction, Dr. FULLER divides cases of acute gout into two classes, namely: 1. Cases in which the excretory organs are originally sound and functionally active—cases in which the attack of gout is due principally to excess and indiscretions of diet; and 2. Cases in which the excretory organs are in some way disordered, and fail in performing their eliminatory functions—cases in which the patient is not necessarily guilty of indiscretions of diet, but in which the liver and kidneys fail in their action, either as the result of functional disorder, or of organic change in their structure.

The first class of cases corresponds with those which pass under the name of asthenic gout; the tongue is usually furred, the urine loaded, and the bowels are commonly torpid. In these cases, until the acute symptoms have subsided, Dr. FULLER restricts the diet to liquids, administers a saline draught containing sulphate and carbonate of magnesia, and a few drops of colchicum wine; occasionally gives an aperient pill containing calomel, aconite and opium, and wraps the joints in finely carded wool, or in flannels steeped in a solution of soda and laudanum. As the acute symptoms subside, a more generous diet is permitted, and some light, bitter tonic, such as tincture of gentian or calumba, is added to the mixture.

The second class of cases have more affinity with what is termed atonic gout: the tongue is often clean and the urine clear—sometimes of low specific gravity—and the bowels are regular. In these cases Dr. FULLER does not restrict the diet to the same degree; he allows a little meat without vegetables, and also, if desired, a glass of sherry or a little spirits and water. He acts freely on the skin by means of the hot-air bath; administers an aperient in the morning, containing taraxacum and sulphate of magnesia, and during the day he gives a warm stomachic draught containing ammonia and a few grains of soda in a light bitter infusion. Occasionally a dinner pill is prescribed containing rhubarb and a grain of colchicum; and in some instances, characterized by pale, clear, urine, a draught containing quinine, the mineral acids and taraxacum, is substituted for the mixture just referred to.

In these cases, as soon as the acute symptoms have subsided, a drachm

of the syrup of phosphate of iron is given each morning before breakfast.

DR. H. SALTER, LONDON.

The *local treatment* of this author is all that is peculiar. It consists in the application of the following lotion :

953. R.	Potassii iodidi,	ʒj	
	Potassæ bicarbonatis,	ʒj	
	Aquæ bullientis,	ʒj.	M.

To this a little tincture of opium may be advantageously added.

Double lint, saturated with this lotion, is applied to the part affected, and covered with oil-silk ; to that is put a layer of cotton-wool, and the whole swathed in a flannel bandage. The lint should be taken off from time to time, and re-dipped in the lotion. The relief that the patients experience from this application is very great. With or without this lotion there are three other things on which Dr. SALTER insists in the local treatment of a gouty joint—perfect physical rest, protection, and preventing the part affected being too dependent.

PROF. S. D. GROSS, PHILADELPHIA.

954. R.	Vini colchici radidis,	f.ʒj	
	Morphiæ sulphatis,	gr.ʒ.	M.

For one dose, at bedtime, in gouty affections of the joints.

This treatment should be preceded by purgation or venesection, if indicated, and be followed in the morning by a gentle laxative. These doses are recommended by our author as the most efficient, and as seldom disappointing the most sanguine expectations. Where there is a full, bounding pulse, indicating excessive arterial action, then the following will come into play :

955. R.	Tincturæ aconiti radicis,	f.ʒj	
	Morphiæ sulphatis,	gr.ʒj	
	Antimonii et potassæ tartratis,	gr.ʒj	
	Aquæ,	f.ʒjss	
	Syrupi zingiberis,	f.ʒss.	M.

A teaspoonful every three hours.

Veratrum viride may be substituted for the aconite in the same or double the dose. The action of these potent remedies should, of course, be carefully watched and kept within proper limits. Together with the above means the following should be employed, to neutralize the acid state of the blood :

956. ℞. Potassæ bicarbonatis, ʒj
Sodæ bicarbonatis, ʒij. M.
For six powders. One to be taken every six hours, in a wineglassful of water.

As a local application nothing will be found better than :

957. ℞. Tincturæ opii, f.ʒj
Linimenti saponis, f.ʒij. M.
To be rubbed in twice a day, and constantly kept in contact with the affected joint by means of a piece of flannel covered with oiled silk. A fly-blister may be used if the disease manifests a disposition to linger.

PROF. A. B. GARROD, KINGS COLLEGE, LONDON.

958. ℞. Lithii carbonatis, gr. iv
Aquæ rosæ, f.ʒvj. M.

This solution is to be warmed and then imbibed by means of charpie or a piece of sponge, and applied on the seat of pain, and covered by a sheet of gutta-percha. Two or three times a day the application is to be wet with the solution, in order to keep it always moist. Internally, the carbonate of lithia, in doses of gr. iij-vj, or the citrate, in doses of gr. v-x, in aerated water.

959. ℞. Fraxini foliæ, ʒss
Aquæ, Oj.

The leaves are to be boiled in the water during ten or fifteen minutes; then strain and sweetened. To be taken in fractional doses during the day, an hour before the meals, in chronic gout.

The leaves of common ash, though much extolled in France and Germany in the treatment of gout and rheumatism, have not succeeded in the hands of our author, in acute gout; when taken for a long time and in large quantities, in the form of decoction of the leaves, they have probably some influence in keeping off the attacks in chronic gout.

DR. GALTIER-BOISSIERE, FRANCE.

The author gives eight drops of the tincture of colchicum about every two hours, in a small cup of tea or weak coffee, until thirty-two drops are administered during the first day, in acute gout. The next day the colchicum is stopped, and the patient put on the use of sulphate of quinine, fifteen grains being given, in four doses in the course, with a few drops of dilute sulphuric acid in a cup of weak coffee. The third day, forty drops of tincture of colchicum

are given; the fourth day, fifteen grains of quinine; and the fifth day, fifty drops of the tincture; that is to say, each time one-fourth more. This increase of dose is to be stopped so soon as abundant diaphoresis and diuresis show themselves, which usually are followed by a marked diminution of the pain. But the quantity of one fluid drachm and a half of the tincture is never to be exceeded during the day, taken in four doses, at four hours' interval.

RÉSUMÉ OF REMEDIES.

Aconite. Professor GROSS recommends tincture of aconite root, with morphia and antimony, when there is excessive arterial action.

Ammonii Phosphas has been recommended, in ʒj doses daily, highly diluted. DR. GARROD has derived much benefit from the long-continued use of this salt in chronic conditions of the gouty habit.

Cajuputi Oleum, in doses of gtt.v-vj, frequently repeated, is serviceable in retrocedent gout.

Colchicum, in gout, has been compared to cinchona in ague, but unfortunately, unlike the latter remedy, it does not prevent a return of the disease. Dr. A. B. GARROD states that often an almost magical change is produced by a single large dose, without the least increase in any of the secretions, the effect showing itself in the rapid decrease of the pain, and other symptoms of the joint inflammation.

Fraxini Folia. Ash leaves, in infusion, have been used by Dr. A. B. GARROD with advantage, but, as he remarks, the amount of the infusion given daily being considerable, the action of the diluent must not be forgotten.

Guaiacum is considered by Dr. A. B. GARROD as especially useful in the asthenic gout of old subjects. It may be given continually, for a long time, without injury. This remedy is much employed in Germany.

Muriaticum Acidum Dilutum is strongly recommended by Dr. J. F. DUNCAN (*Medical Press*, May 2, 1866), as acting more directly upon the primary cause of the disease, the presence of lithic acid in the blood, and holding out a greater prospect of effecting a real cure than any antacids. He directs the following mixture:

960.	R.	Acidi muriatici diluti,	f.ʒiiss	
		Spiritus chloroformi,	f.ʒij	
		Tincturæ colchici,	f.ʒj	
		Infusi cascarillæ,	f.ʒvj.	M.

Two tablespoonfuls every three hours.

Lithiæ Carbonas is a valuable remedy. So also are the natural lithia waters of Baden-Baden.

Magnesiæ Carbonas, dissolved in an excess of carbonic acid, is an excellent manner of exhibiting magnesia, which is often of great service in chronic gout.

Manna is an excellent aperient, in the following combination :

961. R.	Mannæ,	ʒiſs	
	Vini colchici,	ʒiſs	
	Potassii tartratis,	ʒij	
	Tincturæ cardamomi compositæ,	f.ʒj	
	Infusi sennæ compositi,	f.ʒx.	M.

For one draught.

Oleum Olivæ is strongly recommended by Dr. J. SPENCER RAMSKILL, of London. See above.

Opium is now rarely given alone internally in gout, but is frequently combined with other remedies.

Podophyllum is given with good effect, in the form of pill, with henbane or belladonna, when it is important to secure free biliary evacuations.

Potassii Iodidum is frequently indicated in chronic gout. When fluid effused into the joint cavities is slow of absorption, the iodide often acts to great advantage.

Potassii Nitræs is recommended by Prof. BENNETT, of Edinburgh, in acute gout.

***Rheum**, taken regularly between the attacks, often wards off a return. At the period of an impending paroxysm, Professor GRAVES, of Dublin, advises the following :

962. R.	Pulveris rhei,	ʒj	
	Aurantii corticis,	ʒij	
	Pulveris aloes c. canella,	ʒij	
	Spiritus vini gallici,	ʒiv.	M.

A tablespoonful of the strained liquor, in water, night and morning.

EXTERNAL APPLICATIONS.

Aconitia, applied locally, over the seat of the pain, is an excellent palliative.

Alcohol. Sir C. SCUDAMORE recommends a tepid lotion of one part of alcohol and three of camphor mixture.

Cajuputi Oleum, externally, is of much benefit.

Colchicum, locally to the affected part, is highly praised by Dr. LAYCOCK.

Iodoform, externally applied, has succeeded in the hands of some practitioners in relieving the pain.

***Iodine**, locally used, is a very valuable remedy. The following formula is said to afford sometimes almost instant relief :

963. R.	Iodinii,	ʒij	
	Alcoholis,	f.ʒj	
	Aquæ,	f.ʒvj-f.ʒj.	M.

Dr. J. PEREIRA says that no external remedy gives such relief as iodine, but that the skin of different individuals is most un-

equally susceptible to its influence ; in some it excites great pain, while in others it produces scarcely any. It is especially useful when effusion into the synovial membranes or sheaths has taken place.

Morphia. A solution of morphia, applied by means of lint, often affords great relief :

964. R.	Morphiæ muriatis,	gr.viiij	
	Aquæ,	ʒ.ij.	M.

Oleum Menthae, painted on the painful part, will not infrequently relieve the pain.

Pressure. A number of recent writers have borne strong testimony to the value of gentle and equable pressure over the affected limb in gout. Some diachylon should be spread on felt, and over this a flannel bandage be firmly and equably applied. The great art in this treatment is to have the pressure evenly distributed.

Sinapisms to the inflamed part often afford speedy relief. They are also useful in retrocedent gout, in inviting a return of the disease to its original seat.

Sodii Phosphas. The finely powdered bibasic phosphate of soda, sprinkled over moistened spongeo-piline, and applied so as to envelop the whole of the affected part, affords immediate relief in many cases.

Strychnia has been employed hypodermically in the later stages of gout paralysis.

Sulphur. The exposure of the bed-clothes to strong sulphur fumes, before they are spread over the patient, is recommended to induce copious perspiration and relief of pain.

Sulphurosum Acidum. Dr. DEWAR, of Ireland, has urged fumigation with sulphur fumes. He advises that the bedclothes of the patient be exposed to the strong fumes, which produces active diaphoresis.

Tabaci Folia. The application of the moistened tobacco leaf often affords great relief.

Turkish Baths have been highly spoken of to keep the skin active.

Veratria, in ointment, is of occasional service, and is recommended by Sir C. SCUDAMORE :

965. R.	Veratriæ,	gr.xxx	
	Unguenti,	ʒj.	M.

Zingiber. A ginger plaster placed over the epigastrium relieves the pain or gout in the stomach.

HEMORRHAGIC MALARIAL FEVER.

DR. R. D. WEBB, OF ALABAMA.*

The indications of treatment are—to arrest the paroxysms; to relieve the nausea and restlessness so as to facilitate the administration of medicines, and add to the comfort of the patient; to sustain the patient by appropriate food and stimuli; to assist the emunctory functions of the liver and skin, and in the latter part of the disease, to promote the action of the kidneys, so as to prevent the accumulation of deleterious matters in the blood, and to prevent a recurrence.

He usually commences with a mercurial purge, and follows with a full amount of quinine, gr. xxx, in four doses, one every two hours, if the stomach will retain it. If it will not, the drug should be used hypodermically. Chloral hydrate and bromide of potassium by enema will lessen the gastric irritability; or small doses of morphine may be given for that purpose. Of the objections to quinine on the ground that it increases the blood in the urine, Dr. WEBB says: "I have ever looked upon the mere fact of blood in the urine, as of minor importance, and have never directed remedies specially to the arrest of this symptom. I believe it to be dependent upon the condition of the nervous system, and by directing my remedies to the source of the evil, I expect to remove the *cause*, and the *effect* will cease. This I believe is best accomplished by the use of quinine; and if in its administration the hæmaturia is temporarily increased, as I have no doubt it is at certain times, I do not upon this account hesitate to use it. I regard it here, notwithstanding this temporary increase, as the great hæmostatic, by its power of removing or counteracting the condition upon which the hæmaturia, in common with other symptoms, is dependent."

DR. THOMAS J. PUGH, OF LOUISIANA.

This writer states that he became dissatisfied with quinine and mercury in this troublesome form of malarial poisoning, and now uses instead:

966. R.	Vini ergotæ,	f.3j	
	Tinct. ferri chloridi,	gtt.xx	
	Olei terebinthinæ,	gtt.v.	
	Spiritus ætheris nitrici dulcis,	gtt.xx.	M.

This amount, in a gill of water, every two hours until the urine clears.

**Hæmorrhagic Malarial Fever.* A Monograph, Selma, 1876.

After this, omit the ergot and oil turpentine, but continue the iron and nitre, and add to them a preparation of nux vomica—the fluid extract—in five-drop doses, every four hours, until the patient is safe from a recurrence of the disease, and then direct it every eight hours, or before meals. The danger in this disease is not from an excessive flow of bloody urine, but rather from a suppression of urine. (*Atlanta Med. and Surg. Jour.*, Jan., 1877.)

For Résumé of Remedies, see under Intermittent Fever.

INTERMITTENT FEVER (AGUE, CHILLS).

THE PERSONAL PROPHYLAXIS OF MALARIA.

The general belief that the cinchona alkaloids are reliable prophylactics against the malarial poison is so far from correct that it should be renounced. It is even dangerous, for it has been well established, by the observations of the English surgeons in West Africa and elsewhere, that when long used as a preventive, it not only loses its prophylactic, but also its therapeutic powers. (See Surgeon Gore's *Medical History of the West African Campaign*, page 164.) The best prophylactics are a generous diet, plenty of work, mental and physical, but not to exhaustion, avoidance of night air and wet, proper clothes, and a cheerful disposition. The eucalyptus, in the form of infusion or extract, and infusion of box leaves, have been lately advocated on respectable authority.

The free use of pepper in the food, and the habit of taking a small cup of strong coffee on rising, may be favorably mentioned. During the night, doors and windows should be closed, and an open fire should be lighted in the evening and early morning. The drinking water should be filtered, or thoroughly boiled before using.

From the experience of English surgeons in India (*Indian Medical Gazette*, March, 1871,) *quinodine* is the alkaloid of bark that ranks highest in prophylactic qualities. Three grains daily was the amount prescribed.

PROF. S. M. BEMISS, M. D., NEW ORLEANS.

This writer (*New Orleans Medical and Surgical Journal*, Sept., 1876,) states that in the treatment of malarial fever, three objects

colocynth, and castile soap: make two pills and give at one dose. Restorative and eliminant remedies may be combined, as:

971. R.	Magnesiæ sulphatis, Ferri sulphatis, Acidi sulphurici diluti, Syrupi aurant. cort., Aquam,	ʒj-ij ʒij f.ʒj f.ʒvij ad. f.ʒvj.
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A tablespoonful in water twice daily.

The third indication is best subserved by the preparations of cinchona. These may be given habitually, as, for example, from three to five grains of quinine in one or two ounces of coffee daily.

The alimentation of anæmic malarial patients is a most important consideration. They should be liberally supplied with carefully selected and well-prepared animal food, to which such vegetables and fruits may be added as are regarded suitable to their condition. Digestion may be aided by acid solutions of pepsin, or by mineral acids diluted in some bitter infusion. The list of promoters of digestion is incomplete if we omit alcoholic drinks, or, for many patients, coffee and tea. A good prescription is the following:

972. R.	Tinct. cinchonæ comp., Dessertspoonful, in water, after each meal.	ʒiv.	M.
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Whenever considered indicated, from five to eight drops of nitromuriatic acid may be added to each dose. Alcohol may also be given in the form of wine or beer.

In violent forms of *congestive chill*, or *algid pernicious malarial fever*, Dr. BEMISS states that opium, chloroform, belladonna, chloral hydrate and bromide potash, prove more or less valuable, according to the idiosyncrasy of the patient, or the circumstances under which they were used. Opium is the most valuable of the agents, and may be combined with other drugs, as an adjuvant. It is better to use it in moderate doses, and repeat these at short intervals. Twenty drops of laudanum, with half a teaspoonful of chloroform, is an efficient prescription. One-sixth of a grain of morphia, with one-fortieth of a grain of atropia, may be injected subcutaneously. Nitrite of amyl is highly recommended. These remedies may be used at any stage of the chill without fear of prejudicing the subsequent career of the case.

Piperine may be used instead of the oil.

DR. A. R. HALL, OF INDIA.

The use of *emetics* in intermittent fever should not be neglected. Often the anti-periodic will not act until the stomach is thus emptied. Dr. HALL also states (*The Practitioner*, May, 1875,) that in India it is customary to give an emetic at the commencement of the cold stage, when shivering first begins. Sulphate of zinc, gr. xxx, followed by copious draughts of hot water, say three or four pints, if the patient can be induced to swallow them, will generally induce free vomiting, and cut short the paroxysm at once. Ipecacuanha may also be employed, but the depression it leaves behind it is much greater than the zinc.

DR. J. B. SCRIVEN, OF LAHORE, INDIA.

This English surgeon reports very favorably of the *nitric acid bath* in malarial disorders. (*Lancet*, Nov., 1876.) He has used it with the best effect in a vast number of cases. For children it is an extremely pleasant remedy, though it often produces a slight irritation of the skin. They generally sleep soundly after it, and rapidly improve in health. It is always necessary to continue the baths daily for at least a fortnight, often for a month or six weeks. With adults, of course, it is less manageable, but not less efficacious. In one case, of a gentleman who had suffered much from fever, and was greatly reduced in strength, he administered quinine by the mouth for the immediate arrest of the disease, afterwards injected it subcutaneously, and also prescribed the nitric-acid bath. The three remedies combined had a very marked effect, and he remained free from fever for a long period.

The chronic enlargement of the spleen which results from intermittent fever ought to be always treated by topical applications, in addition to the general treatment for the malarious condition. Repeated blisters are often useful in grown people, but they interfere with the use of the nitric-acid bath, and are otherwise inconvenient. Nothing seems to answer so well as iodine paint, ten, twenty, or thirty grains to the ounce of rectified spirit, according to the age of the patient or the irritability of his skin. This should be applied once a day till the skin becomes a little sore, then suspended, and reapplied.

As pure nitric acid is very expensive, it may be well to add that he has found the impure acid, which is very cheap, and read-

ily procurable, quite good enough for the acid bath. It contains a little hydro-chloric acid and iron. A wooden tub should, of course, be used in preference to a metal one, or, in the absence of this, an earthen vessel.

PROF. M'LEAN, M. D., OF INDIA.

This distinguished authority speaks in the highest terms of *Warburg's tincture*. His words are :

"I have treated remittent fevers of every degree of severity, contracted in the jungles of the Deccan and Mysore, at the base of mountain ranges in India, on the Coromandel Coast, in the pestilential highlands of the northern division of the Madras Presidency, on the malarial rivers of China, and in men brought to Netley Hospital from the swamps of the Gold Coast, and I affirm that I have never seen quinine, when given alone, act in the manner characteristic of this tincture. And although I yield to no one in my high opinion of the inestimable value of quinine, I have never seen a single dose of it given alone, to the extent of nine grains and a half, suffice to arrest an exacerbation of remittent fever, much less prevent its occurrence, while nothing is more common than to see the same quantity of the alkaloid in Warburg's tincture bring about similar results."

The following is the formula, as made known by Professor M'LEAN :

978. ℞.	Aloës (socotr.)		℥ij
	Rad. rhei. (East India),		
	Sem. angelicæ,		
a.	Confect. damocratis,	℥℥	℥iv
	Rad. helenii (s. enulæ),		
	Croci sativi,		
	Sem. fœnicul.,		
b.	Cret. præparat.,	℥℥	℥ij
	Rad. gentianæ,		
	Rad. zedoariæ,		
	Pip. cubeb.,		
	Myrrh. elect.,		
	Camphor,		
c.	Bolet. laricis,	℥℥	℥j.

The above ingredients are to be digested with 500 oz. proof spirit in a water-bath for twelve hours; then expressed and ten ounces of disulphate of quinine added; the mixture to be replaced into the water-bath till all the quinine be dissolved. The liquor when cool is to be filtered, and is then fit for use.

a. This confection, which consists of an immense variety of

aromatic substances, was once officinal, and is to be found in the London Pharmacopœia, 1746.

b. Dr. Warburg states that this ingredient was added to correct the otherwise extremely acrid taste of the tincture. Many other substances were tried, but none answered so well as prepared chalk.

c. This is the *Polyporus laricis* (*P. officinalis*, *Boletus purgans*, or larch-agaric), "formerly," says PEREIRA, "used as a drastic purgative, and still kept by the herbalist."

The tincture is of a deep brown color, has an aromatic and slightly terebinthinate odor, and an intensely bitter and warm aromatic taste; a noteworthy point about it is that there is nothing spirituous in either taste or smell, and it seems as if the alcohol employed in its manufacture were entirely saturated, and so to speak extinguished, by the substances taken up. The tincture evaporates readily, leaving a copious brown residue.

DR. J. MILNER FOTHERGILL, OF LONDON.

The great remedy in malarial attacks is *quinine*. It is best given in an acid solution. The following is an agreeable dose:

979. R.	Quiniæ sulphatis,	gr. x	
	Acidi sulphurici diluti,	℥. x	
	Syrupi aurant.,	f. ℥ij	
	Aquam,	ad. f. ℥j.	M.

This amount three times a day.

In some cases where the quinine seems powerless to break up the chill, the administration of an emetic each morning brings the disease at once under the control of the drug.

Some patients manifest a marked intolerance of quinine, especially those who have resided in the tropics. In such patients arsenic, strychnine, bebeerin, and the eucalyptus must be resorted to.

The following combination is highly extolled by a writer in the *American Medical Biweekly*, March, 1877, in order to prevent the return of the chills after they have been broken by quinine:

980. R.	Quiniæ sulphatis,	℥ij	
	Tinct. ferri chloridi,	f. ℥ij	
	Liq. potassæ arsenitis,	f. ℥iiss	
	Tinct. opii,	f. ℥ss	
	Strychniæ sulphatis,	gr. ij	
	Alcoholis,	f. ℥viiij	
	Aquæ,	f. ℥xxiv.	M.

One tablespoonful three times daily.

For breaking up chronic chills the following combination has been highly praised by Dr. W. O'DANIEL, of Georgia. (*Atlanta Medical and Surgical Journal*, February, 1872.)

981. ℞.	Quinæ sulphatis,	ʒij	
	Ferri redacti,	ʒiiss	
	Extr. aconiti,	gr. xxx	
	Morphiæ sulphatis,		
	Strychniæ sulphatis,		
	Acidi arseniosi,	ʒiij	M.

Make sixty pills. One after breakfast and one after supper.

PROF. HARVEY L. BYRD, M. D., BALTIMORE.

In the treatment of that much-dreaded and often rapidly fatal condition, the "Congestive Chill," Prof. BYRD knows nothing of equal value to *chloroform* and *opium*, used as follows:

982. ℞.	Chloroformi,	q. s.	
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Inhale to anæsthesia, or to the restoration of the circulation in the extremities.

The doctor often prescribes inhalation of chloroform to a limited extent to mitigate or curtail the *cold stage* in intermittent and fevers. Or,

983. ℞.	Pulveris opii,	gr. ij	
	Pulveris capsici,	ʒj.	M.

Make viiij powders. One powder every hour, in severe cases, until the re-establishment of the circulation.

He is accustomed to give between the powders ten to fifteen drops of aromatic sulphuric acid, in a little water.

When reaction of the circulation is established in "congestive chill," the case should be treated in the usual manner.

DR. BENJAMIN LEA, PHILADELPHIA.

This practitioner recommends a full dose of quinine about an hour before the chill, and half an hour before it the following:

984. ℞.	Chloral hydratis,	ʒj	
	Aquæ camphoræ,	ʒj.	M.

For one dose.

PROFESSOR GREENSVILLE DOWELL, M. D., TEXAS.

985. ℞.	Quinæ sulphatis,	gr. xx	
	Ferri et quinæ citratis,	gr. xxx	
	Extracti gentianæ,	gr. x	
	Extracti hyoscyami,	gr. xij.	M.

Make twelve pills. Give one every hour till six are taken.

DR. PAVESI, MORTARA, ITALY.

990. R. Sodii chloridi, ʒiiss
 Ferri redacti, ʒv
 Acidi hydrochlorici, f.ʒv
 Salicin, ʒj. M.

Gr.v-x three times a day, in debility from malaria.

Salicin, in one to two-scruple doses, three to six times daily, is an efficient remedy in mild intermittents.

DR. CLEMENS, PARIS.

991. R. Acidi arseniosi,
 Potassæ carbonatis, aa ʒj.
 Dissolve in water, f.ʒix, and add brominii, ʒij. Keep in the dark, and shake frequently, for four weeks. Three or four drops, in water, twice a day.
992. R. Extracti eucalypti, ʒij
 Tincturæ cinchonæ, f.ʒij. M.
 One or two teaspoonfuls three times daily.

The eucalyptus has not yet met the expectations of American physicians.

993. R. Quinæ sulphatis,
 Ferri redacti, aa ʒj
 Acidi arseniosi, gr.ij
 Piperinæ, Diss. M.

Make twenty pills. One three or four times a day. A favorite prescription, in obstinate chills, with some Southern physicians.

THE HYPODERMIC USE OF QUININE IN INTERMITTENT.

The subcutaneous injection of quinine in malarious fevers has been frequently tested at home and abroad, the efficacy of the drug in controlling fever, and the saving effected in consequence of the smaller quantity required, being sufficiently important to fully justify the share of attention which the subject has received. When rapid action is called for, or when, from irritability of the stomach idiosyncratic or symptomatic, quinine is not well borne, or again when its exhibition *per viam naturalem* is resisted, the hypodermic injection of the drug may be advisable.

By this plan there is a great saving in the quantity used, the cases being usually conducted to a satisfactory conclusion, so far as fever is concerned, with a very moderate expenditure of quinine, say three grains or so. On the double ground of checking the fever and economy in the consumption of the drug, this

mode of treatment would seem to be superior to the old method, but, unfortunately, a drawback presents itself in inflammation at the point of insertion of the syringe. This may be avoided to some extent by a careful solution and administration.

Surgeon Major GEORGE Y. HUNTER (*Lancet*, March, 1876,) of Bombay, uses

994. R.	Quiniæ sulphatis,	gr.lxxx	
	Acidi citrici,	gr.ccc	
	Aquæ destillatæ,	f.ʒj.	M.

Dissolve with the aid of heat. ℥vj contains one grain of quinine.

The formula of Dr. LEORUST, of Bremen (which is recommended by Dr. AUSTIN FLINT) is:

995. R.	Quiniæ sulphatis,	gr.xxxiiij	
	Acidi sulphurici,	gtt.xj	
	Aquæ destillatæ,	f.ʒj.	M.

Mix the acid and water, and gradually add the quinine, stirring with a glass rod; if the solution is not clear, it may require one, possibly two drops more of the acid. Filter through paper, and it is ready for use. Ten *drops* of this mixture is equivalent to fifteen *minims*, which contains one grain of quinine. One grain hypodermically is equivalent to three or four by the mouth.

As regards the best place for insertion, it is stated that the region of the collar bones is the most preferable. Any spot will do that is at all suitable for hypodermic injections, but when it is inserted where the muscles are in constant use just beneath the skin and fascia, it will be apt to occasion soreness and swelling. Abscesses are rare when the solution is kept free from particles and sediment. If care is not taken, the instrument used may be spoiled by the acid acting on the piston and other parts; to avoid this, it should be washed after using, first in clear water, then in a solution of soda (a teaspoonful in a glass of water), then in clear water again.

- Ether perhaps will answer for the same purpose, but is not always convenient.

There is considerable pain on forcing out the solution, for the acid is irritating to the tissues, and there are frequently hard, indurated spots where the fluid is forced out, lasting a few weeks or even months, but they always gradually disappear.

Dr. J. M. FOTHERGILL recommends as not liable to cause ulceration:

996.	R.	Quiniæ sulphatis,	gr. x	
		Acidi sulphurici diluti,	℥x	
		Aquæ destillatæ,	gtt. c.	M.

The hypodermic method does not produce ringing in the ears, deafness, or other unpleasant effects of quinine taken by the mouth. It ought, as a rule, to be used only in those instances in which the ordinary method is inapplicable, as the following: 1st. Those in which quinine by the mouth has failed to stop the fever. 2d. Those in which there is great irritability of stomach or great disgust for the remedy. 3d. Those in which the fever, though controlled by quinine in the ordinary method, yet requires large and repeated doses. 4th. Those in which the effect on the head or nervous irritability produced by the drug is distressing. 5th. Cases in which death seems to be imminent, and in which it is necessary to produce a decided and rapid effect upon the fever. The following formula, containing gr. iv to f.ʒj, is an appropriate one:—

997.	R.	Quiniæ sulphatis,	gr. xxxij	
		Alcoholis diluti,	f.ʒvijs	
		Aquæ ammoniæ,	f.ʒss.	M.

Dr. LENTE'S formula is :

998.	R.	Quiniæ sulphatis,	gr. l	
		Acidi sulph. diluti,	℥c	
		Acidi carbolicli liq.,	℥v	
		Aquæ,	f.ʒj.	M.

Dissolve the quinine by the aid of heat, and after filtration add the carbolic acid.

All acid solutions, however, cause considerable pain, and it is probably better to dissolve the quinia in ether.

Prof. W. BERNATZIK recommends :

999.	R.	Quiniæ,	gr. vij	
		Etheris sulphurici,	℥xv.	M.

The alkaloid can be obtained by precipitation from a solution of the sulphate of ammonia.

THE TREATMENT OF ENLARGED SPLEEN OR AGUE CAKE.

According to some authorities, *mercury* in any form is contra-indicated when malarial enlargement of the spleen exists.

The *hyposulphite of soda* is recommended by Dr. THOMAS HILL of Missouri. (*Louisville Medical and Surgical Journal*, 1872.)

1000. R.	Quiniae sulphatis,	gr.viiij
	Sodae hyposulphitis,	gr.xvj
	Acidi sulph. aromat.,	gtt.vj
	Aquae,	f.ʒj.

A teaspoonful every two hours to a child. Ten grains of the soda, thrice daily, may be given to an adult.

In the enlarged spleen, often associated with leucocythemia, which so frequently follows malarial disease, the *iodide of ammonium*, gr.v three times a day, with inunctions of the red iodide of mercury, has been found efficient. Dr. DA COSTA prefers, however, the treatment by the hypodermic administration of *ergotine*, gr.iii-v daily, which has certainly produced excellent results. Dr. J. B. C. GAZZO, of Louisiana, (*Medical and Surgical Reporter*, March, 1877,) reports favorably of throwing the injection into the tissues of the spleen itself. He uses:

1001. R.	Fld. extr. ergotæ ether.,	f.ʒij	
	Glycerinæ,	f.ʒj.	M.

This solution was injected into the spleen, two syringefuls at once, and repeated after twenty-four hours. The more deeply the needle is driven the less is the sensibility. Constipation must be avoided.

Professor MOSLER, of Switzerland, has also employed parenchymatous injections to reduce the spleen. He employed *carbolic acid* in a two per cent. solution, and *liquor potassæ arsenitis*, one part to ten of distilled water. The former caused so much pain that he did not continue it; the latter, however, was repeated a number of times, and brought about a very decided diminution of the organ. (*Eulenburg, Die Hypodermatische Injection*, Berlin, 1875.)

Dr. R. BARTHOLOW believes that small doses of the *iodide of ammonium* combined with arsenic will reduce an enlarged spleen from malarial causes; as

1002. R.	Ammonii iodidi,	ʒj	
	Liq. potassæ arsenitis,	f.ʒss	
	Tincturæ calumbæ,	f.ʒss	
	Aquæ,	f.ʒjss.	M.

A teaspoonful three times a day before meals. Paint the side with tinct. iodin. compos.

Very excellent results have been reported by Dr. L. MCGUIRE, of California, from the use of *strychnia* or *nux vomica* (*Pacific Medical Journal*, Feb., 1873,) in ague cake. He gives one sixteenth of

a grain of the former, or ℥xx of the tinct. nucis vomicæ, three times daily, combined, if need be, with iron or quinine.

In splenic and hepatic enlargement, Dr. EVERS (*London Medical Record*, June, 1875,) reports the best results from the milky juice of the unripe fruit of the paw-paw, *Carica papaya*. About a teaspoonful of the juice is mixed with sufficient sugar and divided into three boluses, one to be taken thrice daily. If it causes symptoms of gastric irritation, a little opium may be added. From twenty to twenty-five days is sufficient for a cure in nearly all cases of ague cake.

Of *external remedies*, blistering, painting with the compound tincture of iodine, inunction of ointment of biniodide of mercury, local abstraction of blood, etc., have each been lauded, but it is doubtful whether any of them is particularly useful. In Germany the "dry-packing" method is employed at hydropathic establishments, and is said to reduce the spleen at a rapid rate without any other medication. It is certainly a simple and excellent derivative. B. SKORZEWSKY (*Wiener Med. Wochensch.*, 1876, No. 21), believing the enlargement of the spleen in ague to be due in chief to a depressed action of the vaso-motor nerves, employed *faradization* to diminish the size of the gland. He placed the electrodes, one over the anterior, the other over the posterior border of the spleen, and gradually increased the intensity of the current. Each sitting lasted 15 to 20 minutes. The results he arrived at are as follows: The induction current produced a decided effect in reducing the size of the tumor; the first application was generally followed by the most marked alteration; the softer the spleen the more striking was the effect of the electricity. The spleen became hard on palpation, and the pain and uneasiness in the side were alleviated. The reduction of the gland, which was always best marked in the first few days of this treatment, was in rare cases noticed as early as 24 hours after its application. No relapses occurred in any recent case of ague with a swollen spleen in which faradization had been carried out. The benefits of the electrical treatment were essentially aided by the administration of quinine.

In India, *puncture* of the spleen with long, sharp stiletts of considerable thickness, is a common and successful practice with native physicians. It is not followed by bad results, and has been commended by some English physicians.

DR. W. T. GADBURY, OF MISSISSIPPI.

This practitioner speaks in the highest terms of the preparation given below. He says that in extensive practice for many years he has never had a case of malarial splenic hypertrophy which resisted it. (*Medical and Surgical Reporter*, April, 1866).

LIQUOR OXYSULPHATIS FERRI.

- | | | | |
|----------|--|----------|----|
| 1003. R. | Ferri sulphatis, | ʒj | |
| | Acidi nitrici, | f.ʒj. | M. |
| | Stir until it ceases to effervesce; then add | | |
| | Aquæ, | f.ʒiv. | |
| | This is used as part of the following combination: | | |
| 1004. R. | Liquoris oxy-sulphatis ferri, | f.ʒiij | |
| | Aquæ cinnamomi, | f.ʒviiij | |
| | Quiniæ sulphatis, | ʒss | |
| | Potassii nitratis, | ʒijss. | M. |
| | One tablespoonful three or four times a day. | | |

In obstinate cases, an iodine ointment or some other counter-irritant should be rubbed in over the enlarged viscus, and a roller worn round the body, so as to make compression on all the organs supplied by the cœliac axis. In cases of children, suffering from lumbrici, it is well to commence with anthelmintics.

In the *Atlanta Medical and Surgical Journal*, 1876, Dr. D. L. PHARES, of Mississippi, highly recommends the root of the *Ceanothus Americanus* as a remedy for enlarged spleen. He exhibits it in form of a tincture, made by filling a bottle loosely with the root and root bark, pouring whisky upon it, and allowing maceration to continue for a week. The dose is f.ʒss.-j ter die. The same tincture is rubbed over the spleen twice daily.

RÉSUMÉ OF REMEDIES.

Ammonii Carbazotas. It is stated by Dr. DUJARDIN-BEAUMETZ that this agent acts very efficaciously in intermittent fever. The daily dose is gr. ʒj.-j in pill form. Dr. SLANE, of Goalpara, India, finds carbazotate of ammonia to be a very efficient remedy. It does not increase the appetite, but like quinine, after a few doses, it produces tinnitus aurium and slight deafness. The urine becomes tinged of a deep orange color, and occasionally the skin and conjunctiva acquire a jaundiced hue, but the discoloration soon disappears. It may be given in pill, with extract of gentian, and combination with a quarter of a grain of extract of nux vomica seems to increase its efficacy. Being perfectly soluble in water, it may be given in solution, but it has an intensely bitter taste. The largest quantity Dr. SLANE ever gave was eight

grains in twelve hours. (*Indian Medical Gazette*, April, 1876.) It has also been favorably reported upon in this country, especially on the Pacific Coast.

Ammonii Chloridum, in doses of ℥ij daily, as an average, was once very popular in ague, and is still employed by some.

Amyl Nitrite. In intermittent fever amy] has aborted the chill, but only shortens the latter stages; it may be given even after the algid stage has fairly set in. Some bold exhibitions have been tried, even to the extent of thirty drops, with good rather than bad effects, in this form of fever. The ordinary dose has been six drops.

Apiol may be exhibited with good effect in mild intermittents in doses of gr. x-xv.

Arsenicum undoubtedly stands second only to quinine in the treatment of malarial poisoning; its especial field is the chronic forms. It may usefully be combined with iron:

1005. ℞. Pill. ferri carbonatis, ℥j
Acidi arseniosi, gr. j.
For twenty pills. One three times a day.

Or,

1006. ℞. Quiniæ sulphatis, ℥ij
Ferri sulph. excic., ℥j
Acidi arseniosi, gr. j.
For twenty pills. One three times a day.

When used alone ten drops of Fowler's solution may be given three times a day after meals. The diet should be abundant and nourishing.

Atropia. Some writers state that in the cold stage of intermittent or congestive fevers, atropia injected under the skin will bring about reaction with more certainty than all other means commonly used in such cases. It will abort the chill if applied at the onset in most cases.

Berberin. This alkaloid from the *Hydrastis Canadensis*, *Berberis vulgaris*, etc., is highly esteemed in chronic malarial poisoning.

Buxinæ Sulphas. The alkaloid of the *Buxus Sempervirens*, in doses of gr. xv, has achieved some reputation in Italy.

Camphora. A tablespoonful of tincture of camphor about the time the chill is expected will occasionally prevent it.

Carbolicum Acidum. This has rather disappointed expectations. It may be given in doses of gr. iv in infusion of gentian, and no doubt it occasionally acts well. M. DÉCLAT, of Paris, has used it hypodermically with success in obstinate cases. (*Comptes Rendus*, No. lxxv.)

Chloroformum, in doses of f.ʒss-j in a small glass of milk, every two hours, about the time of the expected chill, will frequently abort it.

Chinoidine. This is the *cheapest* of the cinchona alkaloids. From gr. xv-xx daily for five or six days, and then gradually reduced, will cure mild intermittents very satisfactorily.

Chloral Hydras has been highly commended by Dr. P. BAILEY, of South Carolina (*Charleston Medical Journal and Review*, Oct., 1873,) and others. When the fever heat is intense, its refrigerant and calmative influence is undoubted; and while it quiets the nervous system, it rather promotes the secretions, in this particular being far superior to the opiates. In the malarial fevers of children, with a tendency to convulsion, or when this unfortunate complication has supervened, it can scarcely be excelled. Although the first impression on the gastric surface is rather to excite emesis, nothing can be more demonstrable than its promptness in arresting the vomiting in these fevers when all other efforts have been fruitless.

1007.	R.	Chloral hydratis,	ʒiiss	
		Potassæ bicarbonatis,	ʒij	
		Spts. aeth. nitrosi,	f.ʒss	
		Syrupi tolutani,	f.ʒijss	
		Aquæ,	f.ʒj.	M.

A tablespoonful every hour or two.

Cimicifuga Racemosa. Dr. EDWARD R. MAYER, of Wilkesbarre, Pa., states that the tincture of cimicifuga, alone or combined with tincture of kalenia, is one of the most efficient remedies known for the malarious neuralgia of the first branch of the fifth pair, commonly called *brow ague*. (*Hints in Specific Medication*, 1876, p. 17.)

Cinchonæ Sulphas. A cheap and useful alkaloid, about half as strong as quinine.

Cinchonidiæ Sulphas. This is a valuable alkaloid of the bark, and in all usual and milder cases, answers quite as well as quinine, and is cheaper. In congestion and pernicious forms, it is not so reliable, however. Dr. WHARTON SINKLER'S formula is:

1008.	R.	Cinchonidiæ sulphatis,	gr.iv	
		Acidi sulphurici aromat,	mʒv	
		Aquæ,	f.ʒj.	M.

This dose every four hours, beginning as early in the day as possible, until gr. xvj have been taken. Continue the amount five or six days after the last chill, then reduce one dose every other day. (*Medical and Surgical Reporter*, February, 1874.) It is said to produce less nausea and less cinchonism than quinine.

Cornus Florida. The extract and tincture of dogwood are employed in the southern states as a substitute for quinine.

Eucalyptus Globulus. The celebrity attained by the eucalyptus as a curative agent in malarial disease, is doubtful. The tincture is recommended in f.ʒj doses, three times daily; of the oil, f.ʒss-j may be given two or three hours before the expected attack.

1011. R. Potassii bromidi, ℥xj
 Aquæ, Oiv.
 Dissolve and add,
 Acidi tartaraci, ℥xiiij.
 The hydrobromic acid remains in solution, and potassa bitartrate is precipitated.

M. LATOUR'S formula is :

1012. R. Quinæ sulphatis, gr. x
 Acid. sulph. diluti, ℥xx
 Aquæ, f. ℥j.
 To this, ad Potassii bromidi, gr. xx.
 This forms a neutral bromohydrate.

Quinia Salicylas. The salicylate and carbolate of quinia have been recommended on theoretical grounds.

Quinia Sulphas. This is the standard remedy, the typical specific in all phases of malarial diseases. In regard to the *form* of its exhibition, the most active is in solution. Its bitter taste is best concealed by liquorice, chocolate, tannic or malic acid. Sugar-coated pills and chocolate caramels, containing quinia, may readily be obtained. Frequently a clear solution, free from turbidity, is a *desideratum*. With aromatic sulphuric acid we get a passable solution, but the acid is often objectionable if not absolutely contra-indicated. Dr. ISAAC SMELT, JR., (*N. Y. Medical Journal*, Aug., 1876,) finds that, in practice, the sweet spirits of nitre is all that is desired. One ounce of it will dissolve about two drachms of quinine, giving a transparent solution. The following is said to disguise the taste well :

1013. R. Quinæ sulphatis, ℥j
 Coccoa, ℥i
 Syr. aurant. cort., f. ℥xx.

Triturate well the cocoa, after which add the quinine and orange peel. Mix thoroughly.

Sweetened hot tea, drawn strong, will almost entirely conceal the bitterness so much complained of. The tannic acid is the efficient agent, which may be utilized as follows :

1014. R. Quinæ sulphatis, gr. xxiv
 Syr. sarsap. comp., f. ℥iij
 Acidi tannici, gr. iij
 Olei menth. piper., gtt. v. M.

In giving quinine to children it is frequently better done by enema :

1015. R. Quinæ sulphatis, gr. ij-x
 Acidi tannici, gr. ij-vj
 Aquæ, f. ℥j. M.

For one injection. The tannin aids the retention.

Or the *endermic* method may be very successfully employed.

1016. R. Quinæ sulphatis, ʒss-j
 Alcoholis, f.ʒss
 Adipis, ʒvij. M.
 Rub well into the skin. (Dr. AUGUSTE NONAT.)

Often the action of quinine is greatly aided by stimulant and aromatic adjuvants, as alcohol, ether, capsicum, pepper, ginger, etc. Dr. FULLER has found that when there is splenic enlargement the addition of colocynth and rhubarb greatly increases the energy of the alkaloid.

Dr. ROBERTS BARTHOLOW (*Prize Essay on the Use of Quinine*) lays down the rules: 1. Quinine is equally effective, whether administered in the interval or during the seizure. 2. Its maximum effect is five hours after taking; hence it should be administered about this long before the expected paroxysm. 3. It is better to give the whole amount in a single dose than in a succession of small doses. In ordinary intermittents, gr.x in the sweating stage, and the same quantity five hours before the time of the next paroxysm, is the most effective plan.

Some useful suggestions are made by Dr. AUGUSTE NONAT. (*Practitioner*, Sept., 1871.) The older the case, the larger the dose required; whenever the spleen is enlarged a double dose is demanded; quartan fever requires a much larger dose than quotidian or tertian. The total time required to eradicate the disease will generally be three weeks; the first week the maximum dose must be given daily, the second week one-third less, and the third week two-thirds less; even after this, small doses from time to time are needed.

Salicin was extensively used during the Civil War by the Confederate surgeons, and has recently been revived; gr.xxx three or four times a day is an average dose. On account of its alterative effect on mucous surfaces, it is deemed particularly applicable in malarial hæmaturia.

Sodii Bisulphis. This has been employed with good effect. Dose ʒj in water every two hours. It is only available in mild cases.

Sodii Chloridum. Dr BROKES recommends the following (*Zeitschrift für Praktische Medicin*, 1876, No. 33): Heat table salt in a pan until it turns brown; dissolve a tablespoonful in a glass of hot water; take the whole at one draught on an empty stomach the day after the chill (or in the quotidian type, two hours after the fever). Avoid drinking water and diet low. One such dose is usually enough. In doses of ʒvij-x in the apyrexia it was recommended as far back as 1854 by Dr. J. C. HUTCHINSON, of New York.

Strychnia Sulphas. In India, cases of intermittent have been successfully treated with this agent alone. It is also freely used in this country in numerous antiperiodic combinations. (above.)

Tela Aranea. In the *Cincinnati Lancet and Observer*, 1877, Dr. L. M. JONES reports that having failed in treating a case of chronic

intermittent, he adopted the suggestion of Dr. JACKSON in the U. S. Dispensary, to use spider-web. A bunch of spider-web collected from a dark cellar (as it is the web of a species of spider which inhabits dark places that possesses medicinal properties), about the size of a large hulled walnut, was put into four ounces of whisky and allowed to macerate forty-eight hours, when it was filtered. The patient took a teaspoonful four hours before the expected chill, and at hourly intervals until she had taken four doses, and then took a like quantity before each meal and at bed-time until all was taken. Although the anticipated chill came, it was very light, and was the last one experienced up to the time of the report, a period of four months.

MILK SICKNESS.

DR. J. C. PATTON, OF INDIANA.

This practitioner describes (*Indiana Journal of Medicine*, August, 1875,) a treatment which, he says, "almost deserves the character of a specific:"

1017. ℞. Infus. sennæ foliorum, Oj
Magnesiæ sulphatis, ℥xij. M.

Of this give from one to two ounces, which will be vomited; then immediately give a second dose, and so continue until it is retained.

Large injections of cold whisky and water should be thrown well up the rectum. For milder cases, sulphur, in free doses, until the bowels are moved, followed by diffusible stimulants, is sufficient.

DR. W. H. PHILLIPS, OF OHIO.

This writer, in an essay on this disease published in 1877, throws doubt on the value of alcohol in this disease. He says the practical difficulty is that a large proportion of patients cannot tolerate it. The plain indications of treatment are to care for and sustain, by every proper means, the strength of the patient while he is passing through the disease. Dr. P. is not in favor of any plan of treatment that will create active perturbations of the system, as they inwardly do mischief; the means which will allay the nausea, procure quietude and rest, are always the most satisfactory. Patients treated upon a severely expectant method, recovered in quite short a time, and with less discomfort than those treated by more heroic methods.

According to his experience, *sulphate of strychnia* accomplishes more good than any other remedy. By its use he has been able in some measure to overcome the atonic condition of the muscles, especially the muscular coats of the stomach and bowels. He also thinks that by virtue of its action upon the vaso-motor nerve centres, it is capable of improving the circulation, and in that manner invigorating the functionary power of the system.

He is in the habit of using from one twenty-fourth to one-sixteenth of a grain of strychnine, every four to six hours as indicated, with the results above stated. As a palliative, some agreeable effervescent mixture is usually well borne, as the citrate of magnesia, or the granulated nitrate of cerium, with a little fruit syrup and fresh water. This serves to allay the thirst and nausea. He has also used the bitartrate of potassa, with the view of increasing the secretion of urine, and thus saving the patient from danger arising from retention of effete matter, with very satisfactory results in some cases.

PURPURA HÆMORRHAGICA.

DR. THOMAS HAWKES TANNER.

This writer says the treatment should consist in the exhibition of full doses of sulphate of soda with sulphuric acid, or of castor-oil, until the bowels are thoroughly cleared. Then quinine, iron, the mineral acids, and arsenic, as in the following combination:

1018. R.	Quinæ sulphatis,	gr. ix
	Acidi phosphorici diluti,	
	Tincturæ ferri chloridi,	ʒ̄ss
	Liquoris arsenici hydrochlorici,	ʒ̄xv-xl
	Syrupi zingiberis,	f. ʒ̄vj
	Infusum quassiaæ,	ad. f. ʒ̄viiij.

One sixth part directly after breakfast, dinner and supper.

The patient should be given nourishing diet, fresh fruit or vegetables, and a fair allowance of malt liquor or wine. The oil of turpentine, or gallic and aromatic sulphuric acids, where there is internal hæmorrhage, are often quite effective.

PROFESSOR E. TROUSSEAU, PARIS.

1019. R.	Ferri et potassii tartratis,	ʒj-ij	
	Acidi tartaraci,	gr.ijj	
	Syrupi tolutani,	f.ʒj	
	Aquæ canellæ,	f.ʒv	
	Aquæ destillatæ,	f.ʒiiijss.	M.

A tablespoonful from hour to hour, in purpura hemorrhagica.

RÉSUMÉ OF REMEDIES.

Ergot should be combined with tonics, and will be found of value.

Ferrum is always useful. The following prescription is a good one:

1020. R.	Ferri sulphatis exsiccatae,	ʒij	
	Quiniae sulphatis,	ʒj	
	Strychniæ sulphatis,	gr.ss.	M.

Make twenty pills; one thrice daily.

Sulphuricum Acidum sometimes acts happily in purpura.

Terebinthina Oleum is an important agent in the treatment of purpura.
It should be given in emulsions.

RELAPSING FEVER.

CITY HOSPITAL, RIGA.

In the decade 1865-75, two thousand cases of relapsing fever were treated in this hospital. The therapeutics adopted are described in the *Deutsches Archiv für Klinische Medicin*, Bd. xix., (March, 1877,) by Dr. X. GIRGENSOHN. After frequent attempts to abort or shorten the disease by quinine, aqua chlorinii, acids, etc., all of which failed, a pure symptomatic plan was adopted. During the febrile stadia, acids in mucilaginous decoctions were exhibited, and in the intermissions, some preparation of iron. Wine and brandy in moderate quantities were given throughout, and also a simple but nourishing diet, consisting of milk, bouillon, eggs, flesh, etc. For the vomiting, ice pills were found most efficacious, as also subnitrate of bismuth in doses of gr.ijj-v. For the attacks of diarrhœa, which, however, often proved a favorable indication, opium was at first used, but later usually tannin gr.ijj-v. For the profuse hemorrhage, sometimes of decided gravity, ice water injections, ice to the breast and back of the neck, and large hypodermic injections of ergot, were occasionally called for. The muscular pains which

the patients complained of, especially during convalescence, were treated with the warm bath, or rubbing with a mixture of oil and chloroform. The severe pain occasionally felt in the splenic region could usually be allayed with a bladder of ice to the part. Morphia injections were rarely employed. The delirium was usually mild, and if not, was easily controlled by the ice bladder and chloral. The last mentioned drug was also very satisfactory in overcoming insomnia, in doses of gr.v-xlv. The icterus and gastric symptoms rarely called for special attention. The parotitis and abscesses occurring during convalescence demanded a prompt use of the knife to give exit to the pus. The neuralgia which sometimes remained after the disease yielded most rapidly to a judicious application of electricity.

DR. R. MURCHISON, OF ENGLAND.

This author states his opinion that we may prevent the occurrence of uræmic intoxication, which is one of the main causes of death in uncomplicated cases, by keeping up the action of the kidneys from the first. He prescribes :

1021.	R.	Spiritus ætheris nitrici dulcis,	f.ʒij	
		Acidi nitrici diluti,	f.ʒj	
		Syrupi simplicis,	f.ʒj	
		Decocti hordei,	Oij.	M.

To be taken in the twenty-four hours. Should symptoms of jaundice manifest themselves, hydrochloric acid should be substituted for the nitric.

DR. HENRY HARTSHORNE, OF PHILADELPHIA.

Relapsing fever was very prevalent in Philadelphia and New York in 1870, with a mortality of a little over 15 per cent. of the cases. From the experience of this epidemic Dr. H. recommends that after a mild cathartic at the beginning, and if headache be severe, a few cups or leeches to the back of the neck. Cooling diaphoretics may be given, as solution of citrate of potash or acetate of ammonia. After the crisis, which occurs from the fifth to the seventh or eighth day, quinine may be given in moderate doses, at least until the relapse. Many persons will require support, especially in the third week, by beef-tea, alcoholic stimulants, etc. It has been proved that any amount of quinine will not prevent the relapse, and it is therefore useless to administer it with this object in view.

ACUTE RHEUMATISM.

SALICIN AND SALICYLIC ACID TREATMENT.

DR. T. MACLAGAN, DUBLIN.

This author (*Lancet*, March, 1876,) praises the action of *salicin* in acute rheumatism. Relief is afforded in forty-eight hours or less:

1022. R. Salicin, gr. xv.
This amount in water every three hours.

Later observers corroborate this statement; gr. x, every two hours, is preferred by some.

Decoction of the inner bark of the willow (*salix fragilis*, etc.), which contains the active principle, *salicin*, has also been used with excellent results.

Salicylic acid, now produced by synthesis, was formerly derived from salicin. Dr. L. TRAUBE, of Berlin, and many following him, give it high praise in acute and subacute rheumatism. It disperses the fever and soothes the pain. Grains xv to xxx in powder, in a capsule, may be given every hour. Or,

1023. R. Acidi salicylici, ℥ss
Sodæ boratis, ℥j
Glycerinæ, f. ℥j
Aquæ menthæ, f. ℥v. M.

A tablespoonful as occasion may require.

The borax makes the acid more soluble.

Dr. STRICKER, of Berlin, in a résumé of his experience with salicylic acid, says:

1. If the salicylic acid act thoroughly in the manner expected of it, there should be, during the treatment of articular rheumatism by a certain quantity given internally, no return of the disease in a hitherto unaffected joint, nor any secondary inflammation of the endocardium or other serous membranes.

2. In order to prevent a relapse, it is necessary to continue the use of the salicylic acid in small doses for some days after the end of the principal treatment.

3. Salicylic acid is of doubtful use in chronic articular rheumatism.

4. It is not likely to be useful in gonorrhœal and dysenteric rheumatism, or in septæmic inflammation of the joints.

THE ALKALINE TREATMENT.

DR. H. W. FULLER, OF LONDON.

The treatment of rheumatic fever adopted by Dr. FULLER, at St. George's Hospital, is *essentially alkaline*, and consists not only in administering salines and small doses of alkalis, but in pushing alkalis, as rapidly as possible, to the point of producing alkalinity of the secretions. He usually prescribes:

1024.	℞.	Sodæ bicarbonatis,	ʒiiss	
		Potassæ acetatis,	ʒss	
		Liquoris ammoni acetatisæ,	f.ʒiij	
		Aquæ,	f.ʒiiss.	M.

For one dose. To be taken in a state of effervescence, in combination with

1025.	℞.	Acidi citrici,	ʒss	
		Aquæ,	f.ʒij.	M.

The quantity of the fluid not only takes off from the nauseous quality of the medicine, but promotes its absorption, and thereby facilitates its action. As soon as the urine manifests an alkaline reaction, the dose is repeated three times only in twenty-four hours; and on the following day, if the urine still remains alkaline, twice only. After three days, two doses only of this mixture in twenty-four hours usually suffice to keep the urine alkaline; and then Dr. FULLER adds two grains of quinine to each dose; or, if quinine be not well borne, he substitutes:

1026.	℞.	Sodæ bicarbonatis,		
		Potassæ acetatis,	ʒiij	ʒss
		Tincturæ cinchonæ,		f.ʒiiss
		Decocti cinchonæ flavæ,		f.ʒiiss.
				M.

For one dose.

Day by day, as the tongue cleans, and the other symptoms subside, the quantity of alkali is cautiously diminished, until a simple quinine draught is taken; but the condition of the urine is constantly watched, with a view to the immediate administration of a small quantity of alkali, should the least acidity call for its use. The diet is another point on which Dr. FULLER lays particular stress. He gives beef-tea or broth throughout, and, if stimulants appear to be needed, does not object to their being administered cautiously; but he withholds solid food until the tongue is quite clean, and has often proved to his class in the wards that a too early recourse to meat will induce a relapse, and prevent convalescence.

Under this treatment, Dr. FULLER says, the pains commonly sub-

side in five or six days, and the patients are seldom ten days in bed. Moreover, the heart may be regarded as safe from attack; for in two instances only, in the whole course of his hospital experience, has inflammation, either of the endocardium or pericardium, arisen after the patient has been twenty-four hours under treatment.

DR. FINCHAW, WESTMINSTER HOSPITAL, LONDON.

1027. ℞	Potassæ bicarbonatis,	ʒj	
	Potassæ nitratis,	ʒij	
	Liquoris ammoniæ acetatis,		
	Aquæ,	ʒiij	M.

A tablespoonful, in water, every four hours, with a full opiate at night, if the pain be severe.

He does not think it advisable to continue the alkaline treatment for any lengthened period; but to give quinine, in doses of two or three grains, every six hours, when the urgent symptoms begin to yield, especially if the sweating is over-profuse. He believes that, by giving quinine earlier than is generally the custom, convalescence is less tedious, and there is less chance of relapse. As regards cardiac complications, if pericarditis supervene, and there be sharp, catching pain, he applies a few leeches, followed by linseed poultices; should the pain be slight or absent, he omits the leeches. In all cases he applies, subsequently, one or more blisters. As to medicines, he continues the alkalies, giving at the same time a grain of opium every four or six hours. Should endocarditis manifest itself, he contents himself with the alkaline treatment, as he cannot satisfy himself that local remedies have any effect.

HENRY POWER, F. R. C. S., ETC., LONDON.

1028. ℞	Tincturæ aconiti radicis,	ʒxxiv	
	Tincturæ colchici,	f.ʒijss	
	Aquæ camphoræ,	f.ʒiv.	M.

A tablespoonful three or four times a day.

In feeble patients, in women and in children of from ten to fourteen years of age, the quantity of each tincture may be reduced to one-half; and when the water is or has been high-colored, with deposits of the lithates, the bicarbonate and nitrate of potash, with a little spirit of chloroform or of nitric acid, may be advantageously added.

Our author has applied these remedies to a considerable extent in various cases of rheumatic disease for the last few years, and finds their use attended with great benefit when judiciously employed. They are particularly beneficial in *rheumatic ophthalmia*.

In many instances, when the disease presents a periodic character, recurring with great regularity at a certain period of the night, the addition of two or three grains of quinine, or a few minims of Fowler's solution, may be made.

DR. F. J. FARRE, LONDON.

Dr. FARRE's ordinary mode of treating acute rheumatism is the "alkaline." He usually commences with three five-grain doses of calomel, followed by:

1029. R.	Magnesiae sulphatis,	ʒij	
	Tincturae sennae,	f.ʒij	
	Spiritus ammoniac aromatici,	ʒxx	
	Infusi sennae compositi,	f.ʒiiss.	M.

For one dose.

He repeats this daily till the evacuations are natural. At the same time he gives the bicarbonate or acetate of potash, in twenty or thirty-grain doses, every four or six hours, according to the severity of the attack, generally using the former, but preferring the latter when there is synovial effusion.

When there is little or no perspiration, or when the heart is much excited, he adds ten or fifteen grains of nitrate of potash. He not unfrequently, also, gives one grain of opium every night. For local treatment, especially of the smaller joints, he relies chiefly on the tincture or liniment of iodine, using the tincture for women and children, the liniment for the robust; one or the other of these is used in almost every case, and with nearly certain relief. When, however, there is synovial effusion, Dr. FARRE uses either mustard or cantharides plaster. Mustard is always useful, especially when applied to the larger joints, as the shoulder. The appetite being always faulty, Dr. FARRE gives milk diet until the tongue is clean or cleaning. Meat given before it can be digested, immediately brings back pain in the joints. He keeps the patient between blankets. As soon as the pain has gone, and the tongue is clean, he gives bitter tonics, omitting or diminishing the alkali if the urine is alkaline or neutral.

DR. FLEMING, BIRMINGHAM, ENGLAND.

1030. R.	Potassae bicarbonatis,	gr. xxx	
	Aquae,	f.ʒij.	M.

For one dose, before each meal. Add one-half an ounce of fresh lemon juice, and take the mixture during effervescence.

If there be high fever, from one to three minims of *Fleming's tincture of aconite* are added to each draught. If there be much pain in the muscles, in place of aconite, from five to ten minims of *tincture of hemlock* are added to each dose of the alkaline. If, on the other hand, the periosteum be affected, from two to six grains of the *iodide of potassium* are given. To relieve pain and secure sleep, Dr. FLEMING orders, at bedtime, a full draught of morphia and Indian hemp; as a drink, potassa water, or lemonade, freely. If necessary, colocynth and hyoseyamus pill is given to relieve the bowels. Cotton wadding is applied to the affected joints. Active and repeated counter-irritation, and poultices over the heart, are employed in cardiac inflammation. During convalescence, warm clothing, full diet, with quinine and iron. After considerable experience, Dr. FLEMING has found that this treatment has furnished very good results, and that the number of those attacked with cardiac inflammation, *after* their admission into the hospital, is undoubtedly small. Placing the patient between blankets materially promotes perspiration, and prevents chills.

THOMAS KING CHAMBERS, M. D., ETC., LONDON.

This author calls rheumatic fever "a pleasant disease for the doctor to treat, though not for the patient to bear," and gives a very simple, uniform plan of treatment, which, he states, hardly ever requires modification.

Bedding.—The patient's bed is made in a peculiar fashion. No linen should touch the skin. A slight calico shift or shirt may be allowed; but if the patients possess underclothing only of the prohibited sort, they are better naked. Even a linen front to the shirt is dangerous. The sheets should be removed and the body carefully wrapped in blankets, the newest and fluffiest that can be got. The head is to be carefully protected from currents of air.

Fomentations.—Those joints or limbs which are swollen, red, or painful, are to be wrapped up in flannels, soaked either in hot water or a decoction of poppy heads, with half an ounce of carbonate of soda to each pint.

Curative Drugs.—If the skin is red, swollen or painful about the joints, if motion is impossible or the cause of exquisite suffering, and especially if these phenomena are metastatic, then the "alkaline treatment" is employed as follows:



1031. R. Potassæ carbonatis, ʒj
 Aquæ camphoræ, f.ʒij . M.
 For one dose. To be repeated every three hours, day or night, when awake.

If, however, the above symptoms are insignificant, and the pain is felt more in the bones, being intensified by pressure rather than by motion, and fixed, not metastatic, then two grains of iodide of potassium are to be added to each dose. So soon as the symptoms take a favorable turn, the alkali is to be omitted altogether, and only the iodide of potassium given.

Palliatives.—Opium is to be administered in amounts proportionate to the subjective sensation of pain—from one to two grains at a dose. Immediately upon the relief of the pain, the quantity is diminished.

Pure opium in the pill, and the tincture, are the best preparations. If the pain remains fixed in one joint after it has left the other places, leeches are to be applied there and the part kept poulticed. Bruised laurel leaves may be mixed with the poultice. If the heart becomes affected, leeches and poultices are to be applied to the cardiac region.

Diet.—The food is to be varied to some extent by the social and personal state of the patients. If they have been hearty and well-to-do persons before the attack, simple diet is proper, *i. e.*, bread and butter, gruel and tea. If they have been ill-nourished, a pint of broth or of beef tea is added.

J. M. DA COSTA, M. D., PHILADELPHIA.

1032. R. Ammonii bromidi, ʒss
 Tincturæ aurantii corticis, f.ʒss
 Aquæ, f.ʒijss . M.

A dessertspoonful every three hours, except at night. In acute rheumatic fever, the beneficial influence of the bromide of ammonium is undoubted.

Over the pains and aches of acute rheumatism this remedy also exerts an unquestionable control; but in chronic rheumatism it is decidedly inferior to iodide of potassium. But slight amelioration follows its use in persistent swelling of the joints of rheumatic origin, and none in rheumatism due to a venereal taint.

1033. R. Atropiæ sulphatis, $\text{gr. } \frac{1}{30}$
 Aquæ destillatæ, ʒx M.
 30-M

For one injection. To be thrown under the skin, in certain forms of muscular rheumatism, particularly wry neck, over or into the rigid parts. To be repeated once a day. Sometimes the most marked and speedy relief follows this treatment, after ordinary remedies have failed.

1034. R. Potassii iodidi, ʒj
Vini colchici radidis, f.ʒij
Morphiæ sulphatis, gr.ij
Syrupi, f.ʒj
Aquæ, f.ʒij. M.

A teaspoonful three times a day, after meals, in muscular rheumatism

1035. R. Potassæ carbonatis, ʒij
Potassæ acetatis, ʒiij
Vini colchici seminis, f.ʒj
Syrupi tolutani, f.ʒiiss
Aquæ, f.ʒss. M.

A teaspoonful thrice daily, in lumbago, the following liniment to be rubbed in night and morning.

1036. R. Chloroformi, f.ʒss
Linimenti ammoniæ, f.ʒiiss
Linimenti saponis, f.ʒij. M.

In a week or ten days, after the pain has subsided, apply:

1037. R. Emplastri picis cum cantharide, ʒss equal parts. M.
Emplastri Logani,

The quickest way of treating lumbago is by throwing $\frac{1}{10}$ of a grain of atropia under the skin near the affected muscles. This will sometimes dissipate the attack as if by magic.

1038. R. Tincturæ guaiaci, f.ʒij
Vini colchici radidis, f.ʒij
Potassæ bicarbonatis, ʒss
Syrupi aurantii corticis, f.ʒij. M.

A dessertspoonful in water, thrice daily, in rheumatic arthritis. Also have the joints wrapped in cotton, and painted, morning and evening, with equal parts of tincture of iodine and alcohol, until they become sore. Sulphur baths are beneficial. Small blisters are also of service in the neighborhood of the joints, frequently repeated and dressed with:

1039. R. Morphicæ acetatis, gr.¼
Pulveris marantæ, gr.j. M.

Arsenic is an excellent remedy in rheumatic arthritis. It may be administered as follows:

1040. R. Liquoris potassæ arsenitis, f.ʒij
Potassii iodidi, ʒij
Syrupi, f.ʒiij. M.

A teaspoonful thrice daily, between meals, in water.

1041. R.	Vini colchici seminis,	f. ℥j	
	Potassæ acetatis,	℥vj	
	Spiritus etheris nitrosiæ,		
	Syrupi,	℞ā f. ℥j.	M.

A teaspoonful thrice daily, in pleurodynia.

Also use a stimulating liniment and keep the parts warm.

1042. R.	Potassii iodidi,	℥ij	
	Vini colchici radice,	f. ℥ss	
	Extracti cinchonæ fluidi,		
	Elixir cinchonæ,	℞ā f. ℥iss.	M.

A dessertspoonful thrice daily, in muscular rheumatism.

Cinchona disguises the taste of the iodide of potassium. Quinine is often serviceable alone in those cases in which the joints are not affected, and in which there is pallor and loss of strength.

1043. R.	Potassii iodidi,	℥ij	
	Tincturæ belladonnæ,	f. ℥iss	
	Syrupi aurantii corticis,	f. ℥ss	
	Aquæ,	q. s. ad. f. ℥iij.	M.

A teaspoonful thrice daily in muscular rheumatism associated with vesical incontinence.

In case of swelling and stiffness of the joints following acute rheumatism, nothing does so much good as *sulphur baths*. When practicable, send the patient to the sulphur baths of Virginia to get rid of these remnants of the acute attack. Artificial sulphur baths are also useful. When these are not practicable, great benefit will be obtained from the iodide of potassium and compound tincture of guaiacum.

1044. R.	Potassii iodidi,	℥ij	
	Tincturæ guaiaci compositæ,	f. ℥vj.	M.

A dessertspoonful thrice daily.

This prescription is very efficient, though not an elegant one. It is very unpleasant to take. There are few who will go on with it for a long enough time to get its full therapeutical effects.

In the treatment of the *sub-acute form of muscular rheumatism*, nitrate of potash is very valuable. This is an old remedy, but the advance of therapeutics has shown no other, in this form of rheumatism, of which our author thinks so highly. It may be conjoined with Dover's powder.

1045. R.	Potassæ nitratis,	gr. xv	
	Pulveris ipecacuanhæ compositi,	gr. iij.	M.

For one powder, to be taken every fourth hour.

WILLIAM AITKEN, M. D., EDINBURGH.

1046. ℞. Hydrargyri chloridi mitis, gr.v
 Pulveris jalapæ compositi, ℥ij-℥j
 Pulveris zingiberis, gr.ij-iv. M.

This powder to be taken in a little milk at the commencement of rheumatic fever. It will secure an abundant secretion from the glandular follicles of the intestinal mucous membrane. The daily evacuation of the bowels is then to be maintained by salines, such as Rochelle or Epsom salts.

1047. ℞. Veratriæ,
 Extracti opii, āā gr.j. M.

For ten pills. Take two the first day, three the second, four the third, five the fourth, and so on, increasing one pill each day, until the condition of the pulse or the irritation of the mucous embrane compels a diminution.

1048. ℞. Pulveris guaiaci, ℥j
 Pulveris rhei, ℥ij
 Potassæ bitartratis,
 Sulphuris sublimati, āā ℥j
 Pulveris nucis moschatæ, ℥ij
 Mellis, ℥j. M.

Of this compound, two large spoonfuls are to be taken night and morning.

It is used in some large hospitals, both civil and military, in the treatment of old chronic cases. The beneficial effects of guaiacum are obtained in those cases which are unaccompanied by perspiration, and in which the secreting organs are gently excited by this drug. When the diaphoresis is free, it does little good.

THOMAS HAWKES TANNER, M. D., F. L. S., ETC., LONDON.

1049. ℞. Ammoniacæ muriatis, ℥iij
 Liquoris ammoniacæ acetatis, f.℥vj
 Aquæ camphoræ, q. s. ad. f.℥vj. M.

A tablespoonful, in water, every four hours.

RÉSUMÉ OF REMEDIES.

Aconite is, according to Dr. REITH (*Edinburgh Medical Journal*), ordinarily given in too large doses in acute rheumatism. He obtains good results in mild cases by its agency alone in small and often-repeated doses ($\frac{m}{4}$ of the tincture every two hours). In some cases he combines it with the full alkaline or blister treatment.

Chloral has been extolled in cerebral rheumatism by M. BOUCHUT.

Cimicifuga was brought forward as a remedy in acute rheumatism by Dr. F. N. JOHNSON, of New York. It is less employed in the acute than in the chronic form.

* *Colchicum* relieves the symptoms and shortens their duration, when combined with small doses of calomel, ipecacuanha, alkalies and

opium. It is less beneficial, according to Dr. FULLER, in the weak and nervous than in the robust; less in purely fibrous rheumatism than in that complicated by synovial inflammation; less in proportion as the fever exceeds the articular swelling, and as the urine is less highly charged with the lithates. During its use, its operation must be carefully watched, the bowels kept regulated, and if the lithates disappear from the urine, if the pulse become weak, if faintness, or nausea, or purging supervene, it must be discontinued. The acetous extract or the inspissated juice (gr. j-iss), or the wine (℥xv-xx), may be given twice or thrice daily.

Ergota, in full doses internally, is a very efficacious remedy in many cases of acute rheumatism.

Ferri Chloridi Tinctura has been employed by Dr. RUSSELL REYNOLDS, of London, in doses of about ℥xxx every six hours, with the effect of shortening the duration of the disease, and relieving the joint affection.

**Opium*, in large and repeated doses, is given by Sir D. CORRIGAN, of Dublin. He commences with gr. j every two or three hours, and increases the dose both in frequency and quantity until the patient feels decided relief, when it should be kept up at that dose until the disease is steadily declining. The average quantity required in twenty-four hours is about gr. xij, and even that amount does not affect the head; occasionally it produces diarrhœa, when astringents are required to check it. The tolerance of opium in this disease is remarkable.

Potassii Acetas is much employed. The dose usually given is about gr. xxx, every four hours.

**Potassii Bicarbonas* is a favorite remedy. Dr. A. B. GARROD, of London, gives gr. xxx in solution every four hours, until the joint symptoms and febrile disturbance have completely disappeared. Dr. FULLER, of London, considers that ℥ss is the minimum dose which will suffice to overcome the acid condition of the blood during the first twenty-four or forty-eight hours of treatment, and in sthenic cases ℥ij are often needed. Small doses he regards as useless.

Potassii Nitras. Dr. BASHAM, who instituted a series of experiments to ascertain the real value of nitre in acute rheumatism, arrived at the following conclusions: 1. That it is a most valuable remedy in doses of ℥ij-ij in Oiv of barley-water, daily. 2. That it acts by restoring the saline constituents of the blood, and by lessening the excess of fibrine. 3. That there is a certain amount of exemption from cardiac complication, and that cardiac inflammation, when it supervenes, is more amenable to remedies. 4. That the tendency to collapse is much diminished, and the acute or inflammatory symptoms usually give way on the third or fourth day.

Potassii Permanganas. Dr. FENN (*Canada Medical Journal*, Jan., 1868,) writes in the highest terms of the efficacy of the permanganate of potash in the treatment of rheumatism, gr. ½ thrice daily,

which he believes to be due to the large proportion of oxygen which it contains. This salt promotes the transformation of lactic into carbonic acid.

Potassii Bitartras, in doses of gr. xv–xx, every four hours, given in mint water alone, or in combination with tincture of hyoscyamus (mxxx–xl), is said to produce good results.

Propylamine, or *Trimethylamine*, has at times been popular as a remedy in rheumatism. Its favorable action is thought to be on account of its alkaline properties. There can be no doubt that it reduces the temperature, diminishes the pulse, and removes the pain in some cases of acute rheumatism and gout, and that in a very short time—from six to thirty-six hours after its use. The more acute the disease, the more marked is the effect of the remedy. In chronic cases there is little or no benefit from it.

Quinia Sulphas, according to Dr. FULLER, should ordinarily only be used as a restorative when the febrile paroxysm is beginning to abate, and not as a cure during the active stages of the disease.

Salicin and Salicylic Acid. See above.

Zinci Cyanuretum. This remedy was suggested by LUTEN, of Rheims, some time since. Lately, DESCHAMPS has used it with success, and recommends it highly. He employs the following formula :

1050.	℞.	Zinci cyanid.,	gr. ʒi	
		Pulv. acaciæ,		
		Sacch. lactis,	āā	q. s. M.

For one pill. To be taken to the number of ten in twenty-four hours.

LOCAL APPLICATIONS.

Baths. Dr. R. J. BUTLER (*Medical Press*, August 5, 1868,) has found great benefit in acute rheumatism from baths containing valerian. He directs :

1051.	℞.	Valerianæ radice,	℔.j
		Aquæ,	C.ʒ.

Boil together for a quarter of an hour, strain the liquor and add to an ordinary bath at 98°, the patient remaining in it for twenty or thirty minutes.

For any remaining inflammation about the joints, he applies linseed meal poultices, prepared with a strong decoction of valerian. In the arthritic form of the disease, he considers valerian of extraordinary efficacy in subduing the pain and inflammation.

Prof. DA COSTA, of Philadelphia, recommends sulphur baths, artificial or natural, for the swelling and stiffness of the joints following acute rheumatism.

**Blisters*. The blister treatment has been prominently advocated. Dr. HERBERT DAVIES directs armlets, wristlets and even fingerlets of blister-plaster to be applied at the time the inflammation is most acute, linseed-meal poultices being subsequently applied to keep up the serous discharge. He places these blisters entirely around

the affected limbs, and in the case of the knees, orders them at least three inches wide, regarding any slight strangury which may arise as of little importance compared with the benefit afforded by the free vesication. This treatment may be aided by a *mild* course of alkali, but he does not regard this as essential, excepting when the rheumatic virus attacks the heart in the first instance, and seems to hesitate in fixing itself upon the joints. Dr. RINGER, of London, considers all the alleged good effects may be obtained by the use of "flying blisters." Dr. A. FLEISCHMAN (*Lancet*, May 1st, 1869,) looks upon a blister, about two inches square, placed an inch and a half below the left clavicle, as an almost certain preventive of cardiac mischief.

Packing. Applying a mixture of pounded ice and salt to the swollen joint for not longer than five minutes at a time, will sometimes relieve the pain promptly. Or, the cold pack may be employed. Two dry blankets are laid on a bed, and over these a sheet wrung out as dry as possible with cold water is laid so that when folded it will completely embrace the affected limb or limbs. The patient is placed upon the sheet, which is tightly folded over the rheumatic parts and covered immediately with the blankets. This may be renewed every two or three hours.

Packing. This is much esteemed by some practitioners; as employed in Mount Sinai Hospital, New York City, the method is as follows: The bed is prepared by spreading over it a sheet of rubber cloth, and over this a blanket. Hot blankets are then wrung out of water of a temperature about as hot as the hand can bear, and with these the patient is enveloped. Two or three thicknesses of dry blankets are superimposed, and the whole retained in position till the patient is free from pain—a time varying from two to six hours. When the pack is applied, the patient sweats very profusely, as might be supposed, and after its removal, no danger has been found to occur. If the pain is confined to one joint, that joint is enveloped by the hot blanket, which is removed as soon as the pain disappears. One case of chronic rheumatism, extending over a period of seven months, was treated by means of local packings, and after slight relapses, occurring at intervals for five weeks, was discharged perfectly cured. This method presents the advantage in private practice of not shocking the friends of the patient as much as the ice and ice-water packings.

CHRONIC RHEUMATISM.

DR. FULLER, OF LONDON.

In attacks of lumbago this author recommends brisk purgatives at the commencement of the attack when the bowels are costive and the urine scanty, high colored, or loaded; but when the urine is abundant and light-colored, the bowels regular, and the dejections natural, the value of purgatives is not so apparent. Cupping on the loins is of essential service—dry cupping when it is not thought desirable to extract blood. Baths rendered alkaline by carbonate of soda or potash; hot fomentations formed by placing across the loins flannels wetted with an alkaline and opiate solution, and covered with a piece of gutta percha. In obstinate cases, stimulating and opiate embrocations. As excellent liniments in these cases he gives :

1052. R.	Olei cajuputi,		
	Tincturæ opii,	āā	f.ʒij
	Olei terebinthinæ,		f.ʒiv
	Linimenti ammoniæ,		f.ʒj.
	For a liniment.		M.

Or:

1053. R.	Liquoris ammoniæ,		f.ʒj
	Tincturæ opii,		f.ʒij
	Tincturæ cantharidis,		f.ʒiij
	Linimenti saponis,		f.ʒx.
	For a liniment.		

DR. HENRY HARTSHORNE, OF PHILADELPHIA.

This author considers the treatment of chronic rheumatism largely experimental. Local treatment generally does more for it than medicine. Our author has found a liniment containing turpentine, oil of sassafras, ammonia, and laudanum, diluted with soap liniment, of great use. Where pain is considerable, chloroform or aconite liniment is better. Blisters may be applied in bad cases. For rigidity of the joints, and for pain in them, *pouring hot water* continuously over the parts affords great relief. The hot or vapor bath, as well as the hot dry air bath (130° to 200°), will sometimes prove very effective.

RÉSUMÉ OF REMEDIES.

Cajaputi Oleum. In doses of gtt.i-ij in pill form, this has been given internally in chronic rheumatism with alleged good effects. It is also an ingredient in liniments. (F. 1052.)

Cimicifuga. In some cases of this disease this drug exerts a prompt and very positive healing action; but as it frequently fails, it is impossible to point out the indications for its use.

Guaiacum has long been esteemed in this disease; f.ʒj of the tincture may be administered thrice daily.

Kerosene. See Petroleum.

Morrhua Oleum is one of the most efficient remedies in chronic rheumatism with dyspepsia and general exhaustion.

Opium and its alkaloids are especially valued in the form of hypodermic injections, as additions to liniments, etc.

Petroleum has been used with much advantage locally, well rubbed into the affected parts. Internally, a teaspoonful of kerosene in water every other night has cured some cases. (*British Medical Journal*, May, 1872.)

Phytolacca Decandra. The poke root has quite an extended reputation in this disease. No doubt it cures certain cases with astonishing promptness. The indications for its use are, however, not definitely known.

Potassii Iodidum is the most generally successful of all remedies in this disease. Sir JAMES PAGET has pointed out that the addition of carbonate of ammonia greatly increases its therapeutic action. Five grains of the iodide may be combined with three of the carbonate.

Sassafras. This is stated to be an efficacious remedy when the circulation is languid, the skin dry, and the kidneys, liver and bowels inactive. It has the advantage over guaiacum, of not being purgative. Dr. FULLER, of London, recommends the following formula:

1054.	R.	Sassafras radicis,	ʒiss	
		Mezerii,	ʒiv	
		Taraxaci radicis,	ʒiij	
		Aquæ ferventis,	Oj.	M.

Dose—f.ʒj-iss, conjoined with a plentiful use of diluents.

Sulphur internally is often of benefit.

Terebinthina Oleum is a valuable addition to liniments and stimulating embrocations.

Xanthoxylum. The bark of the prickly ash has long enjoyed a popular reputation in chronic rheumatism.

Electricity in its various forms has been very extensively tried in chronic rheumatism. Sometimes the results are most satisfactory; but Drs. BEARD and ROCKWELL state that on the whole, in cases of long standing, they have been disappointed in its effects.

TYPHOID FEVER.

PROF. KARL LIEBERMEISTER, M. D., OF TÜBINGEN.

This writer, whose essay on typhoid fever forms part of Ziemsen's *Cyclopædia*, believes it possible that both iodine and calomel may exert a specific influence in cutting short an attack of typhoid fever, if given early. He gave iodide of potassium, ℥j-ʒj, in the twenty-four hours; and when he employed calomel, gr. viij, three or four times in the same period. He prefers the latter, and recommends it in the stage of the disease before the ninth day.

His main reliance, however, is *the antipyretic treatment*. This is to be carried out by cold baths and quinine. For adults, the full-length cold bath, 60° to 68° Fahr., is to be preferred. The duration of the bath should be ten minutes; but, if the patient is feeble, seven or five minutes. After the bath, the patient is to be wrapped in a dry sheet, put to bed, and given a glass of wine. In very severe cases, the bath should be repeated every two hours; the average cases require four to eight baths daily. *Contra-indications* to the baths are hemorrhage and perforation of the bowels, weakness of the heart's action, and extreme debility.

Quinine comes next as an antipyretic. But it must be given without timidity, and in a definite manner, as follows: from gr. xxij to gr. xlv *must positively be taken within the space of half an hour or, at most, an hour*. Six or eight grains every ten minutes is a good rule. If this is boldly done, cinchonism is produced, and a material fall of temperature follows. This dose is repeated once every forty-eight hours; or, if the remission is not marked, once in twenty-four hours, the quantity being increased. When the fever spontaneously manifests a tendency to remissions, the quinine is of little value. This dose should reduce the temperature in the rectum to 100° Fahr. Of the two antipyretics mentioned, our author would generally rely on the quinine, if it is properly given.

When the fever is of such obstinacy that additional antipyretic effects are required, he usually gives from eleven to twenty-two grains of powdered digitalis, extended over a period of about thirty-six hours; this should be followed by a full dose of quinine, say gr. xl, in one hour, as above directed.

The diarrhœa he controls with opium, in small and repeated doses; meteorism with cold compresses to the abdomen, changed

every half hour; cold enemata, and frictions with turpentine; hemorrhage from the bowels with opium (gr.ij, in the twenty-four hours), ice to the abdomen, and perfect quiet.

DR. SIREDEY, FRANCE.

This practitioner gives in the first instance, especially in those cases in which the gastro-intestinal symptoms (coated tongue, nausea and diarrhoea) are present, twenty grains of ipecacuanha, with half a grain of tartar emetic, weak wine and water for drink, and beef-tea. The next day, julep of gum, four ounces, with thirty grains of liquid extract of cinchona, taken in divided doses, and an injection containing vinegar or carbolic acid. Several times a day the mouth of the patient is very carefully cleaned with a slice of lemon; morning and evening the body is sponged with a lotion containing vinegar, and is immediately rolled up in wool. This proceeding is peculiarly grateful to the patient. A glass of Seidlitz water is often given in the course of the disease, and as convalescence sets in quinine is ordered in all its forms.

PROFESSOR S. JACCOUD, PARIS.

This able clinical teacher, like most French and English physicians, discredits the cold bath treatment of typhoid. He abjures from the commencement all debilitating measures, such as purging. If needful, a mild laxative of Seidlitz water is given. During each twenty-four hours the patient takes a cordial mixture containing two or three scruples of extract of cinchona bark, two drachms of tincture of cinnamon, an ounce of syrup of orange peel, three ounces of red Bordeaux wine, and an ounce of old brandy, which may be increased, as occasion requires, to three or four ounces. The main constituent of the food is beef-soup, given at least twice daily; about eight ounces of old Bordeaux wine are allowed, and this is taken alternately with the stimulant mixture just mentioned. The ordinary beverage is lemonade, containing one-fourth of red wine. If it appear needful, all this is supplemented at the end of the second week by nutritive enemata twice daily. This mode of alimentation is stated to be well tolerated by the stomach and bowels.

When the patient's temperature reaches 102° Fahr., with a rise in the evening not above 103°, M. JACCOUD directs that twice during the day the whole body should be well sponged with aromatic

vinegar. If the temperature rises higher, three, or even four, of these applications are made daily. They are continued, more or less frequently, until the close of the fever, and both comfort and benefit are derived from their refreshing and cooling effects.

Should any threatenings of bronchial or pulmonary implication arise, they are met by dry cupping.

BOSTON CITY HOSPITAL.

The treatment at this hospital, as practiced under the surveillance of Drs. STEDMAN and DRAPER, is a modification of the bathing process, occupying an intermediate position between the full carrying out of cold-water bathing and the expectant treatment. On entrance, patients are immediately put to bed, and their diet restricted to milk, of which they are expected to drink about two and a half quarts in twenty-four hours. This is perhaps the most important part of the treatment; at first they may object to milk, but on becoming accustomed to it they take it freely. To keep up the strength is the chief aim, and if insufficient nourishment is taken, by giving a small amount at regular intervals the end sought for is accomplished. This diet is continued till the temperature has been normal for several days, when light soups and easily digested farinaceous articles are given; in a few days more, a gradual return to regular though still somewhat restricted diet is allowed.

To lower the temperature, sponge-baths, of equal parts of cold water and alcohol, are quickly applied to the surface of the body, which is immediately dried.

In mild cases of diarrhœa nothing is done, two or three loose dejections per diem not being considered harmful; when, however, it becomes excessive, it is quickly checked by a pill composed of a grain of opium and a quarter of a grain of sulphate of copper.

In delirium and wakefulness, when the patient can be made to tolerate it, the ice-cap is of great benefit.

The frequent use of a mouth-wash, of equal parts of glycerine and rose-water, is very pleasant to the patient, relieving the foul taste and dryness of the mouth.

In very mild cases, twenty drops of dilute nitro-muriatic acid may be given every two hours.

Excepting the medicines above mentioned, no drugs are given, but every attention possible is shown to the comfort, nourishment, sleep and general welfare of the patient.

THE ANTISEPTIC TREATMENT OF TYPHOID.

Although this method of treatment cannot be considered as established, there has been enough testimony in its favor to commend it to careful consideration. In 1870, Dr. G. WILKES, of England, recommended the administration of *sulphurous acid*, *acidum sulphurosum*, in enteric fever, and in this country Dr. J. WESLEY BOTKIN, of Illinois, (*Medical and Surgical Reporter*, May, 1876,) and others, have testified to its efficacy. The dose is from gtt. x-xx every three or four hours, in lemonade. It can be combined with opium or digitalis. It should be continued until the tongue is perfectly clean.

In the *Practitioner*, September, 1873, Mr. STEPHEN SKINNER reports very excellent results from the *sulpho-carbolate of soda*. He generally commenced with gr. xx every four hours, gradually increasing during the next four days to the full dose of gr. xxx. A larger dose than this may produce cerebral symptoms. When the diarrhœa was excessive, opium was combined with the salt. He also claims that by its early use the premonitory symptoms of the disease are dispersed, and the threatened attack aborts.

RÉSUMÉ OF REMEDIES.

Acida. The mineral acids have been at times much prescribed in typhoid fever. Dr. GEORGE JOHNSON, of London, however, discounts them on the ground that they must irritate the ulcerated mucous membrane of the intestines, cause pain and griping, and increase the diarrhœa.

Alcohol. The value of alcoholic stimulants in typhoid has been much discussed. The following judicious rules are those laid down by Dr. ALFRED J. LOOMIS, of New York :

First. They should never be administered indiscriminately—that is, never give a patient stimulants simply because he has typhoid fever.

Second. When there is reasonable doubt as to the propriety of giving or withholding stimulants, it is safer to withhold them, at least until the signs which indicate their use become more marked.

Third. In every case, but especially when stimulants are not clearly indicated, watch carefully the effect of the first few doses. There are few whose experience in the treatment of typhoid fever is such as to enable them to positively determine, from the appearance of the patient, when the administration of stimulants should be commenced.

Should you commence the administration of stimulants, it is necessary to see your patient every two hours, and note carefully the effect produced. If you find the tongue becoming dry-

the patient more restless, the delirium more active, the temperature ranging higher, and the pulse more and more rapid, you may be certain that stimulants are contra-indicated. If, on the other hand, the pulse becomes fuller and more regular, if the first sound of the heart is more distinctly heard, or, if it has been absent, it has returned, if the restlessness and delirium is less marked, the tongue more moist, and the patient more intelligent, you may be certain that the time for the administration of stimulants has arrived. When you have commenced their use, it is of the greatest importance that you administer them at stated intervals, especially during the night.

In a severe case of typhoid fever, a free administration of stimulants, just at a critical period (which may not last more than twenty-four hours), will often be followed by a refreshing sleep, and your patient may rapidly pass from an apparently hopeless condition to one of convalescence.

Alumen may be employed to check the diarrhœa.

Ammonii Acetas and *Carbonas* are often exhibited, the former as a febrifuge, the latter as a stimulant. Professor BARTHOLOW, however, considers that all salts of ammonium are distinctly contra-indicated by the excess of that element in the blood in this disease.

Camphora is frequently excellent in allaying the nervous agitation.

Chloral is often serviceable in small doses to induce sleep.

Digitalis. Dr. WUNDERLICH has recommended this drug to lower the temperature and slacken the pulse. Other German writers have also urged its claims, sometimes for its alleged antipyretic effects, sometimes as a roborant of the heart; but as yet no positively favorable opinion can be pronounced for its exhibition in this disease.

Ergota. This is of great value in the hemorrhage of typhoid. A common prescription in St. Thomas' Hospital, London, is,

1055.	℞.	Tincturæ opii,			
		Olei terebinthinæ,			
		Tinct. chloroformi,	ʒā	℥x-xx	
		Acidi tannici,		gr. x	
		Mucilaginis et aquæ,		q. s.	M.

For one dose.

When this is not retained by the stomach, the following may be tried:

1056.	℞.	Acidi tannici,	gr. x	
		Extracti ergotæ fluidi,	ʒss-j.	M.

For one dose every hour.

Or gr. v of ergotin may be used hypodermically.

Iodinium. In St. Francis Hospital, London, iodine is given internally in all cases of typhoid fever. It is thought to lessen the troublesome gastric irritability so often present, and to diminish the number of evacuations from the bowels.

The following formula is usually employed :

1057. R.	Iodinii,	ʒj	
	Potassii iodidi,	ʒij	
	Aq. dest.,	ʒx.	M.

Gtt. iij in a wineglassful of water every three hours.

LUGOL'S solution, the liquor iodinii comp. of the Pharmacopœia, may be used in doses of six drops every three hours.

The cold bath, quinine and iodine, with close attention to the diet and the exhibition of stimulants when indicated, constitute the main features in the treatment of typhoid fever.

Hydrargyrum. The old practice of giving small doses of calomel at the commencement of the disease has largely fallen into desuetude. It is, however, recommended on the high authority of the late Dr. PARKES. The gums should not be touched. Sometimes the diarrhœa will yield to gr. $\frac{1}{100}$ of corrosive sublimate every two or three hours.

Opium is of great value to allay the nervous jactitation and insomnia. One-eighth of a grain of morphia in an ounce of camphor water is an admirable draught. It may also be given in the diarrhœa. Nevertheless, it must be used cautiously. Dr. GEORGE JOHNSON has pointed out that although the direct effect of opium is soothing, yet that when given in sufficient doses to render the intestines torpid, it acts indirectly as an irritant, by retaining the putrid morbid secretions until they decompose and give off noxious gases, which distend and irritate the bowel, and thus increase and prolong the diarrhœa.

Quinia. The use of quinia as an antipyretic and its administration has been discussed above (p 474.) Its value is far from proven. As a tonic in the latter stages it is highly and justly esteemed.

Flumbi Acetas is sometimes useful in checking the diarrhœa.

Salicin and Salicylic Acid have been largely employed for their antipyretic and anti-zymotic properties. The general result up to the present date has not been favorable to their use.

Serpentaria. Dr. BARTHOLOW considers that in typhoid fever serpentaria is indicated, and is unquestionably serviceable when much depression exists. It is apt to increase the diarrhœa, however, and must be given with caution when the intestines are very irritable. The fluid extract is an appropriate form.

Terebinthinæ Oleum. There are two conditions in typhoid when turpentine is of the utmost value. About the end of the second week the tongue sometimes becomes very dry, red, chapped, perhaps coated in the centre with a brownish fur, and at the same time marked meteorism develops. Ten drops of turpentine every two hours during the day and every three hours during the night will in the majority of cases remove these threatening symptoms. Again, when the diarrhœa persists after the acute stage of the fever is passed, when the convalescence is protracted and evidently the ulcers of Peyer's patches are slow to heal, turpentine

acts almost as a specific. It has been recommended in five to ten drop doses frequently repeated for the intestinal hemorrhage, and in doses of f.ʒj every six hours when there are tympanitis and prostration, but no diarrhoea.

Veratrum Viride has been employed to reduce the pulse, but its utility is questionable.

TYPHO-MALARIAL FEVER.

DR. JEFFERSON D. WILLIAMS.

This writer, practicing in Mississippi, relates an extensive experience in this disease. (*Virginia Medical Monthly*, March, 1877.) In its treatment he condemns quinine, believing that it aggravates the symptoms. The most essential point he has found is to control the diarrhoea, tympanitis and pain in the bowels. To this end he administers subnitrate of bismuth, gr. xxx, pulvus ipecac et opii gr. x, every few hours; this failing and the diarrhoea becoming excessive, he checks it by injections of opium, acetate of lead, subnitrate of bismuth and glycerine. When the red and dry tongue, the tympanitis and pain, denote active inflammation of the intestinal tract, he trusts to frequent doses of chlorate of potash, a teaspoonful of a saturated solution every one, two or three hours. Turpentine he has not found to be of value. Abundant, easily digestible food and moderate stimulation are required throughout the disease.

DR. ALONZO HARLOW, DETROIT, MICHIGAN.

In typho-malarial fever this physician states (*Peninsular Medical Journal*, December, 1873,) that he has used with much satisfaction the following :

1058. R.	Quiniæ sulphatis,	gr. xxx	
	Olei piperiti nigri,	gtt. xxiv	
	Acidi sulphurici aromatici,	ʒj	
	Syrupi simplicis,	ʒiv	
	Alcoholis,	ʒj.	M.

Tablespoonful every hour until half the quantity has been used; afterward, every other hour.

If the chill recur, repeat in same or less quantity; milk punch to be used freely. He used aconite, or *veratrum viride*, or *gelsemium*, for the fever, and did not believe in too general stimulation

with alcoholic stimulants. At a later stage, and in some cases, diffusible stimulants, as ammonia carbonate and brandy, are necessary.

VARIOLA—SMALL-POX.

W. H. BARLOW, M. D., MANCHESTER, ENGLAND.

Dr. BARLOW has no doubt that the exclusion of light exerts a retarding influence upon the progress of the pustules in their later stages, so that, instead of acuminating in the usual way, they shrink and shrivel about the sixth or seventh day of the eruption. But some recent cases of confluent small-pox have led him to believe that death may have resulted from the exclusion of light, the poison having, by the abstraction of the accustomed stimulus, been prevented from taking its usual course to the skin, just as patients die from the suffusion of the exanthem of scarlatina or measles. This view, which he supports by the history of a number of cases, leads him to the conclusion that the mode of treatment of small-pox by the exclusion of light, although very useful in the lighter cases of unmodified, and in all cases of modified small-pox, should be employed with caution in the graver cases of a confluent character. (*Lancet*, July 1, 1871.)

DR. E. PRIDEAUX, OF ENGLAND.

This writer gives in the *Lancet*, 1877, the treatment of small-pox which he has employed with much success. On entering the small-pox hospital under his charge the patients were ordered:

1059. R.	Acidi salicylici,	gr. xx
	Sodii bicarbonatis,	
	Ammonii carbonatis,	ʒʒ gr. iv.

This amount in water every two or four hours, according to the severity of the case.

In the later stages of the disease, gr. v of citrate of iron and ammonia was added to this mixture.

In the first stage of the disease the patients were placed in baths of 90° and cooled down to 70°, they being allowed to remain in them about fifteen or twenty minutes. These baths were administered every day, and in severer cases twice daily. After each bath

they were painted over with a mixture of glycerine, gelatine and carbolic acid, in the following proportion :

1060. R.	Acidi carbolici,	f.ʒj
	Glycerinæ,	f.ʒvj
	Gelatinæ,	f.ʒj
	Aquæ,	f.ʒxxvj.

For local use.

As soon as the pustules were full, those on the face were pricked, if necessary, and the gelatine mixture painted on frequently. All the patients had at their own desire a pot of the mixture, with a brush, in order that they might paint their faces frequently. They said it relieved the pain, and entirely prevented any itching. It kept the skin soft and moist, acting as an antiseptic, and preventing any unpleasant smell. In this stage of the disease each patient had a warm bath daily. Later on, soda in considerable quantity was put into each bath, and the patients well washed with carbolic soap, to aid the desquamation and so expedite their removal from the hospital.

The results were very gratifying, in that there was an almost entire absence of pitting, whilst the marks left even in the most severely confluent cases were such as would almost disappear after a short time ; and the number of confluent cases was rendered much smaller, by the eruption being checked both by the local and constitutional measures employed.

RÉSUMÉ OF REMEDIES.

Camphor is advantageously employed, particularly in confluent or malignant small-pox, when the vital power is greatly depressed. It may be given alone or in combination with opium.

Carbolic Acid has been administered with marked benefit. It is more useful at an early stage of the disease, although, given afterward, it much modifies the symptoms, and hastens the curative process.

1061. R.	Acidi carbolici,		
	Acidi acetici,	āā	f.ʒj-iss
	Tincturæ opii,		
	Spiritus chloroformi,	āā	f.ʒj
	Aquæ,		ad. f.ʒviiij. M.

A tablespoonful every four hours, till the fever subsides. After the first dose, the mixture is rather grateful to the patient than otherwise.

**Opium* often fails to procure rest in the early stage of small-pox, but in the advanced stage of the disease, patients who are wakeful, but

otherwise doing well, are benefited by it, given once or twice. But neither it, nor any other anodyne, is to be given when there is copious salivation and mucous expectoration, as the patient may die asphyxiated during sleep, from the secretion accumulated in the air-passages.

Soda Sulphis. The sulphites are recommended by Professor POLLI, of Milan, as mitigating the febrile action, rendering the confluent and malignant forms benignant, shortening the course of the milder forms, and in all cases accelerating convalescence.

Sulphuricum Acidum Dilutum. In confluent small-pox, treatment by dilute sulphuric acid, ℥xv-xx, with gr. j of quinine, every three or four hours, together with stimulants and nutritives, is an excellent one.

TO PREVENT PITTING.

Amylum. A thick mucilage of starch has been used as a local application to prevent pitting, with excellent effect. The entire surface of the body should be first sponged with tepid water.

Argenti Nitras. VELPAU and other French writers recommended the practice of opening each vesicle on the third or fourth day of the eruption, and touching each with a stick of the nitrate scraped to a point. This, however, is a tedious and painful process, not unattended with danger. It has been recommended to wash the face on the fourth or fifth day with a strong solution of the nitrate.

Calcis Aqua. The application of cotton-wool, soaked in a mixture of equal parts of lime-water and olive oil, is said to be an efficacious one.

Carbolicum Acidum. Dr. H. YATES reports a case (*Lancet*, January 25th, 1868,) treated with success by the following ointment:

1062. R.	Acidi carbolici,	f.ʒij	
	Adipis,	ʒij.	M.

The ointment was colored with lampblack and applied thickly spread on wadding. It was changed every second day, the parts first washed with soap and warm water, and then with warm water impregnated with carbolic acid.

Glycerina. The following application is recommended by J. F. MARSON:

1063. R.	Glycerinæ,	1 part	
	Aquæ rosæ,	2 parts.	M.

Apply (after the pustules have discharged, and the discharge has begun to dry) freely for a few days, until the scabs begin to loosen.

Hydrargyri Unguentum. Inunction of mercurial ointment has been advised by Prof. BENNETT and others, but excessive salivation may follow its use. The following ointment is employed in the Children's Hospital, Paris:

3064. R.	Unguenti hydrargyri, Cera flava, Fels nigra.	ʒxxv ʒx ʒvj.	M.
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Ichthium. The tincture, applied once or twice a day, is a remedy which has been long used. Although it does not absolutely prevent pitting, it usually renders the marks and cicatrices less evident.

Zinc Carbonat. Prof. BROWNE, of Edinburgh, prefers the following to all other ointments:

3065. R.	Zinci carbonatis, Zinci oxidii, Olei olivæ.	ʒiij ʒj q. s.	M.
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The same object is said to be obtained by treating the whole surface thickly with powdered calamine. This application has a very soothing effect.

EXTERNAL MEASURES.

Cold Baths. Dr. CROSCMANN, in ZIEMSEN'S *Cyclopaedia*, maintains that baths are only useful in the premonitory and eruptive stages. But considering that the greatest danger in small-pox is during the fever suppuration, Dr. CLEMENT, of Lyons, thinks that it is to this period of the disease that treatment should be directed. Before the employment of these baths, this physician had treated ten unvaccinated cases, eight of which had died. Of the seven cases treated by baths, only two died, and these were both of a hæmorrhagic type. Those that recovered were very severe cases, while one of them was of the hæmorrhagic type, and another complicated with pneumonia. The most noticeable effects produced by baths on small-pox patients are, a fall in the temperature, often sudden and of some degrees; cessation of the delirium soon after the first bath; and a great reduction of the pulse-rate and of the respirations. Moreover, the eruption was in all the cases favorably modified. Dr. CLEMENT states, that after the second bath he has generally seen the vesicles become larger and fuller, and during the eruptive stage, more opaline and of a better nature. The number of baths given in these cases varied from seven to eighteen.

The first baths should always be of a temperature from 25° to 28° C. The effect of the bath must be carefully gauged by the thermometer. The patient should be submerged beneath the water up to his shoulders; and when he is put to bed he should be enveloped in a sheet, and covered only with a simple woollen covering. Two or three baths may be given in the twenty-four hours.

VII. DISEASES OF WOMEN.

The Constitutional Treatment of Diseases of Women—Abortion—Amenorrhœa—Chlorosis—Dysmenorrhœa—Mammary Diseases—Menorrhagia—Ovarian Diseases—Pruritus Vulvæ and of Pregnancy—Uterine Diseases—Vaginismus—Vaginitis (Leucorrhœa)—Vomiting of Pregnancy—Vulvitis.

THE CONSTITUTIONAL TREATMENT OF DISEASES OF WOMEN.

HENRY M. FIELD, M. D., OF BOSTON.

The writer lays proper stress upon the necessity of associating constitutional medication with topical applications in the treatment of diseases of women. He suspects that there is a too general tendency, in uterine therapeutics, to trust solely, or nearly so, to the employment of local medication. For instance, in many cases of constipation, complicating uterine disorders, when the nervous system is impaired and the blood poor, to give strychnia or belladonna, with the design of acting specifically upon a single function, and of restoring a condition of permanent health to the bowels, would be almost as short-sighted, and almost as much of a temporary expedient, as it would be to give purgatives. The impoverished blood must first be fortified and enriched before we can look for the normal performance of any important function; and accordingly there are patients, answering the condition described, in whom a course of iron, properly regulated, is the only general therapeutic agent that is necessary.

In some of his cases, he has found *arsenic*, and especially the *arsenate of iron*, very effective in removing constipation, and has sometimes received benefit from this agent when he had failed to make a successful impression with any of the more commonly used remedies.

He has been very much pleased, in cases of female difficulties in which iron has been indicated, with the action of *oxalate of iron*, a preparation first brought to notice by Prof. CRAIG, of the Smith-

sonian Institute. Being a light and tasteless powder, with nothing repulsive in its appearance, it can be exhibited in that form to those occasional patients who are unable to swallow a pill. He values it particularly, because it is less liable to cause irritation or derangement of the stomach, or constipation of the bowels, where this common effect of ferruginous preparations is to be avoided, than is any other form of iron with which he is familiar. He has found it to agree with and benefit patients who, from past experience, believed themselves unable to take iron in any form.

PROFESSOR WILLIAM GOODELL, M. D., OF PHILADELPHIA.

This able specialist states that one cardinal rule in the treatment of all uterine disorders is the internal administration of *iron*, and of other tonics. Whenever the womb is hypertrophied, ergot, quinia, arsenic or bromide of potassium may be added. The bowels should be kept soluble. An excellent pill for this purpose is:

1066.	℞.	Extracti colocynthidis compositi,	gr.ij
		Extracti belladonnæ,	gr.½
		Extracti gentianiæ,	gr.ij
		Olei carui,	gtt.ʒss.

For one pill, to be taken at bedtime.

The following tonic pills are much prescribed by Dr. G.:

1067.	℞.	Acidi arseniosi,		
		Strychniæ sulphatis,	āā	gr.¼
		Extracti belladonnæ,		gr.½
		Cinchonæ sulphatis,		gr.ʒss
		Pilulæ ferri carbonatis,		gr.ijss.

For one pill.

1068.	℞.	Acidi arseniosi,		gr.¼
		Cinchonæ sulphatis,		gr.ʒss
		Ferri et potassæ tartratis,		gr.ij.

For one pill. One after each meal.

BASHAM'S iron mixture, with the addition of fractional doses of strychnia, will be found very admirable in its effects. The following is perhaps the best formula for this celebrated mixture:

1069.	℞.	Tincturæ ferri chloridi,	f.ʒijj	
		Acidi acetici diluti,	f.ʒss	
		Liquoris ammoniæ acetatis,	f.ʒijjss	
		Curæoæ,		
		Syrupi simplicis,	āā	f.ʒj
		Aquam,	ad. f.ʒvijj.	M.

One tablespoonful after each meal.

When there is nervousness and sleeplessness the following nerveine can be prescribed with very general satisfaction :

1070. ℞. Elixiris humuli, f.ʒj
 Elixiris valerianæ ammon.,
 Elixiris lactucarii, ññ f.ʒss. M.

One desertspoonful at bed time or during the day, if necessary.

ABORTION.

DR. ALFRED MEADOWS, OF LONDON.

Ergot is exhibited by this author in habitual abortion dependent upon a weakened atonic condition of the uterus (*Practitioner*, September, 1868). He commences in small doses (℥v-vij extracti *ergotæ* liquoris, *British Pharmacopæia*), as soon as pregnancy is known to exist, and continues it in increasing doses (℥xx-xxx), as long as it may seem necessary, certainly till after the period of the accustomed abortion, but with the occasional omission of a week or two. In unsuitable cases, this mode of treatment may be productive of mischief, for, as Dr. MEADOWS remarks, its employment is a matter of extreme delicacy, requiring a very careful discrimination of the cause of previous abortions, and of the actual present condition of the uterus.

On the general use of *opium* in abortion, it may be concluded, from the evidence offered, that it is of value in *threatened abortion* arising from accident, from mental causes, or from habit, when it may be given by the mouth, or in a cold starch injection thrown into the bowel, repeated every night, or oftener, according to circumstances; the application of cold, perfect quiet and unstimulating diet, being at the same time enforced. When, however, abortion is threatened from fetal disease or imperfection, so that the premature emptying of the uterus is but an effort of nature to get rid of that which she cannot accomplish, opium does harm, by retarding the emptying of the uterus, which must sooner or later take place. After *abortion has taken place*, opium allays excitement, tranquilizes the circulation, and procures sleep.

RÉSUMÉ OF REMEDIES.

Arsenic has been recommended in threatened abortion from irritable uterus, by Mr. HENRY HUNT, of Dartmouth, England.

DISEASES OF WOMEN.

is Indica has been found useful in impending abortion from congestion or irritability of the uterus. From v-xx drops of the tincture may be given every two or four hours. Drs. CLENDENING, REYNOLDS, LEVER and CHURCHILL praise its effects.

Plumbi Acetas is a valuable adjunct to opium in uterine hemorrhage with threatened abortion.

Quinine is thought by many to act as a uterine stimulant, and to be advantageous in this accident.

Sabina is useful against the hemorrhage which indicates approaching abortion in women of bad fibre. In these cases, the dried powder of the leaves may be given, in doses of gr. xv-xx thrice daily. In habitual abortion depending upon diminished vitality of the uterine system, she has been advised:

1071. R.	Sabinæ,	ʒij-iv
	quæ feruntur	f.ʒvj. M.

A table of the medicine should be taken during the intervals of the menses, and the medicine must, however, be employed with caution.

Tannicum Acidum, in combination with opium and ipecacuanha, has been strongly advised in the treatment of threatened abortion.

Terebinthinæ Oleum has been favorably reported upon by Dr. FORDYCE BARKER in the treatment of threatened abortion; given as an enema, he found it act as an effective oxytotic, as well as hæmstatic.

Viburnum Prunifolium is an extremely valuable preventive of abortion, often succeeding where other means fail. The bark of the root is the portion used, from which an extract is prepared. It has been especially noticed by Dr. E. W. JENKS. (*Gynecological Transactions*, 1876.)

Ice, pounded and swallowed freely in considerable quantities, is an excellent remedy in abortion.

AMENORRHŒA.

PROF. R. J. GRAVES, M. D., DUBLIN.

This author observes, in his *Clinical Lectures*, that the periodicity of the function of menstruation can still be traced, even in cases where suppression has continued for a great length of time, means of the menstrual molimina (pains in the loins, thighs, hypogastric region, flushing, colicky pains of the abdomen, general feeling of *malaise*), which occur at stated intervals; in endeavoring to bring on the discharge, therefore, we must be guided as to the time the attempt should be made, by an observance of the period at which these molimina occur. For a few days before that time

our efforts to produce a determination of blood to the uterus may be judiciously employed; and if they fail, the attempt should be abandoned until a few days before the next menstrual period. Of course, however, the general constitutional treatment must be constantly persevered in; one of the chief means of bringing back this evacuation being the restoration of health to the natural standard. But all such remedies as pediluvia, stuping of the genitals, leeches to the inside of the thighs, near the labia, aloes and other stimulating purgatives, etc., should be only used at the times spoken of. To use them at any other period, either after the molimina have disappeared, or during the intervals between them, tends, in most cases, still further to derange nature, by determining to the uterus at an unseasonable time, when there is no natural tendency to that organ. Under such circumstances, the very same means fail, and prove injurious, which, applied so as to coincide with the time of the natural effort, would have been successful.

To illustrate these principles by an example: We are consulted in the case of a young woman affected with various hysterical symptoms for several months, and during that period more than usually subject to headache, languor, loss of spirits, diminution of appetite, and irregularity, and usually constipation of bowels; she is pale, and complains of various pains and uneasy sensations, and has not menstruated since the onset of these symptoms. Here it is evident that the constitutional treatment must be strengthening and tonic. The practitioner will therefore recommend regular hours, much exercise in the open air, a nutritive diet, and afterward cold shower-baths; he will regulate the bowels, and afterward prescribe a course of tonic medicines, chalybeates, preparations of bark, strychnia, etc.; he will likewise inquire carefully when the last period happened, and where, and how often since that occurrence, menstrual molimina were observed. He thus ascertains when they should again recur, and contents himself with enforcing the constitutional treatment until about six days before the calculated time. Then he lays aside the other medicines, and has recourse to those means which determine to the uterus. Two leeches are applied to the inside of the thigh, near the labium, every second night, until they have been three times applied. The bleeding is encouraged by stuping. On the intermediate days the bowels must be actively moved by aloetic pills; and for three nights before and after the molimina, hot pediluvia, rendered stimulating by mustard

seed, may be used. During the same time, also, frictions, with stimulating liniments, should be applied to the feet and legs every morning, and oil of turpentine or tincture of cantharides may be exhibited internally, while the necessity of more active exercise is inculcated. If these means fail, they must for the moment be laid aside, and the constitutional treatment must be again resumed, until the same number of days before the next period, when the list of remedies above spoken of must be again tried, and in few cases indeed shall we find them to fail.

DR. PINTSCHOVIVS, OF KETZIN.

1072. R. Extracti pulsatillæ, āā q. s. M.
Foliorum pulsatillæ,
Divide into pills of three grains each; one three times a day.

J. M. DA COSTA, M. D., PHILADELPHIA.

1073. R. Apiol, gr. iv. M.

In the form of a granule, or "pearl," four times a day, as an emmenagogue. To be taken for three days before the expected period. Apiol is an excellent remedy for amenorrhœa, when there is no uterine disease.

DR. EMIL DILLENBERGER, VIENNA.

Treatment demands the removal of those errors and lesions which lie at the bottom of the malady. If the amenorrhœa consists of some anomaly of the sexual organs, congenital or acquired, and such as cannot be remedied, or in some other irremediable malady, treatment is useless. If menstruation has been already established, the physician must convince himself, by a careful examination, whether or not pregnancy is the cause of the cessation of the periods. Internally are used aloes and myrrh, as follows:

1074. R. Pulveris aloës, gr. lxxvij
Pulveris myrrhæ, gr. xxxiv
Extracti glycyrrhizæ, q. s. M.
For sixty pills. Two to four pills two or three times a day.

1075. R. Pulveris aloës socotrinæ,
Pulveris myrrhæ, āā gr. xlviij
Crocī sativi, gr. xxxiv
Extracti glycyrrhizæ, q. s. M.
For ninety pills. From four to six twice a day.

TILT, of London, recommends its internal administration combined with podophyllin. It is frequently combined with myrrh.

Ammonii Murias, in the hands of Dr. ANSTIE, in gr. x doses, three times a day, in cases of amenorrhœa, marked rather by general feebleness than by anæmia, has occasionally seemed to conduce directly and considerably toward the cure. But of this as of all other emmenagogues it is pre-eminently true that it is worth absolutely nothing if not exhibited precisely on the fit occasion.

Ammonia Aqua has been successfully employed in the form of injection into the vagina:

1080. ℞.	Aquæ ammoniæ.	f.ʒj	-
	Lactis,	Oj.	M.

To be injected into the vagina daily.

Apiol is highly recommended by Dr. JARET (*Bull. Gén. de Thérap.*, August 15, 1860,) as one of the safest and best of emmenagogues, not being even contra-indicated in incipient pregnancy. It is said to be especially adapted for cases attended with local or general nervous symptoms.

Argenti Nitras, applied in substance lightly to the os uteri at the time of the expected appearance of the menses, has proved successful in obstinate cases.

Cantharides. Dr. W. P. DEWEES placed much confidence in the internal use of tincture of cantharides, in doses of gtt. xx, gradually increased to gtt. xxxv or xl. Dr. T. H. TANNER, of London, combined it with bromide of potassium.

Cimicifuga has been found an effectual remedy in some cases.

Ergot is recommended by Dr. TILT, of London (in doses of gr. v-x, in powder, two or three times a day). He usually gives it in conjunction with other remedies:

1081. ℞.	Tincturæ ergotæ,	ʒ℥xxx	
	Syrupi croci,	f.ʒss	
	Decocti aloës compositi,	f.ʒjss.	M.

A teaspoonful three times a day.

**Ferrum Redactum*, and the other ferruginous preparations, are indispensable in the anæmia which constantly accompanies stoppage of the function.

Galbanum may frequently be combined with benefit, with the salts of iron.

Hydrargyri Chloridum Mite is contra-indicated, if the patient be feeble, and is capable of doing much mischief in unsuitable cases. But Drs. GRAILY HEWITT, ASHWELL, and others, have found it a decided emmenagogue. Dr. HEWITT directs that on two successive nights, at the time of the expected period, a dose be given of five grains of calomel and six grains of aloes, followed by a Seidlitz powder in the morning.

Iodine frictions over the abdomen have been found to give good results.

CHLOROSIS.

This name, or that of *green sickness*, is given to the anæmic condition of young girls, associated with disordered menstrual function. The blood has an excess of fibrine, and undergoes some chemical change in its pigments which produces the greenish hue of the skin, whence the disease has its name.

Under the head *Anæmia* (Chap. VI,) will be found a full selection of appropriate remedies for that feature of the disease; but a mere routine treatment with iron is neither creditable nor successful. Attention to hygienic conditions, baths, nutritious food, regularity of the bowels, and judicious mental and physical exercise, are first in importance.

DR. FREDERICK T. ROBERTS.

This writer on *Practice* considers *aloes* the best form of aperient, either the extract, or as *pil. aloes cum myrrhâ*. For the unpleasant sensations in the stomach, bismuth, with hydrocyanic acid, is particularly valuable. For the pain in the side often complained of, a belladonna plaster is usually efficacious. Iron is the great remedy; and it is frequently desirable to change the form of the preparation from time to time.

PROFESSOR A. P. REID, OF MONTREAL.

This writer (*Canada Medical Record*, 1875,) has adopted, with signal success, in uncomplicated chlorosis, the use of *liquor potassæ*, gtt.x-xv, in mucilage, thrice daily. It defibrinizes the blood, and often acts promptly for good where iron is of no avail.

DR. BRETONNEAU, FRANCE.

1086. R.	Ferri redacti,		ʒij	
	Quiniæ sulphatis,			
	Zingiberis pulveris,	āā	gr.vij	
	Extracti cinchonæ,			
	Extracti gentianæ,	āā	ʒj	
	Aloës socotrinæ,		gr.iiij.	M.

Divide into fifty pills. One to five a day. These pills have the advantage of not causing constipation.

DR. GALLARD, PARIS.

1087. R.	Ferri carbonatis,			
	Extracti cinchonæ,	āā	ʒijss	
	Extracti opii,		gr.xv.	M.

Divide into one hundred pills. From two to four a day, principally at meal times.

When there is constipation, this formula ought to be modified as follows :

1088. R. Ferri carbonatis, ʒij
 Extracti cinchonæ,
 Extracti rhei, āā ʒiiss
 Extracti opii, gr.xv.

Divide into one hundred pills. To be taken as above.

RÉSUMÉ OF REMEDIES.

Aloes. (See above.)

Bismuthi Subnitras. Sir H. MARSH states (*Medical Press*, March 6th, 1867,) that in chlorosis bismuth is an excellent substitute for iron, when the latter is not well borne.

Ergot, in five-grain doses, three or four times a day, is recommended by CHURCHILL, in chlorosis and leucorrhœa.

* *Ferri Iodidum.* In chlorosis, accompanied by much torpor of the system, Dr. ASHWELL has found this salt particularly efficacious, in the following formula :

1089. R. Ferri iodidi, gr.xvj
 Tincturæ calumbæ, f.ʒj
 Aquæ, f.ʒvij. M.

Take two tablespoonfuls twice a day.

* *Ferri Mistura Composita*, *Ferri Chloridi Tinctura*, *Ferri et Quiniæ Citras*, *Ferri Sulphas*, and *Ferri Vinum*, are all excellent ferruginous preparations in chlorosis.

Sir H. MARSH advises (*Medical Press*, March 6th, 1867,) the following formulæ :

1090. R. Liquoris ammoniæ citratis, f.ʒiij
 Ferri et quiniæ citratis, gr.vij-xxiv.
 Syrupi, f.ʒj
 Aquæ, f.ʒiv. M.

Two tablespoonfuls three times a day.

1091. R. Ferri sulphatis,
 Aloës, āā gr.ij
 Pulveris cinnamomi, gr.v. M.

For two pills, to be taken at dinner-time, and repeated at night if necessary.

Sodæ Biboras. Dr. COPLAND advises the following formula :

1092. R. Sodæ biberatis, ʒij
 Sulphuris præcipitata, ʒj
 Mucilaginis acaciæ, q. s. M.

Make twenty-four pills. Three to be taken three times daily.

Nux Vomica. Dr. COPLAND has derived benefit in some obstinate cases of chlorosis from the following formula :

DISEASES OF WOMEN.

1093. R. Pilulæ aloës c. myrrhâ, ʒij
 Extracti nucis vomicæ, gr.x. M.
 For thirty-six pills. Take one to two night and morning.

Tassa Liquor. (See above.)

DYSMENORRHŒA.

1094. R. Ammonii chloridi purificati, ʒij
 Extracti glycyrrhizæ, ʒss
 Aquæ, f.ʒvj. M.
 A dessertspoonful three Recommended by Dr. O. WARD,
 of Tennessee, and oth inful dysmenorrhœa of the change
 of life.

DR. EMIL GER, VIENNA.

When there is evidence of hypotonia of the womb, several leeches to the portio vaginalis uteri, or to the insides of the thighs, warm soft poultices, or injections of warm water, are very beneficial. When the dysmenorrhœa is of nervous origin, some advantage is derived from the application of warmth, warm baths, mustard poultices, or dry cuppings applied to the loins and thighs, and internally from narcotics, especially opium.

1095. R. Pulveris opii, gr.j
 Sacchari albi, ʒj
 Olei menthæ piperitæ, gtt.ij. M.
 Divide into six powders. Take one every two to four hours.

Or :

1096. R. Tincturæ opii, ℥xxx
 Infusi anthemidis, f.ʒiv
 Aquæ menthæ piperitæ, āā f.ʒss. M.
 Syrupi simplicis,
 One to two tablespoonfuls every one or two hours.

THEODORE JEWETT, M. D., PROFESSOR OF OBSTETRICS, BOWDOIN MEDICAL COLLEGE.

1097. R. Camphoræ, ʒijss
 Extracti belladonnæ,
 Quiniæ sulphatis, āā ʒss
 Pulveris acaciæ, q. s. M.
 For eighty pills. One to be taken every four hours until relieved.

1098. R. Extracti scutellarizæ fluidi,
 Decocti aloës compositi, āā f.ʒss. M.
 A dessertspoonful every two or three hours until relieved.

Dr. C. W. FRISBIE, of East Springfield, N. Y., writes that he used the above formula in his practice many times, and when the cases had been properly selected, with the most happy results.

DR. A. DESPREZ, SURGEON TO THE LOURCINE HOSPITAL, PARIS.

In dysmenorrhœa, warm water occasions congestion of the uterus, and the congestion is followed by a return of the menses, and consequently by a marked alleviation.

Injections of warm water act like the cataplasm and warm lotions, which are so usefully employed in inflammation of the integument.

The injections of warm water are practiced at the hospital with irrigators, of which the jet is not very strong. The water used should be of 95° to 104° Fah., and it is renewed two, four or six times in the day. This therapeutic means is convenient, and not repugnant to the patient.

DR. LISFRANC, PARIS.

1099. R.	Vini opii,	gtt.x-xx	
	Camphoræ,	gr.ij-ivss	
	Decocti althææ,	f.ʒijss	
	Yolk of egg,	ʒijss.	M.

For an enema, to be given nearly cold, at bedtime, to relieve the pain of menstruation. Hot fomentations on the abdomen.

1100. R.	Assafœtidæ,	ʒj	
	Vini opii,	ʒlxxv	
	Extracti valerianæ,	ʒss	
	Decocti althææ,	f.ʒijss	
	Yolk of egg,	ʒv.	M.

An enema, in hysterical dysmenorrhœa.

RÉSUMÉ OF REMEDIES.

Apiol, in the hands of Dr. TILT, of London, acts like a charm when given in doses of four grains, so soon as the pains of dysmenorrhœa begin. It is of little use, however, when the dysmenorrhœa depends upon disease of the uterus.

**Belladonna*. In neuralgic dysmenorrhœa, Dr. ANSTIE, of London, recommends (*British Medical Journal*, August 22d, 1868,) the extract, as a palliative, in doses of gr. $\frac{1}{8}$. He obtained still better results from the hypodermic injection of the sulphate of atropia, in doses of gr. $\frac{1}{20}$ - $\frac{1}{30}$, twice a day, and continued for several weeks, at once reducing the quantity when marked dryness of the throat appeared. In constitutions very intolerant of belladonna in any form, the acetate of morphia may be advantageously substituted for the atropia. A belladonna plaster to

the sacrum is often of benefit; so also is a suppository of extract of belladonna.

Camphor. Dr. DEWEES regards camphor as a very certain and uniform palliative, in doses of gr. x, every one or two hours, until relief be obtained. Or the following injection may be given:

1101. R.	Camphoræ,	ʒss-j	
	Tincturæ opii,	f.ʒj	
	Mucilaginis,		M.

For an enema.

Camphor liniment, or ointment, well rubbed into the loins, also affords relief.

Cannabis Indica is sometimes a remedy.

Colchicum is useful in dysmenorrhœa connected with a tendency to gout or rheumatism. It should be given with blue pill every other night; flannel at the loins should be worn, and exposure to cold avoided.

Ferri Chloridi Tinctura and **Camphoræ Tinctura** are both excellent preparations in atonic dysmenorrhœa. Sir CHARLES LOCOCK recommends the following formula.

1102. R.	Vini ferri,		
	Spiritus ætheris sulphurici		
	compositi,	ʒiij	f.ʒj
	Misturæ camphoræ,		f.ʒvj. M.

Take one-fourth part every six hours.

Guaiacum is often productive of the greatest benefit. The *tinctura guaiaci ammoniata* is especially serviceable.

***Opium.** Opiates are often best exhibited in the form of enemata. Dr. E. J. TILT, of London, recommends a hot linseed-meal poultice, sprinkled with laudanum, to be applied to the hypogastrium. A single hypodermic injection of morphia, when the pain is habitually severe, will often be sufficient at each menstrual period.

Potassii Nitratis has been found highly serviceable, in doses of gr. xv-xx, well diluted with barley water.

Sinapis. Dr. ASHWELL recommends the mustard hip-bath, to be repeated three or four times a day, the patient remaining in it for from thirty to sixty minutes, or even, if the pain be very severe, until faintness is induced.

Sodæ Biboratis is of advantage combined with extract of belladonna.

Stramonium is said to be of marked benefit in the severe forms of the disease.

Taraxacum. A half teaspoonful of the extract in a little warm milk every night proves useful, by keeping up a healthy action of the liver and skin.

Veratria. Mild veratria ointment, rubbed over the hypogastric region twice a day, greatly relieves the pain.

Viburnum Prunifolium affords often great relief if taken for a few days before the menses appear.

MAMMARY DISEASES.

In *acute mammitis*, a number of observers have reported striking success with the *poke root*:

1103. R. Fluidi extracti pnytolaccæ, q. s.
Twenty drops every three hours.

Others have seen benefit from:

1104. R. Tincturæ belladonnæ,
Tincturæ digitalis, āā f.ʒj. M.
Ten drops every three or four hours.

In *chronic mammitis*, Prof. HUNTER MCGUIRE, M. D., of Richmond, Va., condemns (*Virginia Medical Monthly*, September, 1875,) the severe and needless practice of slitting up the sinuses, or of injecting them with stimulating fluids. Nearly every case can be cured by *proper bandaging* with adhesive plaster.

Cut the plaster into strips from four to six inches in length, and from a half to three-quarters of an inch in width, according to the size of the breast. After warming the plaster, apply one end of a strip to the circumference of the gland, near the axilla. Take another strip of the same length and width, and fasten its end to the inner circumference of the breast, near the external bone. The ends of the two strips of plaster thus applied are held in place by an assistant, while the surgeon takes the free extremities of the strips, and drawing them toward each other, that is, drawing the breast from its circumference toward its centre, crosses the strips and fastens them. Two more strips are then applied just below, and lapping slightly the first two pieces. Continue in this way till the whole breast is covered (somewhat upon the same principle and manner that we use strips in an indolent sore on the leg), leaving the nipple and fistulous orifices uncovered. A piece of moistened lint is placed over the sinuses, to catch the pus which escapes.

DR. ASHBURTON THOMPSON, LONDON.

Speaking of mammitis, this writer (*Medical Times and Gazette*, January, 1875,) mentions two modes of treatment, the administration of tincture of *aconite*, and the total abstention from fluids during the necessary number of days. By giving minim doses of aconite every hour, he had succeeded in cutting short inflamma-

tions of the breast which there was no doubt would otherwise have run on to suppuration very frequently; indeed, in three cases out of four. In cases of still-birth he had hitherto found abstention from fluids sufficient in every case to avoid every kind of mammary disturbance. Ice was allowed in moderate quantity, and no other fluid, from the time of delivery until the fourth or fifth day, when the breasts generally return to their normal state of quiescence. The deprivation of fluid caused but little distress.

MR. ROBERT DRUITT, LONDON.

1105. ℞. Acidi tannici, gr. iv.
Aquæ destillatæ, f. ʒvj. M.

This solution, as well as ointments and glycerites of tannin, is useful in cracked nipples. It should be applied on lint covered with oiled silk.

DR. BLACQUIÈRES, FRANCE.

1106. ℞. Extracti kramerizæ, gr. xv
Olei amygdalæ dulcis, f. ʒss
Butyri cocoæ, ʒijss. M.

To be applied to cracked nipples when the child has ceased to nurse; to be removed before nursing.

1107. ℞. Zinci oxidî, ʒij
Sodæ boratis, ʒij gr. iiss
Olei amygdalæ dulcis, f. ʒss
Butyri cocoæ, ʒij
Olei bergamii, gtt. v. M.

A useful liniment for cracked and chapped nipples.

GERMAN HOSPITAL, PHILADELPHIA.

1108. ℞. Extracti opii, gr. iiss
Liquoris calcis, f. ʒv
Olei amygdalæ dulcis, f. ʒij.

Dissolve the extract of opium in the lime-water, and the oil, and shake vigorously.

MR. ERASMUS WILSON, LONDON.

The mucilage of acacia is a useful application to sore nipples. It should be penciled on the part immediately after suckling, and the nipple then be protected by a leaden shield. Or the following powder may be applied:

1109. ℞. Acaciæ gummi pulveris, ʒij
Sodæ biberatis, ʒij ʒss. M.

DR. HUEBNER, DRESDEN, SAXONY.

The treatment pursued by this obstetrician in all lesions of the nipple and areola consists in the constant application, day and

night, of lukewarm compresses, wet with lead-water; fissures, ulcers, and excoriations being touched once or twice a day with balsam of Peru, and the breast well supported. The child should nurse less often than usual, and, where possible, through a nipple-shield. He recommends the warm lead-water in mastitis also, to be followed by strapping of the breast and free incision, while suppuration is promoted by poulticing.

In chaps of the nipple Dr. CHARRIER, of Paris, recommends the employment of perfectly pure *picric acid* in the following formulas: *a.* One and a half parts to 100 parts of distilled water; *b.* one part to the 100 parts. After thoroughly cleansing the nipple with tepid water, the solution *a* is to be applied every morning with a pencil to the cracks; and immediately after suckling the nipple is to be held for four minutes in a glass containing the solution *b*. The infants do not notice the bitterness of the medicine, and willingly take the breast.

Dr. LE DIBORDER, of Paris, thinks that in obstinate fissure of the nipple *quinine* will prove to be of the greatest service; and during a long experience of it he has always found that a cure was effected in from three to five days. He generally prescribed a dose of six grains early in the morning, and a similar dose about eleven o'clock, a. m. Local treatment was considered of secondary importance, being confined chiefly to poultices and some simple wash or salve.

MENORRHAGIA.

DR. RACIBORSKI, PARIS.

1110. R.	Ferri redacti,	ʒj	
	Extracti nucis vomicæ,	gr. xij	
	Mucilaginis acaciæ,	q. s.	M.

Divide into sixty pills. From two to four morning and evening, for chlorotic young girls whose menstruation is too profuse.

DR. EMIL DILLENBERGER, VIENNA.

The treatment of the Vienna school comprises rest, horizontal position with the pelvis elevated, low diet, and cooling drinks, such as:

DISEASES OF WOMEN.

1111. ℞. Acidi tartarici, gr. x-xxij
 Syrupi aurantii floris, f. ℥vj
 Aquæ, f. ℥xv. M.
 For drinking.
1112. ℞. Tamarindi, ℥j
 Fiat decoctum libræ unius,
 Acidi sulphurici aromatici, f. ℥j-ij
 Syrupi rubri, f. ℥ss-j. M.
 For drinking.
1113. ℞. Acidi sulphurici aromatici, f. ℥ij
 Syrupi rubri, f. ℥j. M.
 One to two teaspoonfuls in of water as a drink.

These directions and prescriptions, together with pure air, only moderately warmed, in the are some of the most important points which alone will rather free bleeding.

When there is *passive metrorrhœgia*, use cold dressings, injections of cold water, or the following agents:

1114. ℞. Aluminis, ℥ij-ivss
 Aquæ, f. ℥xv. M.
 For vaginal injections.
1115. ℞. Acidi tannici, ℥ss-iv
 Aquæ, f. ℥xv M.
 For vaginal injections.
1116. ℞. Zinci sulphatis, gr. x-xxxiv
 Aquæ, Oj. M.
 For vaginal injections.
1117. ℞. Catechu, ℥ij
 Aquæ, f. ℥xv. M.
 For vaginal injections.
1118. ℞. Extracti kramerizæ, ℥ij
 Aquæ, f. ℥xv. M.
 For vaginal injections.

Plugging the vagina is also an effectual remedy.

Among internal remedies, those that have generally shown themselves the best are:

1119. ℞. Ferri chloridi, gr. xvj
 Tincturæ opii, gtt. x
 Syrupi tolutani, f. ℥ij
 Aquæ, f. ℥vj. M.
 A tablespoonful every one to two hours.

1120. ℞. Pulveris ergotæ,
Sacchari albi, āā gr.xxxiv
Olei cinnamomi, gtt.j. M.
- Divide into six doses. One powder every five minutes.
1121. ℞. Extracti ergotæ fluidi, ℥xx-xl
Syrupi acaciæ, f.ʒij
Syrupi aurantii floris, f.ʒss
Aquæ, f.ʒiij. M.
- One tablespoonful four times a day.
1122. ℞. Extracti kramerizæ, gr.vj-xx
Aluminis,
Sacchari albi, āā gr.xxij
Olei cinnamomi, gtt.j. M.
- Divide into six powders. One powder every two to five hours.
1123. ℞. Aluminis, gr.xxxij
Tincturæ cinnamomi, f.ʒij
Syrupi aurantii corticis, f.ʒss
Aquæ cinnamomi, f.ʒiv. M.
- One tablespoonful hourly.

Hemorrhage during pregnancy requires complete repose of body and mind, horizontal posture and acid drinks. The employment of other remedies depends on the answer to the question whether the physician can stay the bleeding without pregnancy being interrupted. In the negative case, cold applications on the abdomen, or injections, introduction of bits of ice into the vagina, or plugging the vagina, are proceedings to be recommended.

Bleeding which arises from the bursting of varicose vessels in the vagina requires to be treated with cold compression, plugging, ligature, or transfixion of the bleeding vessels. The bleeding which occurs in mole pregnancies is stayed by the delivery of the moles.

T. HAWKES TANNER, M. D., F. L. S., LONDON.

1124. ℞. Acidi gallici, gr.xv-xxv
Acidi sulphurici aromatici, ℥xv-xx
Tincturæ cinnamomi, f.ʒij
Aquæ destillatæ, q. s. ad. f.ʒss. M.
- For one dose. Mix with two or three tablespoonfuls of water, and take every few hours, in profuse menorrhagia, until the bleeding ceases.

PROFESSOR T. GAILLARD THOMAS, NEW YORK.

This author says that in case of menorrhagia the patient should be kept perfectly quiet upon her back; cloths wrung out of cold water should be laid over the uterus, vulva and thighs; cold acidu-

d drinks should be given freely; and the injection of all warm fluids strictly interdicted. In addition, the apartment should be cool, the nervous system quieted by opium or an appropriate opiate, and all conversation prohibited. In mild cases this may succeed, but in severe ones it will not. Then the speculum should be introduced, a sponge-tent passed into the cervix, and the vagina filled with a tampon. This will rarely fail. But in certain cases, as, for instance, those of cancer of the neck, the tent will not be admissible. Under these circumstances, a soft sponge or wad of cotton should be saturated with a solution of tersulphate of iron, laid upon the cervix, and the tampon placed against it, or a small linen bag may be filled with powdered alum, placed in contact with the cervix, and held in place by a tampon; or two drachms of tannin may be left free against the part. To these means almost all cases will temporarily yield, more especially if the use of the tent is admissible.

EDWARD JOHN TILT, M. D., M. R. C. P., LONDON.

1125. R.	Olei terebinthinæ,	f.ʒss	
	Tincturæ capsici,	f.ʒss	
	Tincturæ ergotæ,	f.ʒj	
	Tincturæ lavendulæ compositæ,	f.ʒij.	M.

In cases of uterine hemorrhage, give from half a drachm to a drachm of this mixture in milk, after shaking the bottle. In severe flooding after parturition, from half an ounce to an ounce may be given in plenty of milk, with good results.

PROFESSOR ELLERSLIE WALLACE, PHILADELPHIA.

1126. R.	Aloës,	gr.v	
	Olei tanaceti,	gtt.xl	
	Cantharidis,	gr.vij	
	Ferri lactatis,	ʒiv.	M.

Make a mass; divide into twenty-eight pills. One morning, noon, evening and night, as an emmenagogue.

J. G. SWAYNE, M. D., PHYSICIAN ACCOUCHEUR TO THE BRISTOL GENERAL HOSPITAL, ETC., ENGLAND.

The following formulæ are of service in cases of *accidental hemorrhage during pregnancy*:

1127. R.	Acidi sulphurici diluti,	f.ʒj	
	Tincturæ opii,	ʒxl	
	Infusi rosæ compositi,	f.ʒvj.	M.

Two tablespoonfuls every other hour.

1128. R.	Plumbi acetatis, Acidi acetici, Morphiæ acetatis, Aquæ destillatæ,	gr.xviii ℥xx gr.j f.ʒvj.	M.
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Two tablespoonfuls every hour.

The woman is also, of course, to be kept in a recumbent position, and cold compresses applied to the abdomen and vulva. Cold drinks and cold water enemata may be administered. By the employment of these expedients, the bleeding may be checked and the patient carried in safety to the close of her pregnancy.

PROF. FORDYCE BARKER, M. D., NEW YORK.

In *uterine hemorrhage at the change of life*, this teacher adopts the following treatment:

Where the uterus is found to be increased in size and weight, he directs the patient to use, for a week previous to the return of the expected period, suppositories made after the following formula:

1129. R.	Extracti ergotæ aquæ (SQUIBB'S), Cacao butter,	ʒij ʒj.	M.
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Divide into suppositories No. xij.

One of these suppositories is to be introduced into the rectum morning, noon and night; and they must be carried far up into the bowel, and the patient must keep the recumbent posture for at least one hour. These are to be continued for a week previous to menstruation, and also throughout its duration. Ergot in this manner, rather than by the hypodermic syringe, avoids the risk of troublesome abscesses in the tegumentary walls of the abdomen.

Now, if the hemorrhage is prolonged, although not excessive, he infers that there is some lesion affecting the lining membrane of the uterus, and then resorts to another plan of treatment, which it is rarely found necessary to repeat in any case beyond the second menstrual return. In those cases, he introduces into the cavity of the uterus cylinders of iodoform made according to the following formula:

1130. R.	Iodoformi, Gum tragacanth, Mucilaginis,	ʒijss gr.xv q. s.	M.
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Divide into cylinders No. x, each one and one-half inches in length.

One of these cylinders is to be carried completely into the cavity

of the uterus, and a pledget of cotton introduced against the cervix, to retain it in position. Introduce one of these cylinders daily for five or six days previous to menstruation. The only objection to them is the excessively disagreeable odor which attends their use.

RÉSUMÉ OF REMEDIES.

- Alumen* often proves successful in controlling the hemorrhage. Dr. E. J. TILT, of London, says that in uterine hemorrhage alum, in solution with sulphuric acid, is the first remedy to try.
- Argenti Oxidum* is an efficient remedy in menorrhagia. More than three grains daily should not be given.
- Arseniosum Acidum*. Fowler's solution is said to check uterine hemorrhage, given at first in the dose of ℥x-xx, and repeated in ℥x doses every twenty minutes until the discharge ceases. This remedy must not, of course, be pushed too far.
- **Cannabis Indica*. Dr. CHURCHILL, of Dublin, obtains from the tincture of Indian hemp, in doses of gtt. v-x, thrice daily, remarkable success in the treatment of menorrhagia and uterine hemorrhage.
- Cimicifuga*. Dr. RINGER, of London, says this remedy will certainly arrest menorrhagia, though he regards it as inferior in this affection to the bromide of potassium.
- Digitalis* is useful in menorrhagia and other forms of uterine hemorrhage, unconnected with organic disease. Dr. E. J. TILT, of London, employs the following :

1131.	℞. Tincturæ digitalis,	f.ʒij	
	Acidi hydrocyanici diluti,	℥xxx	
	Morphiæ acetatis,	gr.ʒ	
	Aquæ,	ad. f.ʒvj.	M.

A dessertspoonful every two or three hours.

Ergota, though not equally beneficial in all cases, is a useful remedy in menorrhagia. Dr. WARING-CURRAN states (*Medical Press*, Nov. 17, 1869,) that it proves most useful in that form of menorrhagia which occurs in women of a scrofulous habit, who suffer from constipated debility, and in whom leucorrhœa exists as a consequence of previous hemorrhage. He gives freshly prepared infusion of ergot and borax in menorrhagia from obstructive cardiac disease, in that associated with a diseased portal system, in that consequent upon a scorbutic state of the system, and in genuine menorrhagia (*i. e.*, an increase of the catamenia, continuing for a lengthened period, and returning before the proper period, without organic lesion). He finds it has little or no effect in menorrhagia dependent upon ulceration of the os, the presence of polypous growths or other tumors, or in that arising from retro-flexion of the uterus. Ergotin, subcutaneously, should not be neglected.

Ferri Chloridi Tinctura may frequently be given with advantage in atonic cases.

**Gallicum Acidum* was much employed by the late Sir J. Y. SIMPSON, of Edinburgh, in atonic menorrhagia. He gave it in doses of gr x, xv or xx daily, and continued its use during the intervals, as well as the period of discharge. Dr. E. J. TILT, of London, while testifying to its value as an astringent in many cases, finds that it often fails when the hemorrhage depends upon organic lesions.

Ipecacuanha, in full emetic doses, is often productive of the best results. Under the use of gr. xx of the powdered root, in the evening, followed by an acidulated draught in the morning, the discharge frequently ceases in twenty-four hours; if a relapse occurs, a repetition of the emetic seldom fails to make the cure permanent. Dr. TYLER SMITH thus explains its action in these cases; by its emetic power, it excites contraction of the abdominal muscles and compression of the uterus, which may, in turn, re-excite some amount of uterine reflex action; but beyond this, it appears to have a special action upon the uterus, increasing its contractile power beyond what could be imagined to occur from the merely secondary effects of vomiting. *Ipecacuanha* thus appears to influence the medulla oblongata and the lower medulla spinalis. This double action upon the extremities of the spinal centre is very extraordinary.

Krameria is particularly useful in menorrhagia occurring about the usual time of the cessation of the menses. Dr. DEWEES employed the following formula:

1132. R.	Extracti krameriaë,	ʒij	
	Pulveris rhei,	ʒss	
	Syrupi,	q. s.	M.

Divide into forty pills, and order two thrice daily.

Magnesia Sulphas is recommended by Dr. GRAILY HEWITT, of London, who found a mixture containing very small doses of this salt, with a little dilute sulphuric acid and syrup, very useful during the time of the catamenial flow.

Matico. The pounded leaves, made into a paste and introduced into the vagina, are said to arrest the hemorrhage after the failure of a strong solution of nitrate of silver.

Plumbi Acetas often succeeds in severe cases, when given in enema:

1133. ʒ.	Plumbi acetatis,	gr. xv-xx	
	Tincturae opii,	ʒxl	
	Mucilaginis,	f. ʒij.	M.

For an enema.

In mild cases, the internal administration of sugar of lead and opium is usually successful.

**Potassii Bromidum* is a favorite remedy of Dr. RINGER, of London, who lays down the following rules for its administration in men-

rhagia: If the loss of blood occurs only at the natural menstrual period, it will be sufficient to begin the medicine about a week before the discharge is expected; and when this has for a time ceased, it should be discontinued till the next attack is about to begin. If, on the other hand, the loss of blood occurs every fortnight, or oftener, it should be given without any intermission, till the disease is well controlled; and when the discharge has been brought to its right period and amount, a few doses should be given for a short time before each monthly period. It has less control over uterine hemorrhage due to tumors of the uterus than ergot and other remedies.

**Tannicum Acidum*, alone or combined with a small portion of dilute nitric acid, has often the happiest effects.

Viburnum Prunifolium is peculiarly applicable in menorrhagia depending wholly upon systemic causes, as phthisis, diseases of the heart or liver, malaria, etc. It is also beneficial in that occurring at the menopause.

Zinci Sulphas, in doses of gr. j-ij in pills, thrice daily, is often useful in the atonic forms of menorrhagia.

VAGINAL INJECTIONS.

Alumen. Dr. E. J. TILT, of London, orders, in purely atonic cases of menorrhagia, the following vaginal injection:

1134. B.	Aluminis,	℥j	
	Decocti quercus albæ,	Oj.	M.

This injection is inadmissible if inflammatory symptoms be present.

Ferri Chloridi Tinctura, with equal parts of water, has been injected with success.

Galla. Decoction of galls (℥j¼, aquæ Oj), daily injected into the vagina, warm or cold, according to the feelings of the patient, is occasionally useful.

Quercus Alba. The decoction, with or without alum (℥j, ad. decocti Oj), is a serviceable and safe vaginal injection.

OVARIAN DISEASE.

PROFESSOR J. MATTHEWS DUNCAN, EDINBURGH.

On the subject of *acute and chronic ovaritis*, this author states there is no specific treatment. In chronic cases, two, three or four leeches may be applied to the cervix uteri, through a speculum, after the monthly periods. Croton oil liniment, or antimonial liniment, or a blister, may be applied to the inguinal canal adjacent to the affected gland. The bowels should be regulated by gentle saline laxatives. Leucorrhœa, if present, should not be actively treated, but by mild injections only. Mercury and iodide of potassium may be given in small doses.

J. WARING-CURRAN, L. K. AND Q. C. P. I., ETC.

For *ovarian neuralgia* :

1135. R.	Ammoniæ muriatis,	ʒij	
	Tincturæ aconiti,	f.ʒij	
	Syrupi aurantii corticis,	f.ʒviiij.	M.

A teaspoonful thrice daily in the treatment of *ovarian neuralgia*.

Our author states that this combination has almost a magical influence in many cases. He reports (*Medical Press and Circular*, August 19th, 1868,) six cases in which various sedatives and anodynes had been tried in vain. In all he found that before the above mixture was finished by the patient the pain had entirely ceased.

Dr. T. J. NEWMAN, of Chicago, confirms the usefulness of this mixture, and records (in the *Chicago Medical Examiner*, for November, 1869,) three cases of neuralgia of the ovaries treated by it with success, after the failure of other remedies.

In the same painful complaint, Dr. R. BARTHOLOW has obtained excellent results from the following recipe :

1136. R.	Extracti belladonnæ,	gr. iv	
	Extracti stramonii,	gr. v	
	Extracti hyoscyami,	gr. v	
	Quinæ sulphatis,	ʒij.	M.

Make twenty pills. One three times a day in ovarian neuralgia and neuralgic dysmenorrhœa.

RÉSUMÉ OF REMEDIES.

Ammoniæ Muriatis is often efficient in ovarian neuralgia.

Antimonii et Potassii Tartras. Counter-irritation by means of tartar

DISEASES OF WOMEN.

emetic ointment is of service in subacute ovaritis. Dr. GRAY HEWITT, of London, advises, together with this counter-irritation over the seat of the disease, the following internal treatment:

1137. R. Pulveris opii, gr.v
 Extracti cannabis indicae, āā gr.x. M.
 Camphoræ, āā
 Divide into ten pills; one to be taken night and morning.

Atropia, hypodermically, $\frac{1}{120}$ - $\frac{1}{60}$ grain in ovarian neuralgia.

Camphoræ is very serviceable in ovarian pain.

Hydrargyri Unguentum. Dr. E. J. TILT, of London, recommends in subacute ovaritis:

1138. R. Unguenti Hydrargyri, ʒij
 Extracti Cannabis Indicæ, ʒj
 Ceræ, ʒij
 Adipis, ʒj. M.

Warm water enemas, and gentle aperients (castor oil), should accompany the treatment.

**Linum*. Large, light and soft linseed-meal poultices afford often the greatest relief in ovarian inflammation.

**Opium*. Pessaries of opium (gr. ij) frequently give the utmost relief in ovarian pain and irritation.

**Terebinthinæ Oleum*. Hot turpentine epithems applied over the seat of the disease are very useful.

Blisters over the ovarian region are sometimes of service in subacute ovaritis.

Enema. Warm water enemas (simple or medicated), retained as long as possible, are of great benefit.

Ice, applied in a bag to the painful spot, is said by Dr. E. J. TILT to relieve severe pain in acute ovaritis.

Leeches may often be applied to the groin or inside the thigh with good effect.

RÉSUMÉ OF REMEDIES.

LOCAL APPLICATIONS.

Ammonii Murias, in the following ointment, is useful :

1143.	R.	Ammonii muriatis,	ʒj	
		Pulveris helleboris albæ,	ʒss	
		Adipis,	ʒiij.	M.

Ammonia Aqua sometimes succeeds in obstinate cases like a charm, when injected in diluted form into the vagina :

1144.	R.	Ammonia aquæ,	f.ʒss-j	
		Aquæ,	Oss.	M.

To be freely injected into the vagina.

Aqua Fervida. One of the most efficient means in relieving the pruritus occurring in pregnancy is hot water, applied by means of flannel cloths wrung out of that fluid and laid upon the parts.

Argenti Nitras. Dr. GRAILY HEWITT, of London, states that in obstinate cases a rather strong cauterization of the os uteri, with the solid nitrate, will sometimes succeed when other measures fail.

Calcis Aqua, applied warm, together with perfect rest and light clothing, will sometimes afford the desired relief.

Camphor, in powder, with starch, dusted over the parts, sometimes removes the distressing symptoms.

**Chloral*, by Prof. J. R. BLACK, of Ohio:

1145.	R.	Chloral hydratis,	ʒiij	
		Aquæ,	ʒiv.	M.

Apply locally.

**Chloroformum*. Dr. GRAILY HEWITT, of London, obtains the greatest benefit from the application of :

1146.	R.	Chloroformi,	f.ʒss	
		Olei amygdalæ expressi,	f.ʒiij.	M.

Creasotum. A weak solution is sometimes useful.

Hydrargyri Oxidi Rubri Unguentum, well diluted with cod-liver oil, is frequently an effectual application.

**Hydrargyri Chloridum Corrosivum*. The favorite formula of ERASMUS WILSON, of London, is the following :

1147.	R.	Hydrargyri chloridi corrosivi,	gr.v-x	
		Spiritus rosmarini,	ʒiij	
		Alcoholis,	ʒiij.	
		Misturæ amygdalæ amaræ,	ʒiij.	M.

Another formula, said to be effective, is given by Dr. MILTON (*Medical Press*, March 11th, 1868):

1148. R. Hydrargyri chloridi corrosivi, gr. iv
 Bismuthi oxidi, gr. xxx
 Acidi hydrocyanici diluti, ℥xxx
 Aquæ calcis, ad. f. ℥viiij. M.

Apply warm, twice or thrice daily.

Hydrargyri Unguentum is advised locally by Dr. RINGER, of London.

Hydrocyanicum Acidum Dilutum is recommended, largely diluted, by Dr. WEST, of London. It must not be applied too freely, nor over abraded surfaces :

1149. R. Acidi hydrocyanici diluti, ℥x-xl
 Glycerinæ, f. ℥j. M.

Iodinium. The tincture, locally applied, often affords relief.

Morphia, subcutaneously, deserves trial in severe cases.

**Olivæ Oleum*, spread over the parts with a feather, sometimes allays the pruritus.

Plumbi Subacetatis Liquor Dilutus. The following soothing application is a useful one :

1150. R. Liquoris plumbi subacetatis diluti, f. ℥j
 Tincturæ hyoscyami, f. ℥ij
 Misturæ camphoræ, f. ℥viiij. M.

To be applied tepid. Rest and an antiphlogistic regimen are at the same time to be ordered.

Sodii Boras. The following formula is advised by Dr. WEST, of London :

1151. R. Sodii boratis, ℥iv
 Morphiæ muriatis, gr. viij
 Aquæ rosæ, f. ℥x. M.

Sodæ Chlorinata Liquor, diluted, has been employed with success :

1152. R. Liquoris sodæ chlorinataæ, f. ℥vj
 Aquæ, f. ℥xij. M.

Sodii Sulphis has been favorably reported on.

1153. R. Sodii sulphitis, ℥j
 Aquæ, f. ℥iiij
 Glycerinæ, f. ℥j. M.

Tanacetum. A poultice of tansy leaves applied as hot as the patient can bear it, is said, by Dr. R. L. BUTT, of Alabama, to be efficient in obstinate cases. (*American Practitioner*, Aug., 1877.)

UTERINE DISEASES.

Chronic Uterine Catarrh (chronic endometritis). Much can sometimes be done by bringing the habits in accordance with hygienic rules, the administration of tonics, especially ferruginous ones, and the occasional use of mild cathartics, as castor oil and the saline mineral waters. Baths, cold, sponge, sea or salt, are required.

Of specific internal remedies, the only one deserving much attention is *ergot*. This should be administered regularly, in the form of the fresh powder, the fluid extract, or by hypodermic injection (gr. iij of the aqueous extract every other day). Undoubtedly, in many instances, this drug sets up a new uterine action, which, with other favoring circumstances, alters and arrests the mucous discharge.

As is remarked, however, by Dr. W. PLAYFAIR, of King's College, London, in many long-standing cases of uterine catarrh it is vain to expect a permanent cure by any means which do not act directly on the seat of the disease, which is the lining membrane of the cavity of the uterus and cervical canal beyond the external os; accompanied, of course, with secondary morbid states of the body of the uterus and cervix, such as hypertrophy, congestion, etc. Rest, applications to the exterior of the cervix, and general treatment, will unquestionably cause a temporary improvement, but on a recurrence to the old habits of life all the old symptoms return. There are serious objections to intra-uterine injections, unless the *os is first dilated with laminaria tents*, as they are apt to bring on severe uterine colics. By means of fine probes of whalebone or flexible metal, round which a thin film of fine cotton-wool is wrapped, alterative applications can readily be made to the interior of the uterus, without pain or danger. In the very numerous cases in which this plan of treatment has been carried out, in no single instance has anything but the greatest benefit accrued. It is no doubt advisable to select the cases judiciously, and where there is much uterine tenderness, intra-uterine treatment should be postponed until this has been diminished by rest, leeching, etc.; but with proper precautions the treatment is perfectly safe. A concentrated solution of *carbolic acid, eighty parts to twenty of water*, is used, and it acts so well that for a long time nothing else has been employed. After the first application, the discharge is sometimes increased, but after the second or third it is generally

greatly diminished, and a single application is often sufficient to cure superficial erosions of the cervix. As a rule, there is no difficulty in passing the probes, as in true uterine catarrh the os is invariably patulous.

DR. F. A. GALLOIS, PARIS.

1154. R.	Morphiæ muriatis,	ʒj-ij
	Sacchari,	gr. iv
	Ceræ albæ,	ʒj
	Butyri cacao,	ʒss.

Melt over a slow fire the cocoa butter and the wax, incorporate the sugar and morphia, carefully triturated together, and when the mixture is on the point of forming a mass, run it into four horns of paper, and allow it to cool.

These vaginal suppositories are useful in painful affections of the uterus, rectum and bladder.

DR. ROBERTS, MANCHESTER, ENGLAND.

In *ulcerations of the os*, this writer, while commending the carbolic application, does not consider the strong acid necessary in superficial ulceration. A mixture of one part of the strong acid with two of olive oil seems to answer all ordinary purposes; but in cases of very deep ulceration the use of the strong acid may be called for. In such cases, Dr. ROBERTS desires the acid to be liquefied by the addition of a very small quantity of water. This has not been found always to answer the purpose, but it has been noted that the addition of a *few grains of camphor* will dissolve the acid, and will, moreover, prevent it again becoming solidified, even at a freezing temperature. The application of the carbolic oil to the os uteri is best effected by soaking a little cotton-wool in the liquid, securing it by a string, and introducing it through a speculum, the string being left depending out of the vagina, and the patient being directed to pull it away on the second day. This procedure is repeated in ordinary cases about twice every week. If it be desired to apply the acid to the cervical canal, it may readily be done by passing in a gum-elastic catheter smeared with the carbolic oil.

INTRA-UTERINE MEDICATION.

PROFESSOR CARL SCHROEDER, OF ERLANGEN.

As cautions in the use of intra-uterine injections, this author mentions:

1. Tenderness or inflammation of the uterus or its appendages.

2. There must be a free exit of the injected fluid; hence it is better first to dilate, in every case, the uterine neck.

3. Only a small quantity of fluid must be injected.

4. The fluid should be slightly warmed, and slowly injected.

5. Where there is flexion of the uterus it is advisable to draw the fluid back into the syringe after a minute or two.

Of substances used, probably the solutions of alum and iodine are the most useful, as these do not form precipitates with the albumen of the discharge, as iron, acetate of lead, nitrate of silver, etc.

Dr. ROBERT BARNES remarks (*British Medical Journal*, January, 1873,) that a most precious way of applying almost any medicinal agent to the interior of the uterus is in the form of an ointment or *pasma*. They can be introduced by means of a hollow sound, with a piston working in its centre, the "ointment positor." Where grease is objectionable, glycerine, cocoa butter, cosmoline, vaseline, etc., may be used. Thus bromine, iodine, mercury, etc., can be safely applied.

Dr. W. W. WILKENS recommends (*Transactions of the New Hampshire State Medical Society*, 1875,) the following as admirably adapted to *chronic uterine catarrh*:

1155. ℞.	Acidi carbolic,	ʒj	
	Aquæ,	f.ʒss.	
	Dissolve and add:		
	Glycerinæ,	f.ʒss.	M.

This mixture will not cauterize or destroy tissue, but acts as a healthy stimulus. None or little pain follows its use. It should be applied to the entire mucous membrane of the womb about once in ten days.

THE MEDICAL TREATMENT OF UTERINE TUMORS.

Fibroid Tumors. From numerous sources, lately, the assertion has been made that interstitial fibroid tumor of the uterus can be treated hypodermically by the aqueous solution of *ergot* with eminently more satisfactory results than by any other mode of treatment, or by operation.

1156. R.	Ergotinæ (Bonjean's),	ʒj	
	Glycerinæ,	f.ʒj	
	Aquæ destillatæ,	f.ʒj.	M.
	Inject twelve drops daily, hypodermically.		

Dr. LOMBE ATTHILL (of Dublin) prefers a solution of the extractum ergotæ liquidum (B. Ph.), one part to two of water, of which he injects fifteen to twenty minims.

Uterine Polypi. The *chloride of calcium*, once popular as a remedy for *goitre*, has recently been advocated by various Irish physicians as efficient in bringing about the expulsion of uterine polypi (*Irish Hospital Gazette*, September 15th, 1874). The formula is :

1157. R.	Liquoris calcii chloridi,	f.ʒiv	
	Tinctura ferri chloridi,		
	Spiritus chloroformi,	ʒss	f.ʒj
	Tincturæ aurantii,		f.ʒij
	Infusi calumbæ,		f.ʒviij.
			M.

Two tablespoonfuls three times a day.

These polypi can, also, in many instances, be expelled by the administration of ergot, either by the mouth or subcutaneously. In the hemorrhage which accompanies these growths, perhaps the best injection is of solution of subsulphate of iron, as follows :

1158. R.	Liquoris ferri subsulphatis,	f.ʒss	
	Aquæ,	f.ʒij.	M.

To be used for intra-uterine injections.

This strength cannot be exceeded with safety, and frequently one-half the amount of the salt will be sufficient.

Prof. JONES, of the Medical College of Georgia, and other Southern physicians, have claimed that the free administration of *muriate of ammonia* brings about the discussion of fibroid tumors of the womb, hypertrophic contractions of the uterine walls, and allied troubles. It may be alternated with ergot.

In *coxcomb graulations* of the os, the best application is strong cider vinegar or crude acetic acid. It may be poured into a speculum and allowed to cover the diseased portion for about five minutes. This should be repeated every other day. Nitrate of silver is liable to excite hemorrhage if applied to this form of erosion.

In simple ulcerations of the os much good often follows the use of *iodo-tannin* :

1159. R.	Iodinii,	ʒj	
	Acidi tannici,	f.ʒj	
	Aquæ,	Oj.	M.

Filter and evaporate to ʒiv. To be applied to the ulcerated surface.

Or, for extemporaneous use:

1160. R. Tincturae iodini,
Tincturae gallæ, ℥ss f.ʒss. M.
For local use.

For uterine cancer see SURGICAL THERAPEUTICS.

VAGINISMUS.

This common and distressing affection is frequently a neurosis, without visible cause; but it is also, at times, owing to herpes, vaginal fissure, hypertrophied and painful papillæ, mucous patches, or disease of the urethra. These various conditions require appropriate treatment.

DR. EUGENE BOUCHUT, PARIS.

1161. R. Extracti krameriz, ʒss
Butyri cacaois, ʒj. M.
Make twelve suppositories. One to be introduced into the vagina night and morning. Valuable where there is vaginal fissure.

PROFESSOR CARL SCHROEDER, OF ERLANGEN.

Bathe the external genitals cautiously with dilute lead water, and afterward, when the redness has subsided, pencil the sensitive parts with:

1162. R. Argenti nitratæ, ʒijss
Aque destillatæ, f.ʒj. M.

O: with.

1163. R. Acidæ carbolicæ, gr. x
Aque, f.ʒj. M.

VAGINITIS—VAGINAL CATARRH—LEUCORRHŒA.

DR. T. FINCH, OF ILLINOIS.

1164. ℞. Potassæ chloratis, ʒiv
 Potassæ permanganatis, gr.x
 Aquæ, Oj. M.

Inject a teacupful morning and evening, in acute vaginitis. Warm sitz-baths and saline laxatives are important accessories. (*Chicago Medical Examiner*, December, 1874.)

DR. J. N. DEMARQUAY, PARIS.

1165. ℞. Acidi tannici, gr.xv-xxx
 Glycerinæ, f.ʒijss M.

Tampons of wadding immersed in this solution are introduced into the vagina after the acute symptoms have been relieved by baths, emollient injections and repose.

M. MAISSONNEUVE, PARIS.

1166. ℞. Ferri sulphatis, ʒijss
 Aquæ, Oj. M.

This solution is advised in injections in vaginitis. After each injection a certain quantity of starch is to be introduced into the vagina.

DR. EDMOND LANGLEBERT, PARIS.

1167. ℞. Tincturæ iodinii, f.ʒv-x
 Aquæ destillatæ, Oij
 Potassii iodidi, q. s. to prevent the precipitation of the iodine. M.

A useful injection in vaginitis after the acute stage has passed. Ulceration, if any exist, should be lightly touched with nitrate of silver. If the vaginal discharge be offensive, the following injection is useful:

1168. ℞. Liquoris sodæ chlorinatæ, f.ʒvj
 Aquæ destillatæ, Oiss. M.

DR. A. A. BOINET, PARIS.

1169. ℞. Tincturæ iodinii, f.ʒij
 Acidi tannici, ʒj
 Potassii iodidi, ʒss. M.

This solution is employed to paint the vagina, in acute or chronic vaginitis, and the uterine neck, in engorgement and ulceration. The proportion of the tincture of iodine is to be lessened according to

the character of the inflamed tissues and the effect that it is desired to produce.

DR. EDIS, OF MIDDLESEX HOSPITAL, LONDON.

In the subacute form of vaginitis this writer recommends swabbing the vagina freely with strong carbolic acid. A speculum is inserted, and the fundus vaginæ first touched; the speculum being gradually withdrawn, the acid is allowed to come into contact with the whole length of the vagina, stopping short just before the junction of the the mucous membrane with the vulval outlet, otherwise intense burning pain will be produced. Care must be taken not to allow any excess of the acid to run down externally. It is well to insert a pledget of cotton-wool soaked in oil just within the orifice of the vagina to prevent this; but should much burning pain ensue, the patient is directed to squeeze a little olive-oil into the passage, and to insert a morphia suppository *per anum*. In several instances, lately, this method of treatment had been adopted with marked success; two or three applications, at most, arresting the discharge, after several weeks' ineffectual treatment with ordinary lotions.

PROF. SCANZONI, VIENNA.

This author recommends, in vaginitis, the employment of a tampon rolled in powdered alum. If the sensibility be too acute, the alum is to be mixed with two parts of sugar. The tampon should not remain in the vagina longer than twelve hours, and ought to be introduced every two or three days. When it is withdrawn, the vagina should be cleansed by warm-water injections, and a bath taken. Some physicians replace the alum tampon by a sachet of gauze filled with an astringent powder, such as oak bark.

PROF. A. NELATON, PARIS.

1170. ℞. Cupri sulphatis, gr. xv
Aquæ, f. ℥vj. M.
To be used in injections in chronic leucorrhœa.

DR. GUIPON, PARIS.

1171. ℞. Ferri sulphatis, ℥ij
Ferri subcarbonatis, ℥iij
Cinchonæ pulveris,
Canellæ pulveris,
Ergotinæ, ʒj. M.

One or two pinches to be administered before the two principal meals, in idiopathic leucorrhœa. Its usage is to be suspended on the ap-

proach of the menstrual epochs. Prolonged vaginal injections, morning and evening, with cold water and vinegar. Tonic regimen.

1172. ℞.	Acidi tannici,	gr. ix	
	Ceræ albæ,	3vj	
	Adipis,	℥iv.	M.

Melt by a slow heat, and cool in a mould.

This is a useful vaginal suppository in leucorrhœa.

RÉSUMÉ OF REMEDIES.

Alumen, in doses of gr. v–vij thrice daily, in combination with pilulæ aloës or with nitre (gr. x), is productive of good in some obstinate cases of leucorrhœa.

Argenti Nitras is useful in uterine leucorrhœa :

1173. ℞.	Argenti nitratis,	℥ss	gr. v	
	Opii,			
	Pulveris rhei,			
	Extracti hyoscyami,	℥ss	℥j.	M.

Divide into twenty pills; one thrice daily.

Bismuthi Subnitratis, applied once a day in powder, on a small piece of charpie, by means of a speculum, to the whole of the vaginal mucous membrane, is an effectual remedy in some cases.

Cantharides. The use of the tincture, once so highly praised by Dr. DEWEES and others, has fallen into comparative disuse. It was given in gtt. xx thrice daily, in a demulcent draught, the dose being subsequently increased to gtt. xl–l, until it produced slight strangury, when it was diminished or the medicine discontinued. The average period of cure was about four months.

Copaiba is highly spoken of by a number of writers, in doses of ℥xv thrice daily.

Cubebs have been employed with success.

Ergot, in doses of gr. v thrice daily, often gives good results, especially if a blister be applied to the sacrum.

Gallæ Puhis, in doses of gr. x–xx, in decoction of tormentilla, daily, is given with great benefit at the Lock Hospital, London.

Hæmatoxyli Lignum, in decoction, has been employed with advantage. *Juniperus* frequently exerts a beneficial influence.

Krameria. The extract, in doses of gr xx daily, often arrests the discharge and improves the tone of the system.

Potassii Nitras. Dr. DEWEES prescribed the following with success in some obstinate cases :

1174. ℞.	Potassii nitratis,	3v	
	Aluminis,	3ijss.	M.

Divide into thirty powders; one thrice daily.

Tannicum Acidum, in doses of gr. ij-ij twice or thrice daily, in aqueous solution, combined with a small portion of dilute nitric acid, has been found an efficacious remedy.

Terebinthinæ Oleum is recommended, in small and repeated doses, by Dr. PEREIRA, in chronic cases, unattended by inflammatory symptoms.

VAGINAL INJECTIONS.

**Alumen*. Dr. TYLER SMITH, of London, has found the following injection very serviceable :

1175.	R.	Aluminis,	ʒss	
		Acidi tannici,	ʒj-ij	
		Aquæ,	Oj.	M.

One-half to be used at night, and the other half in the morning.

Oak-bark decoction also makes a good vehicle :

1176.	R.	Aluminis,	ʒj	
		Decocti quercus albæ,	Oj.	M.

Dr. E. J. TILT, of London, remarks that he has repeatedly known the prolonged use of alum injections produce an irritable, sub-inflammatory state of the cervix uteri; he advises, therefore, when astringent injections are long continued, to use those of alum, zinc and sugar of lead, on alternate days.

Ammonii Murias has occasionally been used in vaginal injections :

1177.	R.	Ammonii muriatis,	ʒj-iv	
		Aquæ,	Oj.	M.

Argenti Nitras, in solution, has been advised as a vaginal injection :

1178.	R.	Argenti nitratis,	gr.ij	
		Aquæ destillatæ,	f.ʒij.	M.

Calcis Aqua. The vaginal injection of a weak solution of lime-water sometimes effects a cure after the failure of other remedies.

Catechu. The infusion, injected once or twice a day, often greatly lessens the discharge.

Cupri Sulphas. The following injection, given after previously washing out the vagina with soap and water, is of service :

1179.	R.	Cupri sulphatis,	gr.xx-xxx	
		Aquæ tepidæ,	Oss.	M.

To be used thrice daily.

Hydrargyri Chloridum Corrosivum. Dr. DEWEES employed the following solution as a vaginal injection:

1180.	R.	Hydrargyri chloridi corrosivi,	gr.ij	
		Aquæ,	f.ʒij.	M.

To be used only in chronic cases ; given at first only once a day, then several times a day, until heat and irritation occur, when lotions of acetate of lead will effect the cure.

Matico. The infusion has been injected with benefit.

Plumbi Acetas. The following are useful vaginal injections :

- | | | | | |
|-------|----|------------------------------|-------|----|
| 1181. | ℞. | Plumbi acetatis, | gr.vj | |
| | | Aquæ, | f.℥j. | M. |
| 1182. | ℞. | Liquoris plumbi subacetatis, | f.℥ij | |
| | | Aquæ, | Oj. | M. |

Potassii Chloras. The following vaginal injection has been employed with success :

- | | | | | |
|-------|----|---------------------|---------|----|
| 1183. | ℞. | Potassii chloratis, | ℥j | |
| | | Aquæ destillatæ, | f.℥vij. | M. |

Granati Radicis Cortex. The decoction of the root-bark (℥ij, aquæ Oij, boiled to Oj) is a useful vaginal injection, combined with alum :

- | | | | | |
|-------|----|----------------------------------|-----|----|
| 1184. | ℞. | Aluminis, | ℥j | |
| | | Decocti granati radicis cortici, | Oj. | M. |

Quercus Alba. The decoction, with or without alum, is a safe and effective vaginal injection.

Sodii Boras. Dr. GRAILY HEWITT, of London, advises, when the discharge is acrid, frequent ablutions of the external parts with a borax lotion, to prevent irritation.

Tormentilla. The decoction (℥ij, aquæ Oiss, boiled to Oj) is an excellent vehicle for alum, in vaginal injection.

**Zinci Acetas.* This salt forms a useful vaginal injection, in the strength of gr.ij–iv to aquæ f.℥j. The following was a favorite formula with Sir ASTLEY COOPER :

- | | | | | |
|-------|----|------------------------------|--------|----|
| 1185. | ℞. | Zinci sulphatis, | gr.vj | |
| | | Liquoris plumbi subacetatis, | ℥xxx | |
| | | Aquæ, | f.℥iv. | M. |

By this formula decomposition takes place, the acetate of zinc resulting.

Zinci Oxidum. The following vaginal injection has been given with success :

- | | | | | |
|-------|----|--------------|------|----|
| 1186. | ℞. | Zinci oxidi, | ℥ss | |
| | | Aquæ, | Oij. | M. |

The sulphate of zinc, gr. j to water f.℥j, is also excellent.

VOMITING OF PREGNANCY.

DR. ALBERT EULENBERG, BERLIN.

1187. R. Tincturæ iodini, ℥xv
Alcoholis, f.ʒij. M.

Give three drops several times a day, in a tablespoonful of an aromatic infusion.

Other approved prescriptions are :

1188. R. Bismuthi subnitratis, ʒij
Acidi carbolic, gr.ʒv
Mucilaginis acaciæ, f.ʒj
Aquæ menthæ piperitæ, f.ʒij. M.

A tablespoonful three or four times a day.

1189. R. Atropiæ sulphatis, gr.ij
Aquæ destillatæ, f.ʒj. M.

Two drops in water, before meals.

1190. R. Cerii oxalatis, gr.x
Bismuthi subnitratis, gr.ʒxxx. M.

Make ten powders. One five or six times a day.

Sometimes a rectal injection of chloral hydrate, gr. xxx, morning and evening, will effectually control this symptom. Bromide of potassium, ℥j, thrice daily; chloroform, gtt. ij, in mucilage; and medicated pessaries, may also be tried. Dr. E. COPEMAN claims invariable success to follow dilatation of the os uteri with the finger, once often being sufficient to relieve the nausea completely. (*British Medical Journal*, May 25, 1875.)

VULVITIS.

In purulent vulvitis Dr T. G. THOMAS recommends lotions of acetate of lead, and later of sulphate of iron.

If this treatment be not effectual in eradicating the trouble, a solution of nitrate of silver (gr. x to aquæ f.ʒj) should be applied, by means of a brush, every other day, and the part kept constantly powdered with lycopodium, bismuth, or starch, until recovery

1191. R. Tincturæ opii, f.ʒij
Plumbi acetatis, ʒj
Aquæ, Oj. M.

Later, paint the diseased surface several times daily with :

1192. R. Liquoris ferri sulphatis, ℥ss f.ʒss. M.
Glycerinæ,

VIII. DISEASES OF CHILDREN.

General Remarks on Infantile Therapeutics—Bronchitis, Acute and Chronic, and Laryngitis—Cholera Infantum—Convulsions—Coryza—Croup, Membraneous and Spasmodic—Diarrhoea—Diphtheria—Hydrocephalus, Acute and Chronic—Pertussis—Pneumonia, Infantile—Scarlatina.

INFANTILE THERAPEUTICS.

EDWARD JOHN WARING, M. D., LONDON.

In childhood (as in old age) the same doses of medicines are not generally as well borne as in youth and manhood, and much nicety is sometimes necessary in regulating the dose. Several exceptions, however, present themselves; thus, in childhood (and in old age) much larger quantities of *mercury* are necessary to induce salivation than in manhood; indeed, Dr. CLARKE states that, in a practice of twenty years, he never saw a child truly salivated; an observation corroborated by the experience of others. Prof. GRAVES ascribes the difficulty of inducing salivation in children and in old persons to the undeveloped state of the salivary glands in the former, and to their atrophied state in the latter. On the other hand, in infancy and childhood, *opium* in every form is a remedy that requires the utmost caution in its administration. Two and a half drops of laudanum have destroyed an infant three days old; three drops, a strong child of fourteen months; and four drops, a child of a few weeks old (CHRISTISON). In infancy and childhood, *blisters* allowed to remain long in contact with the skin are apt to induce ulceration and gangrene; and *leeches*, on account of the thinness of the skin, and the vascularity of the subjacent tissues, draw more blood, and, consequently, make a more decided impression on the system in an infant, than a proportionate number would produce in an adult.

In regard to *anaesthetics*, children bear chloroform well, and with the usual precautions, it may be administered to them without danger. In giving it to infants, but a few drops should be placed on the inhaler at a time.

BRONCHITIS AND LARYNGITIS.

J. M. JULIAN, M. D., HOBOKEN, N. J.

In the suffocative capillary bronchitis of children, says this writer (*Medical Record*, October 2, 1871), the indications are to get rid of the excessive mucous secretion as speedily as possible. For twenty-five years he has used for this purpose, with eminent success, the following:

1193. R. Zinci sulphatis, gr. xij
Tincturæ sanguinariæ, f. ʒij
Aquæ, f. ʒiiss. M.

A teaspoonful in mild cases to a child one year old, every three hours; in severe cases, triple the dose, and give it every half-hour or hour, regardless of vomiting.

PROF. JOHANN STEINER, M. D., OF PRAGUE.

In chronic bronchitis and allied conditions, where there is debility and much irritation from the cough, this author has seen very great relief from the following prescription:

1194. R. Quinizæ sulphatis, gr. ij
Pulveris folior digitalis, gr. vj
Extracti opii, gr. j
Pulverem sacchari albi, ad. ʒj. M.

Divide into twelve powders; one every three or four hours.

PROF. J. LEWIS SMITH, M. D., NEW YORK.

Chronic laryngitis dependent on syphilis or tuberculosis requires specific treatment; local measures have but little effect. The chronic laryngitis occurring in children in general good health, sometimes resulting from an acute attack, is an obstinate affection. The patient should be warmly clad, and every effort made to guard against taking cold. The most satisfactory treatment is the application of tincture of iodine upon the neck, directly over the larynx, and in some cases of a solution of nitrate of silver, ten or twenty grains to the ounce, to the fauces, so that, if possible, some of it may enter the larynx. Little benefit is derived from stimulating expectorants. The following recipes have proved beneficial in a number of cases:

1195. R. Extracti cubebæ fluidi, ℥xl-f. ʒj
Syrupi simplicis, f. ʒijss. M.

A teaspoonful three or four times daily.

J. M. DA COSTA, M. D., PHILADELPHIA.

1196. ℞. Ammoniz carbonatis, gr. xvj
 Spiritus ætheris compositi, f. ʒiss
 Syrupi tolutani,
 Aquæ, - ʒʒ f. ʒj. M.

A teaspoonful every two hours; a stimulating expectorant for a child a year old, affected with bronchitis of two weeks' standing.

Counter-irritation to be applied to the chest by means of weak mustard plasters (one part of mustard to four of Indian meal). Also, if the child be much debilitated, fifteen drops of brandy every four hours. When the child is seen frequently, so that the effect may be watched, there is no better treatment than relieving the lung mechanically by emetics. Hoffman's anodyne, in the above recipe, acts as a diaphoretic and quieting agent, which latter influence would not be obtained from sweet spirits of nitre.

1197. ℞. Syrupi ipecacuanhæ, f. ʒss
 Liquoris potassæ citratis, f. ʒijss
 Misturæ glycerhizæ compositæ, f. ʒj. M.

A teaspoonful every three hours; for a child two years of age. Afterward, when the disease passes into second stage, to be changed to:

1198. ℞. Syrupi scillæ, f. ʒij
 Tincturæ opii camphoratæ, f. ʒij. M.

Thirty drops four times a day.

1199. ℞. Syrupi ipecacuanhæ, f. ʒj.

A teaspoonful every ten minutes until vomiting is produced; to be repeated every second day. For ordinary acute bronchitis in a child a year old. Together with:

1200. ℞. Ammoniz carbonatis, ʒss
 Syrupi senegæ, f. ʒss
 Syrupi tolutani, f. ʒj
 Aquæ, f. ʒijss. M.

A teaspoonful thrice daily.

For *Résumé of Remedies in Bronchitis*, see *Diseases of the Respiratory Organs*, pp. 136, 146.

CHOLERA INFANTUM.

DR. IRVING C. ROSSE, U. S. A.

In a communication to the Surgeon-General's Office, this writer states that the *bromide of potassium* is almost a specific in this affection, careful attention to hygiene being observed. The following formula is used :

1201. ℞. Potassii bromidi, ℥j-ij
Mucilaginis acaciæ, f.ʒij. M.

From ten drops to a teaspoonful, regulated according to circumstances. Occasionally, a drachm of *krameria* is added to this recipe.

The food is prepared by pounding a small quantity of fresh beef in a linen cloth, and expressing the juice, to which a very small seasoning of cayenne pepper is added. Minute quantities of brandy are administered when indicated.

PROF. N. S. DAVIS, M. D., CHICAGO.

In threatening cases this physician recommends :

1202. ℞. Acidi carbolici crystalisati, gr.ijj
Glycerinæ, f.ʒss
Tincturæ opii camphoræ, f.ʒj
Aquæ, f.ʒiiss. M.

Give twenty drops every half-hour, till the vomiting ceases ; then every four hours.

1203. ℞. Hydrargyri chloridi mitis, gr.iv
Pulveris opii, gr.j
Sacchari albi, gr.xxx. M.

Make eight powders. Give one every eight hours.

If the vomiting ceases, but the discharge continues, and the child is fretful and emaciates, then :

1204. ℞. Olei terebinthinæ, f.ʒij
Olei gaultheriæ, gtt.xx
Tincturæ opii, f.ʒij
Pulveris acaciæ, āā
Sacchari albi, ʒiv
Aquæ, f.ʒiij. M.

From fifteen to thirty drops, every three or four hours.

J. LEWIS SMITH, M. D., PROFESSOR IN BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

Prompt measures are required in cholera infantum, as the child rapidly sinks under the prostrating influence of the frequent watery

discharges. Some evacuant is indicated at the outset, if there be any irritating material in the stomach or bowels, causing or keeping up the trouble. Small doses of ipecacuanha (from two to five grains) are often beneficial. When, however, the stomach is irritable and the alvine discharges fail to carry off the intestinal contents, calomel is the great remedy. As it is slow in its operation, castor oil may be administered after it with benefit, or its operation may be aided by a simple enema. It should not be given to the extent of more than one or two doses.

If there be no indigestible substance in the intestines, purgatives are contra-indicated, as they are then hurtful. The continuance of the diarrhœa for several hours affords a pretty sure evidence of the removal of any irritating matter which may have been present, and hence no purgative is required. The objects of the treatment then should be to diminish the frequency of the evacuations, and improve their character. No time should be lost. Opium in some form is the chief reliance.

If laudanum be used, it may be administered in one-drop doses, every two or three hours, to a child one year old. Its effects should be watched. If the evacuations are partially checked, and there are signs of stupor, stop the opiate, or at least give it less frequently.

Astringents, and often alkalies, may be employed as adjuvants to the opium. The opiates and alkali may be employed in the following combination :

1205.	R.	Tincturæ opii,	gtt. xij	
		Misturæ cretæ,	℥. ʒiiss.	M.

One teaspoonful every two or three hours to an infant one year old.

To this mixture an astringent may be added, as tincture of catechu or kino. It should be borne in mind, however, that astringents are less tolerated by an irritable stomach than opium or chalk. When they are vomited, therefore, they should be discontinued, even in cases in which they would doubtless be serviceable if the stomach were retentive.

By means of the opiate and astringents, if they be retained, the passages are rendered, in a few hours, less frequent, and the stools more consistent.

In cases in which calomel is employed our author does not recommend its use in larger doses than one-fourth of a grain, morn-

ing and evening (together with the astringent and opiate), to a child of one year.

Dr. S. also advises small pieces of ice in the mouth at the beginning of the attack, to combat the irritability of the stomach, and the application of mustard to the epigastrium.

In most cases Bourbon whisky or brandy, the best of the alcoholic stimulants, are required. They should be used from an early period of the disease, both for the purpose of sustaining the vital powers and of diminishing the gastric irritability.

The diet should be simple, but nutritious, and taken often, but little at a time. If the child be at the breast, it should be confined to the mother's milk. If it be weaned, cold barley or rice water, with whisky or brandy, should be given in the commencement of the attack; afterward, milk or broth may be employed in addition.

1206. ℞. Creasoti, gtt. j
Aquæ calcis, f. ʒij. M.

One teaspoonful with a teaspoonful of milk, breast milk if the infant nurses, repeated *pro re nata*, for the vomiting so frequent in the summer epidemics of intestinal inflammation in the cities.

This recipe is much used in the Nursery and Child's Hospital of New York city. Or, the following may be administered :

1207. ℞. Potassæ bicarbonatis, gr. xxv
Acidi cictrici, gr. xvij
Aquæ amygdalæ amaræ, f. ʒj
Aquæ, f. ʒij. M.

Teaspoonful, repeated *pro re nata*.

MEREDITH CLYMER, M. D., NEW YORK.

This author gives the following indications for the treatment of *cholera infantum*:

The instantly threatening symptoms, purging and vomiting, are to be stopped. Fermentation, and not chymification, is going on in the stomach and duodenum. Hence small doses of the *bisulphites of soda and potassa*, with limed whey, will often act very happily, while the effect of poisonous drugs is always doubtful, and generally positively harmful. *Mercury* is, at best, negative. *Opium* and its preparations will be found valuable, if not contra-indicated by cerebral epiphenomena. The effects should be carefully watched. Flannel, wrung out of hot water, and on which laudanum is poured, applied to the spine, will be found useful in

checking vomiting. The function of the skin, which, in common with all the excreting organs, is inactive, must be excited. This may be done by gentle friction with woolen cloths, or a warm alkaline bath, in which the little patient should not remain longer than three minutes, being then quickly dried and wrapped in flannel. Food, of proper quality and quantity, should be given as soon as the stomach and bowels will tolerate it. Farinaceous articles are entirely inappropriate. Limed milk, to which a little gelatine has been added, or rennet whey, may be given; but in protracted cases, attended with great prostration and rapid emaciation, the *raw meat diet*, prepared as recommended by Prof. TROUSSEAU, will be often seized with avidity and well borne. Lean beef or mutton is first finely hashed, pounded in a mortar to a pulp, and then passed through a fine sieve. The thick concentrated juice thus obtained is nutritious and digestible, and, when salted or otherwise flavored, quite acceptable. Give a half to three quarters of an ounce, in fractional doses, the first day. If well borne by the stomach, increase the quantity day by day, until a quarter or half a pound is taken in the course of the twenty-four hours. For the first day or two, much of it may pass, hardly changed, from the bowels; but this alone should not occasion its discontinuance. If too long continued, however, this diet is liable to generate tænia. White of eggs, thinned with natural or artificial Seltzer, Vichy, or weak lime water, is an excellent drink, to which a few grains of bicarbonate of soda may be added. Tonics and stimulants are often required. Of the former, minute doses of *arsenic*, alone, or combined with quinine, or the chloride of iron, or the pernitrate of iron, or the tincture of nux vomica, may be given. Wine-whey, or brandy and water, to which a few drops of the aromatic spirits of ammonia have been added, are the best stimulants. The effect of sending the patient to a cool and mountainous region is immediate and lasting.

THOMAS HAY, M. D., PHILADELPHIA.

This practitioner has employed the following treatment in cases of cholera infantum, with the best results:

1208. R.	Hydrargyri chloridi mitis,	gr.ij	
	Bismuthi subcarbonatis,	gr.xvj-xl	
	Pulveris ipecacuanhæ compositæ,	gr.j-ij	
	Pulveris sacchari albi,	gr.xij.	M.

For eight powders; one to be taken every three hours for two or three days, or until the tongue and mouth become moist, and the alvine excretion changed in color and consistency.

Then the following powders are given, and will ordinarily complete the cure :

1209. R.	Bismuthi subcarbonatis,	gr. xvj-xl	
	Pulveris ipecacuanhæ compositæ,	gr. j-ij	
	Pulveris aromatici,	gr. viij-xvj	
	Pulveris sacchari albi,	gr. xij	M.

For eight powders ; one to be taken every three or four hours, in the mother's or cow's milk.

Counter-irritation is kept up over the abdomen with mustard plasters, applied at intervals of three or four hours. The infant is allowed to suck at a piece of ice held in its mouth. When stimulants are required, the doctor gives from fifteen to thirty drops of port wine. When the infant is artificially fed, he gives it cow's milk and lime-water, in the proportion of one fluid ounce of the latter to five fluid ounces of the former ; also, broiled mutton or beef, minced very fine. All farinaceous food is forbidden. The child must be nursed or fed at regular intervals, and not allowed too much at a time.

CONVULSIONS.

PROFESSOR JOHANN STEINER, M. D., OF PRAGUE.

It is not always easy to detect the cause of infantile convulsions. In such cases the causal treatment must give place to the symptomatic. Of the various remedies, our author prefers in such instances the following combination :

1210. R.	Zinci oxidi,	gr. iv	
	Hydrargyri chloridi mitis.	gr. ij	
	Sacchari albi,	ʒj.	M.

Make eight powders. Give one every hour.

Remove all constricting clothing, apply mustard poultices to the trunk and extremities, and use clysters of cold water. The warm bath is often serviceable.

Convulsions from malarial toxæmia demand quinine ; from worms, anthelmintics ; from phimosis or elongated uvula, excision, etc.

RÉSUMÉ OF REMEDIES.

- Anæsthetics.* Either chloroform or ether, by inhalation, are effective in emergencies.
- Belladonna* is valuable in the constitutional treatment.
- Chloral*, in doses of gr. v-x, every six hours, to a child of ten, frequently answers the purpose.
- Opium*, in some form, is preferred by many practitioners. It may be administered hypodermically, or by enema, every twenty minutes, until the pupils contract.
- Potassii Bromidum*, gr. x-3j, is usually a reliable means in idiopathic convulsive disorders. Dr. BLACHEZ (*Gazette Medicale*, December, 1875,) recommends a mixed treatment, the bromide being given during the day and the chloral at night.
- Zinci Oxidum*, especially when combined with tonics, aids much in restoring the nervous equilibrium.

EXTERNAL REMEDIES.

Warm Baths, in infants, often act as potent sedatives. *Cold to the head*, as compresses wrung out with ice-water or dilute ether, is valuable. TROUSSEAU commends pressure on the carotid arteries. The pulsation should be sought at the lateral part of the neck and the pressure be gradually backward upon the spinal column. If it does not relieve in two or three minutes, it should not be continued. Of course, all reflex irritation should be sought for in the first instance, and removed.

CORYZA.

PROF. J. LEWIS SMITH, M. D., NEW YORK.

In children, ordinary attacks of this affection require little treatment beyond keeping the bowels open, soaking the feet in mustard water, and having the body warmly clothed. Friction with camphorated oil over the nose is of some benefit. In attacks which commence with greater severity, an emetic of syrup of ipecacuanha, given early, will moderate the inflammation, and may prevent the occurrence of bronchitis. Afterward, a simple diaphoretic mixture should be administered, such as the following :

1211. ℞	Syrupi ipecacuanhæ,	f.ʒij	
	Spiritus ætheris nitrosi,	f.ʒj	
	Syrupi simplicis,	f.ʒij.	M.

One teaspoonful every three hours to a child of six months.

In place of sweet spirits of nitre, *acetate of potash* may be

employed, in the dose of one to two grains for infants. If there is febrile reaction, from half a minim to two minims, according to the age, of *tincture of digitalis*, may be given in each dose.

In pseudo-membranous coryza, the laryngitis which usually accompanies this affection demands the first attention. The injection of a solution of chlorate of potash, in water, several times a day, subdues the inflammation and removes the collection of mucus and pus. Or the following may be employed :

1212. ℞. Pulveris aluminis, gr.xvj-xx
Aquæ, f.ʒiv. M.

The bromine solution (F. 1232), diluted as directed, will also be found useful when injected into the nostrils.

Chronic coryza should be treated by tonics and by alteratives, directed to the cachexia which may be present. Together with such constitutional treatment, a solution of nitrate of silver (gr.iiij-v to f.ʒj), may be injected into the nostrils. An excellent formula for application to parts which can be reached by a camel's hair pencil is :

1213. ℞. Pulveris zinci oxidi, ʒi
Glycerinæ, f.ʒj. M.

To be applied three or four times a day.

1214. ℞. Liquoris ammoniæ acetatis, f.ʒj
Vini ipecacuanhæ, ℥xvj
Potassæ nitratis, gr.vijj
Misturæ amygdalæ, f.ʒvij. M.

A teaspoonful every four hours for a child of six months.

DR. P. GUERSANT, OF PARIS.

In chronic coryza, with irritating secretions, this author recommends the following :

1215. ℞. Hydrargyri ammoniati, ʒi
Pulveris althææ, ʒj. M.

Use as a snuff.

CROUP, MEMBRANOUS AND SPASMODIC.

PROF. FORDYCE BARKER, M. D., OF NEW YORK CITY.

This teacher always commences treatment by the following emetic of turpeth mineral:

1216. ℞. Hydrargyri sulphatis flavæ, gr. iij-v.
For one dose. If it does not act in fifteen minutes, give a second dose of three to five grains, according to the age of the child. This, however, is rarely necessary.

He prefers this to all other emetics in croup.

If on the next visit he finds the child with a quick pulse, hot skin, somewhat hurried breathing, and an occasional ringing cough, but with no thoracic râles, he directs that it shall be kept quiet in bed, comfortably covered, but not with too many clothes, and prescribes the veratrum viride, in one or two drop doses, according to the age of the child, as, for example, in the following formula:

1217. ℞. Tincturæ veratri viridis, gtt. xvj-xxx
Spiritûs ætheris nitrosi, f. ℥ij
Syrupi simplicis, f. ℥j
Aquæ, f. ℥vj. M.
A tablespoonful every second hour.

He visits the child at least as often as every eighth hour, and increases or diminishes the dose, according to the effect of the medicine on the pulse. He is not satisfied until the pulse is below eighty per minute, and then continues the veratrum in half the dose that was necessary to bring it down to that point. If thoracic râles, hurried and labored respiration, and other symptoms, indicate that the disease is extending downward, then substitute for the above prescription something like the following formula, of course varied according to the special indications of the case:

1218. ℞. Tincturæ veratri viridis, gtt. xvj-xxx
Ammonia carbonatis, ℥ss
Syrupi tolutani, f. ℥j
Syrupi acaciæ, f. ℥j. M.
A teaspoonful every second hour.

Sometimes, on account of increasing laryngeal and bronchial obstruction, the emetic of turpeth mineral should be repeated on the second or third day, but it is not necessary or well to repeat it a third time.

treatment of croup. The safest and best emetic is the sulphate of copper, in half or one-grain doses, every fifteen minutes, till the vomiting occurs. Afterward give the following:

1223.	℞.	Potassæ chloratis,	ʒij	
		Potassii iodidi,	gr.viiij	
		Tincturæ opii camphoratæ,	ʒxl	
		Liquoris potassæ,	ʒxij	
		Aquæ,	f.ʒij.	M.

A dessertspoonful, in water, every second or third hour.

Brush the throat and upper part of the larynx with the following:

1224.	℞.	Tincturæ ferri chloridi,	f.ʒj	
		Aquæ,	f.ʒij.	M.

Beef-tea, wine, quinine and iron are generally required.

DR. FELIX VON NIEMEYER, PROFESSOR UNIVERSITY OF TÜBINGEN.

1225.	℞.	Cupri sulphatis,	gr.x-xv.	
		Aquæ,	f.ʒij.	M.

A large teaspoonful to be taken every five minutes until vomiting sets in.

In regard to the employment of emetics in croup, Prof. N. thinks that *they are only indicated when obstructing croup-membranes play a part in producing the dyspnœa, and when the child's efforts at coughing are insufficient to expel them.* Impeded expiration is an indication of their employment.

Sulphate of copper is preferable to tartar-emetic or ipecacuanha. It should be given in full doses; in small ones it is uncertain, and more apt to operate as a poison.

If the bowels be confined, administer a clyster, so that the diaphragm may have room to act. The best is a cold one, as follows:

1226.	℞.	Acidi acetici diluti,	f.ʒij	
		Aquæ,	f.ʒvj.	M.

If, however, there is no remission, notwithstanding the employment of the emetic and the cold application, apply the following concentrated solution, at intervals of several hours, to the entrance of the glottis:

1227.	℞.	Argenti nitratis,	ʒss	
		Aquæ destillatæ,	f.ʒij.	M.

Dip a curved rod of whalebone, with a small sponge made fast to its lower end, into this solution, press down the tongue of the child, and endeavor to reach the entrance of the glottis with the sponge. There the sponge is immediately compressed by the muscular contraction which takes place, whereby certainly a portion of the liquid, if only a small one, arrives at the larynx. Administer also half a grain of calomel every two hours.

Should this treatment remain without effect, proceed at once to tracheotomy.

Besides treating the dyspnœa upon the principles given above, it may be necessary to relieve the paralytic symptoms due to blood-poisoning by carbonic acid. For this purpose the powerful stimulus obtained by pouring *cold water* upon the child while in a warm bath is of great service. Lose no time in making use of it, the moment the child begins to grow drowsy, the skin to cool, the sensorium to be benumbed, or as soon as emetics fail to act. A few gallons of cold water, poured from a moderate height, over the head, nape and back of the child, almost always cause it to revive for a while and to cough vigorously. Thus, sometimes, after the bath, masses of exudation are expelled. Other stimulants, such as camphor or musk, are much less effective, and ought not to be employed, save when insuperable objections are opposed to the cold affusion. They should be given in large doses, immediately prior to the emetic. The following formula may be used:

1228. R.	Camphoræ,	gr. x	
	Ætheris aceticæ,	f. ʒiij.	M.

Ten to fifteen drops to be given every quarter of an hour.

PROFESSOR J. LEWIS SMITH, M. D., ETC., NEW YORK.

1229. R.	Potassæ chloratis,	ʒj	
	Ammoniæ muriatis,	ʒij	
	Syrupi simplicis,	f. ʒj	
	Aquæ,	f. ʒiij.	M.

One teaspoonful every twenty minutes to half an hour, or in cases not severe, every two hours. This should be continued regularly, night and day, until the cough becomes looser, or until it is evident, if the case be unfavorable, that it can be of no service.

The atmosphere the child breathes should be constantly loaded with moisture, without, however, that degree of heat which would add materially to the discomfort of the patient or attendants. The temperature should be of 75° or 80°.

Besides the nitrate of silver, three other substances have been used of late years for the topical treatment of the throat, which

appear to be more effectual in removing the pseudo-membrane, and controlling the inflammation. One is *liquor ferri subsulphatis*; the second, *carbolic acid*, and the third, *bromine*. The following formulæ may be used :

1230.	℞.	Liquoris ferri subsulphatis, Glycerinæ,	f.℥j f.℥ss.	M.
1231.	℞.	Acidi carbolici fluidi, Aquæ,	f.℥j f.℥vj.	M.
1232.	℞.	Brominii, Potassii bromidi, Aquæ.	℥ij gr.xlv f.℥j.	M.

This is called the bromine solution ; but it must be considerably diluted for use. Twenty-four to forty drops should be added to an ounce of water for application to the fauces or larynx. Our author most highly recommends the sulphate of iron solution.

J. M. DA COSTA, M. D., PHILADELPHIA.

1233.	℞.	Extracti hyoscyami fluidi, Aquæ destillatæ,	ʒiij-x f.℥j.	M.
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Used as an inhalation in spasmodic croup.

RÉSUMÉ OF REMEDIES.

**Acidum Lacticum*, as a solvent of false membrane in croup, is highly esteemed. The following is the formula of the London Throat Hospital :

1234.	℞.	Acidi lactici, Aquæ destillatæ,	℥ss f.℥x.	M.
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Use with an atomizer.

Alumen was the favorite emetic in this disease with the late Prof. CHARLES D. MEIGS. He gave ℥j, in molasses, as required.

**Belladonna* is of considerable value in spasmodic croup.

Collodium Cantharidatum. In severe croup or diphtheria, when emetics give no relief, Dr. MUSICAUTOFF, of Warsaw, has found repeated outward applications of cantharidal collodion to the throat to yield very successful results. (DOBELL, *Reports on Diseases of the Chest*, 1876.)

Ferrum Redactum is useful in strengthening the system and diminishing the excessive nervous sensibility which is so constantly a cause of laryngismus stridulus.

**Morrhua Oleum* is an incomparable remedy in correcting the faulty constitution and diminishing that extreme nervous irritability of itself is sufficient to induce spasms. It may be given

spoonful doses to a child of from two to four months; in table-spoonful doses to one six months. If it cause diarrhœa, Dover's powder may be added; if it disagree, from one to two table-spoonfuls should be rubbed daily on the spine.

**Quinia Sulphas*, given in the largest doses the child can bear, and during the intervals of the paroxysms, is a very satisfactory remedy, especially in weak and obviously nervous infants.

Valerian is highly recommended by Dr G. HILL, (*British Medical Journal*, April 11th, 1868,) who, however, neglects to mention the preparation and dose he employed.

For other remedies, see *Diphtheria*.

DIARRHŒA IN CHILDREN.

THEODORE TÜRK, M. D.

In the *Med. Chir. Centralblatt*, No. 1, 1873, this author says, in the more chronic cases a series of careful observations have shown him that roasted *acorns*, prepared as coffee, with a few beans of the real article, form the best dietetic, and at the same time medicinal remedy. Often, when nitrate of silver, tannin, Dover's powder, etc., have proved useless, the simple acorn-coffee (boiled, in cases of specially profuse diarrhœa, with from one to three grains of tannin, and in meteorism or sickness, with the addition of a piece of orange-peel to the decoction) has, from the first, lessened the stools and improved their quality, and very shortly restored appetite and nutrition. At the same time the children become, not fat, but healthy. The acorn-coffee is more efficacious than alkalies, preparations of lime, tonics (Peruvian bark and extract) and carminatives. Moreover, the children drink it readily, without becoming tired, and the painful, formal, and frequent administration of medicine is avoided.

R. W. ROSS, M. D.

In infantile diarrhœa, *gum acacia* is a valuable remedy. In the simple forms, the mucilage of acacia, one part, diluted with three parts of water, is given alone; when the stools are green and accompanied with vomiting, or when the discharges are almost constant, the addition of a little gray powder to the diluted mucilage is recommended. (*British Medical Journal*, Sept. 3d, 1870.)

If this fails, recourse must be had to an astringent. The official *mistura cretæ* may be given in teaspoonful doses after each loose evacuation, three or four times a day, or tincture of *krameria* may be added, thus :

1239.	R.	Tincturæ kramerie,	f.ʒi-ij	
		Misturæ cretæ,	f.ʒij.	M.

Teaspoonful, repeated as above directed.

They also commend the *aromatic syrup of galls* :

1240.	R.	Pulveris gallæ optimi,	ʒss	
		Pulveris cinnamomi,	ʒij	
		Pulveris zingiberis,	ʒss	
		Spiritus vini gallici optimi,	Oss.	M.

Let the ingredients stand in a warm place for two hours, and then burn off the brandy, holding some lumps of sugar in the flames. Strain through blotting paper. Fifteen to forty drops, three or four times a day, or, when the discharges are very frequent, every two or three hours.

In the chronic form of simple diarrhœa, they have found of late years the following tonic very useful :

1241.	R.	Tincturæ nucis vomicæ,	f.ʒss	
		Tincturæ gentianæ compositæ,	f.ʒiij	
		Syrupi simplicis,	f.ʒv	
		Aquæ,	f.ʒij.	M.

A teaspoonful three times a day, after meals, for children of three or four years of age.

Wine of pepper is also efficacious in such cases, in doses of half a teaspoonful three daily.

FROM ALFRED VOGEL M. D., OF DORPAT, RUSSIA.

This physician positively prohibits *cow's milk* in intestinal disease. He states that *peniciling of the mouth with laudanum*, and the use of *opiate suppositories*, stand at the head of all therapeutic measures. But occasionally, in the profuse diarrhœa of summer, opium proves inefficacious; then order small doses of calomel, gr. ʒ, three or four times daily, or,

1242.	R.	Argent. nitrat.	gr. ss	
		Aquæ destillatæ,	f.ʒiij.	M.

A teaspoonful three or four times a day. A drop of laudanum may be added to each dose.

Vegetable remedies containing tannic acid, such as calumba, rhatany, pure tannic acid itself, and astringents in general, are

with difficulty administered to small children, unless mixed with large quantities of syrup, and, on that account, should be seldom resorted to. In older children they may be oftener employed.

1243. R. Aluminis, gr. vj
 Syrupi acaciæ, ℥. ʒiij. M.
 A teaspoonful thrice daily.

This will sometimes check the diarrhœa, which has been uninfluenced by any of the above remedies.

Dr. V. has often convinced himself of the utter inefficacy of all therapeutic remedies in the treatment of this disease when the child is sustained on milk diet.

The best prophylaxis consists in rendering the cow's milk given the child alkaline, by the addition of the following soda solution to each meal :

1244. R. Sodæ carbonatis, ʒj
 Aquæ, ℥. ʒvj. M.

Several authors have very forcibly urged the importance of *cold* in infantile diarrhœa. Mr. E. Pocock, of London, invariably orders ice in large quantities, as well as frequent sponging with cold water, and he directs that all nourishment (unless the child be sucking) should be iced.

Dr. McKenna, also of London, in cases of great exhaustion employed cold-water baths, stimulant ice injections, and iced drinks.

Cold baths especially are called for where there are marked cerebral symptoms.

When the diarrhœa is without febrile action—a wasting mucous discharge—the use of *ergotin*, or of the fluid extract of *ergot*, has been recommended, on the same authority, as of great efficiency.

See further the general treatment of Diarrhœa under Diseases of the *Digestive System*.

DIPHTHERIA.

EDWARD ELLIS, M. D., LONDON.

The most important indication in the treatment of diphtheria in children is to support the strength in every way, the disease being of perhaps a more lowering character than any other with which we are acquainted; and the other indication is to control, and if possible prevent the formation and spread of the false membrane. Three remedies have been especially commended in the general treatment of this disease: *Chlorate of potash, muriatic acid, and the muriatic tincture of iron.* Probably a combination, such as:

℞	Potassi chloratis,	gr. x	
	Tincture ferri chloridi,	ʒv	
	Syrupi auranti,	℥ss	
	Aque.	℥ʒij.	M.

—for one dose—is the best. At the same time, beef-tea, soups, wine, and every form of light nutriment, may be given with advantage. Rennet whey and buttermilk are useful. The quantity of wine and brandy absolutely needed is sometimes very large, and indeed can hardly be overdone. When dysphagia renders swallowing impossible, *enemas* of port wine and beef-tea must be resorted to. In obstinate vomiting, which is so dangerous a symptom, *ice* may be sucked, while the strength is supported by the rectum; and if the sickness does not pass away, the hypodermic injection of a little morphia over the stomach may be tried. When albuminuria is a primary symptom, the muriatic tincture of iron may be omitted and iodide of potassium substituted; and the child should, when practicable, drink freely of barley-water and other diluents. Locally, a solution of nitrate of silver (ʒj to aquæ ℥ʒss) or perhaps, better, of chlorinated soda (liquoris sodæ chlorinate ℥ʒss, aquæ ℥ʒij) may be applied by a camel's hair brush, or the latter solution may be syringed into the throat, as of course young children cannot gargle; or the muriatic tincture of iron may be applied locally, or the diluted muriatic acid or nitric acids, mixed with equal portions of glycerine.

Ice is always valuable, and may be freely sucked. The inhalation of iodine is also advocated. All attempts at bleeding, blistering, or indeed any form of counterirritation, are worse than useless. The disease being contagious, the secretions and expectora-

tions should be received in vessels containing chloride of lime; cleanliness should be scrupulously observed, and those in attendance should gargle their throats with a solution of chlorinated soda, or Condyl's fluid, or carbolic acid. Strychnine is the tonic from the use of which much may be hoped in the prevention and cure of the subsequent paralysis, and galvanism is the most useful local agency in these cases. Change of air is also desirable in restoring the enfeebled heart and nerves.

DR. ROBERT BELL, OF GLASGOW, SCOTLAND.

1246. ℞. Acidi carbolici, f.ʒij
 Acidi sulphurosi, f.ʒvj
 Tincturæ ferri chloridi,
 Glycerinæ, ʒā f.ʒj. M.

Apply to the throat with a large camel's hair pencil, or by means of the spray apparatus, every two hours.

Also :

1247. ℞. Potassæ chloratis, ʒiij
 Acidi sulphurosi, f.ʒiijss
 Tincturæ ferri chloridi, f.ʒiij
 Glycerinæ, f.ʒj
 Aquam, ad. f.ʒvj. M.

A dessertspoonful every two hours.

With this medication must be combined free stimulation and plenty of nourishment, in the shape of soups, jellies and milk, from the very outset of the disease.

PROF. J. LEWIS SMITH, NEW YORK.

1248. ℞. Sodæ bisulphitis, ʒj-ij
 Tincturæ aurantii, f.ʒij
 Aquæ, f.ʒx. M.

One teaspoonful every two hours. Sometimes, in place of water, a bitter infusion, like that of quassia, has been employed.

The sulphites have not been employed sufficiently to determine their value in this disease. Our author considers the following mixture one of the very best for ordinary cases of diphtheria :

1249. ℞. Tincturæ ferri chloridi, f.ʒj
 Potassæ chloratis, ʒj
 Syrupi simplicis, f.ʒij. M.

One teaspoonful every two or three hours to a child of two or three years.

No drinks should be allowed the patient for a few minutes after each dose, in order that the full local effect may be obtained.

In those of full habit and florid complexion, iron is not so imperatively required. In such cases, use the following :

1250. R. Elixir cinchonæ, f.ʒiv.
A teaspoonful to a tablespoonful for a dose, according to the age. This is a useful and not unpleasant remedy.

The formulæ recommended in the topical treatment of the larynx in croup are proper for the pharynx and larynx in diphtheria (see article on *Croup*). In those old enough, the following is a useful gargle :

1251. R. Potassæ chloratis, ʒiv.
Aque, f.ʒiv. M.
Add to a spoonful of this—
Tincturæ ferri chloridi, f.ʒj.
And gargle with it every hour or two.

For the paralysis following diphtheria, the following formula (recommended by Professor METCALFE, of New York,) is useful:

1252. R. Strychniæ, gr. j
Acidi nitrici diluti, f.ʒj
Aque, f.ʒviij. M.

From three to five drops, in a dessertspoonful of water, are to be given three times daily to a child of three years.

The anæmic state which succeeds diphtheria is to be remedied by the administration of iron, for several weeks.

DR. CARLO PAVESI, OF ITALY.

This writer in the *Annali di Medicina*, Aug., 1876, gives a formula which he recommends in the treatment of diphtheria. It is founded on the antirymotic properties of chloral, salicylic acid, and the sulphates. It is as follows :

1253. R. Chloral hydratis, ʒij
Acidi salicylici, ʒij
Glycerinæ, f.ʒij
Sodæ sulphatæ, ʒij
Albominæ, f.ʒij
Aque, f.ʒviij.

The whole is put into a strong glass vessel, which is closed, and exposed to a heat of 100° to 120° Fahr. for a few minutes, until the sulphate, salicylic acid, and chloral are completely devolved. A

homogeneous solution is produced, which is filtered through bibulous paper, and preserved in a well-closed vessel. It is an oily, limpid, colorless liquid, having the odor of its constituent parts. It is insoluble with water. On the application of proper tests, the chloral, salicylic acid, sulphite of soda, and glycerine are found to be unchanged.

Used both internally and externally, it is an energetic antiseptic, antifermentative, disinfectant, hæmostatic, and preservative, as well as a destroyer of parasitic organisms. Dr. PAVESI says that it may be used as an antiseptic, and also as a sedative, in a large number of diseases.

THOMAS HILLIER, M. D., F. R. C. P., ETC., LONDON.

1254. ℞. Hydrargyri chloridi mitis, gr. iij-vj
 Pulveris ipecacuanhæ compositi, gr. vj. M.
 For six powders; one every two or three hours for a child.

Calomel is now almost discarded in the treatment of diphtheria. Our author is not prepared to give it up. In some of his worst cases, in which recovery occurred, this drug was the remedy. It is not to be used indiscriminately in all cases. It should be limited to children with moderate constitutions, and to cases in which the exudation is firm and thick, or causing laryngeal obstruction with sthenic symptoms. It is to be continued until the bowels are relaxed with greenish stools. At the same time, abundant fluid nourishment, and sometimes wine, is to be given.

DR. H. V. SWERINGEN, FORT WAYNE, INDIANA.

This observer believes that *prompt cinchonism, followed by an alterative tonic, is the most proper and successful treatment for diphtheria*. The line of treatment he pursued was as follows, for a child of six years old :

1255. ℞. Quiniæ sulphatis, gr. xxxij
 Acidi tannici, gr. x
 Syrupi simplicis, f. ʒj
 Tincturæ olei menthæ piperitæ, gtt. iij. M.
 A teaspoonful every three hours until cinchonism is induced.

After which (or it may be administered alternately with the above) the following is given :

1256. ℞.	Potassii iodidi,	gr. xxxij	
	Potassii bromidi,	ʒij	
	Syrupi simplicis,		
	Tincturæ cinchonæ composite,	ʒā	f. ʒij. M.

Make a solution. A teaspoonful every three hours.

Alum and ipecac, as emetics, are useful when the exudation shows a disposition to extend to the larynx, or when there is much difficulty of breathing, from the tumefaction of the fauces, or from the accumulation of the pseudo-membranous deposits.

DR. F. FEJRE FORCHER, OF SOUTH CAROLINA.

℞.	Potassæ chloratis,	ʒj-ij	
	Quinæ sulphatis,	ʒj	
	Tinct. ferri chloridi,	f. ʒij	
	Sodæ hyposulphatis,	ʒj	
	Aquæ,	f. ʒvij.	

A teaspoon to a dessertspoonful to persons exposed to diphtheria.

THOMAS HARKES TANNER, M. D., F. L. S., ETC., LONDON.

℞.	Quinæ sulphatis,	gr. xxiv	
	Acid. muriatici diluti,	f. ʒij	
	Tincturæ ferri chloridi,	f. ʒiij	
	Sinfæ columbæ,	f. ʒvj.	M.

A tablespoonful, in water, three daily.

This preparation is also recommended by Dr. AITKEN for the treatment of diphtheria.

DR. A. W. NELSON, OF NEW YORK.

The writer states *New York Medical Journal*, January, 1874,) that he and others have had remarkable success in diphtheria by the administration of chloride of iron internally, and the local use of sublimate of zinc.

℞.	Liquoris ferri subsulphatis,		
	in aqua.		
	Sublimat. zinc.	ʒā	f. ʒss. M.

Apply with a large camel-hair pencil to the fauces. In severe cases use the sublimate in its full strength.

DR. J. LEITCH, OF CHARLESTON, S. C.

Upon seeing a case of diphtheria, this writer (*Charleston Medical Journal and Review*, October, 1874; January, 1876) at once gives a moderate mercurial purgative (*Hydrargyri chloridi mitis*, gr. x), the importance of which he lays especial stress. (Compare Dr. HARKES's remarks above.) *Tinctura ferri chloridi* is

then administered in suitable doses, and the throat is swabbed, gargled, or atomized with the following :

1260. R.	Acidi muriatici,			
	Acidi carbolicī,	ḡā	ḡxx	
	Glycerinæ,		ʒj	
	Aquæ,		ʒvij.	M.

Use frequently.

RÉSUMÉ OF REMEDIES.

Acidum Oxalicum. Professor PORTA-GIUSLEO claims to have had constant success in diphtheria by the internal administration of the sulpho-carbolate of quinine, together with topical applications of a solution of 15 per cent, of oxalic acid in glycerine. (*Dobell's Reports*, 1876.)

Apomorphia. in the dose of gr. $\frac{1}{4}$ by the mouth, or gr. $\frac{1}{5}$ hypodermically, is a certain, rapid and useful emetic in diphtheria.

Cupri Sulphas ranks, according to Dr. W. SQUIRE, with alum as one of the best and most effectual of emetics in diphtheria. He directs :

1261. R.	Cupri sulphatis,	gr.v	
	Aquæ,	f.ʒj.	M.

A teaspoonful at a time to young children.

**Ferri Chloridi Tinctura* is much employed in diphtheria. It should be commenced on the first day of the illness, or as soon as the patient is seen, and continued until the tongue becomes red and the throat improves. When deposit has already taken place, the good effects of the treatment will be shown, not by any alteration in the size of the patch, but by a diminution in the accompanying secretion, and by improvement of the general symptoms.

Guaiacum. The following formula has been recommended :

1262. R.	Tincturæ guaiaci ammoniatæ,	f.ʒss-v	
	Tincturæ cinchonæ compositæ,	f.ʒss	
	Potassæ chloratis,	ʒiv	
	Mellis,	q. s.	
	Aquæ,	ad. f.ʒvij.	M.

From a teaspoonful to a tablespoonful from one to five hours, or thrice daily, according to the severity of the case.

Guaiacum, as a gargle, in all varieties of *sore throat*, *hoarseness*, etc., is a remedy of ancient and acknowledged repute.

Potassii Bichromas is highly spoken of, gr. $\frac{1}{6}$ - $\frac{1}{8}$ being given in water every half-hour till vomiting is caused, when it is to be continued every two hours.

Sassafras, oil of, is praised as a local application, by Dr. KENNARD, of St. Louis.

Stimulants. Dr. W. SQUIRE, of London, lays down the rule, the less the quantity of nourishment the patient is able to take, the greater must be the dependence on the stimulant. The youngest children may require a teaspoonful of brandy every two hours; a child of three years of age, two teaspoonfuls. It may be given diluted in any way, very small quantities at a time, frequently repeated. Older children take it well mixed with ice or soda water. Champagne is often a good substitute for brandy. The quantity of stimulant ordered must be considered not only in relation to the immediate necessity that may exist for its employment, but also to the probable course of the disease and the strength of the patient; a moderate quantity repeated at regular intervals is of most service in maintaining the strength of the patient where all the symptoms are well marked and likely to go through their full stages; at certain crises of the disease, or where some symptoms only have attained great prominence, the benefit that results from a bold resort to stimulants is surprising, and the effect is the more marked if their use had up to that time been neglected.

LOCAL APPLICATIONS.

Argenti Nitras. Dr. W. SQUIRE, of London, recommends in diphtheria, when the whole of the false membrane is visible, and its margins within reach, to apply to the patch, and to the surrounding turgid mucous membrane, a solution of the nitrate (one part to three of distilled water). When there is much redness and pain, a weaker solution (one part to eight or twelve of distilled water), penciled over the whole surface, tends to prevent further exudation and affords relief. The solid nitrate is objectionable.

Boracicum Acidum has been highly praised, painted over the throat and membranes in saturated solution and used as a gargle.

Brominium. The inhalation of the vapor of bromine has been found of service.

Calcis Aqua. Lime water inhalations are very useful, and as a gargle highly esteemed.

Carbolicum Acidum. Dr. C. SEDGWICK recommends highly (*Medical Times*, February 27, 1867,) the following formula :

1263. R.	Acidi carbolici,	℥xx
	Acidi acetici,	℥xxx.
	Mix, and add gradually—	
	Mellis,	
	Tincturæ myrrhæ,	ʒ̄ f.ʒij
	Aquæ,	ad. f.ʒj. M.

Use as a gargle for adults; apply by means of a sponge to the throat of children.

Argenti Cresceticum. The following is the formula for this agent, recommended by Dr. A. ERICHSEN. (*Medical Times and Gazette*, April, 1877.)

1264. R. Hydrargyri cyanatis, gr. j
 Aquæ destill., ℥vj
 Syr. simplicis, ℥ss.

M. S. Half or a whole teaspoonful every hour.

With its use the membranes become thinner and less adhesive, and even where they had extended into the larynx, threatening obstruction, they had separated, and the larynx again became free.

Ferri Chloridi Tinctura, applied alone or diluted with equal parts of glycerine.

Ferri Sulphas. The following gargle is highly recommended by Dr. DE SABBATA, of Venice:

1265. R. Ferri sulphatis puri, ℥j
 Acidi sulphurici diluti, ℥xxv
 Aquæ, f.℥iij. M.

Use as gargle. For a topical application aquæ f.℥ij should be used in the above. (DOBELL'S *Reports*, 1876.)

**Muriaticum Acidum*. Dr. HILLIER prefers this caustic to nitrate of silver. In very dilute solution it is an excellent gargle.

Iodinium. Dr. WARING-CURRAN obtains excellent results from iodine inhalations:

1266. R. Potassii iodinii, ℥ss gr. iv
 Iodinii, ℥ss f.℥iv
 Alcoholis, f.℥iv
 Aquæ, f.℥iv. M.

A teaspoonful (gradually increased to a tablespoonful) of the solution is to be placed, with a handful of dried garden sage, in a pint of boiling vinegar in a common inhaling jar, for inhalation. The inhalations are to be repeated about twelve times daily.

**Lacticum Acidum*. Lactic acid inhalations, by means of a spray producer (15 to 20 gtt. aquæ f.℥ss.), are said to act as a powerful solvent of the false membrane.

Limonis Succus is strongly recommended as a gargle.

Potassii Chloras in strong solution is an excellent gargle.

Potassii Permanganas. Dr. WATSON CAMPBELL recommends (*Edinburgh Medical Journal*, February, 1867) the following:

1267. R. Potassii permanganatis, gr. x
 Aquæ, f.℥xx. M.

To be used as a gargle, together with the internal administration of iron and port wine.

Salicylicum Acidum. For those who can gargle, Dr. WAGNER, of Fribourg, recommends the following formula: Salicylic acid, 150 parts; alcohol, 15 parts; distilled water, 150 parts; to be used every two hours. He reports fifteen serious cases as being cured by this method. For children too young to gargle he gives the

acid in water or wine, in doses of $1\frac{1}{2}$ to $4\frac{3}{4}$ grains every two hours.

Soda Chlorinata Liquor, used as a disinfectant gargle.

**Sodii Hyposulphitis*. Dr. MAYNARD recommends (*Medical Times and Gazette*, December 30, 1865,) the local application of the hyposulphite of soda. In the very early stages he employs, two or three times a day, the following lotion :

1268.	R.	Sodii hyposulphitis,	ʒij	
		Glycerinæ,	f.ʒij	
		Aquæ,	f.ʒvj.	M.

This, he finds, generally removes the incipient exudation in forty-eight hours, or less. In advanced stages he washes the throat out well with warm water by means of a flexible syringe, and then dresses the affected part with the above solution, using at the same time the following gargle :

1269.	R.	Sodii hyposulphitis,	ʒj	
		Glycerinæ,	ʒij	
		Aquæ,	ʒj.	M.

The effect of this solution he asserts to be most marked; it appears to solidify and dry up the false membrane, and when the syringe is again used, which it should be frequently, the force of the water will wholly or partially wash it away. The exudation rarely re-forms, and the patient makes a comparatively rapid recovery.

Sulphur. The insufflation of sublimed sulphur is recommended by Dr. BARBOSA (*Practitioner*, November, 1868). The unwashed flower of sulphur should be applied, by means of a simple tube slightly bent, directly to the affected surfaces.

**Terebinthinae Oleum*. Dr. SYMONDS advises (*British Medical Journal*, March 14th, 1868,) the application of turpentine at the very commencement. Hot turpentine epithems also often relieve the local distress.

HYDROCEPHALUS, ACUTE AND CHRONIC.

C. WEST, M. D.

The value of purgatives can scarcely be overrated in acute hydrocephalus, but they must be given so as not merely to obtain free action of the bowels, but to maintain it for some days. This end is best secured, after having once overcome the constipation, by giving small doses of a purgative every five or six hours. The administration of strong cathartics every morning will not answer the end nearly so well, if they cause sickness, it is better to give a single full dose of calomel, and follow it up with sulphate of magnesia at short intervals. The following mixture is then advised:

1270. R.	Magnesiæ sulphatis, Potassæ nitratis, Syrupi limonis, Aquæ,	3j gr.x f.3iij f.3ix.	M.
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A dessertspoonful (f.3ij) thrice daily, for a child of one year.

In all cases, of course, the solution and regulation of the purgatives must be determined by the strength of the child.

The local abstraction of blood by *leeches* sometimes proves serviceable when there is much febrile action. They should be placed on the crown of the head rather than on the temples. They are inadmissible when the patient is much debilitated.

J. S. RAMSKILL, M. D.

The *iodide of iron* is usually well borne by hydrocephalic children, unless there be a tendency to congestion or inflammatory action. Among the children of the poor, the combination of *cod-liver oil* and syrup of the iodide almost always gives satisfactory results.

The *mercurial* plan of treatment advised by Prof. GOLIS, of Vienna, is regarded by Dr. RAMSKILL as one of the best. The head be shaved, and the following ointment prescribed:

1271. R.	Unguenti hydrargyri, Unguenti olei juniperis,	gr.xx-xl 3j.	M.
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To be rubbed on the shaved scalp, twice a day.

The child should wear a woolen cap, to prevent the risk of the perspiration being checked by the cold air. *Calomel* (gr. $\frac{1}{4}$ -ss) should be given thrice daily. If this purges too much, the mercurial inunction should be alone employed. The treatment is to be persevered in for thirty or forty days, when, if there be some improvement, the remedies may be gradually diminished, but the cap is to be worn after the inunction has been discontinued. If there be no marked improvement after six or eight weeks, some diuretic, as *acetate of potash*, or *squill*, may be added, and a couple of *issues* may be inserted in the occiput. *Blisters* to the nape of the neck may be advantageously substituted for these. Whenever there is heat of head, and the child grows fretful, restless and irritable, a couple of *leeches* behind the ears will be found of service. When convalescence has begun, it may be accelerated by small doses of *quinine*.

DR. A. N. READ, OF OHIO.

This writer has reported remarkable success in several cases of chronic hydrocephalus, by the external use of pure *glycerine*. (*Transactions of the Ohio State Medical Society*, 1876.) He gives, for instance, the case of a child, eighteen months old; head, twenty-four inches in circumference; sutures separated, and bulging of integuments. He applied twice daily to the head glycerine, with a little tincture of iodine, and directed the use of a close-fitting cap. The application caused the child "to sweat dreadfully." This suggested that the glycerine, because of its strong affinity for water, had caused an exudation of serum, which, if continued, might cure the child—a hope strengthened by remembering the drain following its application to indurations of the uterus. After a year's use, the child was cured. In 1874, the child was attending school, with fair intellect and good health.

Dr. MERRILL, of Mansfield, Ohio, has reported the result of a partial trial in one case. Child under one year old; head circumference, twenty-two inches; eyes much protruded, as well as integuments over separated sutures. Applications of glycerine were followed by profuse serous flow. In three weeks the eyes were restored to their natural position, and there was no protrusion between cranial sutures; but the head was not reduced in size.

PROFESSOR HILLERSIE WALLACE, M. D., OF PHILA.

The following is one of the best tonics which can be given in this disease:

℞	3.	Resin of iodid.	ʒi	
		Spirit of wine.	f.ʒss	
		℥ss.	f.ʒij.	M.

Use ʒss. twice a day, morning and evening after food.

In some cases the *chlor. ferric. form. et strychnic.* acts in a most satisfactory manner.

DR. WILLIAM S. DAVIS, OF CHICAGO.*

The method of chronic hydrocephalus proposed by Professor SKEWTON in puncturing the head and injecting a weak solution of iodine and iodure of potassium, has been tried, but no successful case has been reported. The objects toward which medical treat-

* *Medical Lectures on Impetuous Diseases*. Phila., 1874.



ment must be directed are, first, to allay the morbid excitement of the cerebral structures; and, second, to exert a gentle yet persistent alterative and diuretic influence, avoiding carefully any impairment of the digestive organs, Dr. DAVIS has succeeded in accomplishing these purposes by the following prescription :

1273. R.	Extracti fluidi scutellarizæ,	f.ʒij	
	Tincturæ digitalis,	f.ʒss	
	Potassii iodidi,	ʒij	
	Extracti fluidi hyoscyami,	f.ʒss.	M.

Twenty drops, four times a day, in sweetened water.

If the digitalis is found to be exerting too much influence, the dose must be diminished. *Mercurials* are of no advantage in the chronic stage; though in the early inflammatory stage, combined with mild laxatives, they might check the progress of the disease.

RÉSUMÉ OF REMEDIES.

EXTERNAL REMEDIES.

Croton Oil counter-irritation to the shaven scalp has been recommended by Dr. R. S. TURNER (*Edinburgh Medical Journal*, November, 1868). He uses the following liniment:

1274. R.	Olei tiglii,	1 part	
	Olei olivæ,	3 parts.	M.

**Hydrargyrum*. Mercurial inunction is recommended by Prof. GOLIS and Dr. RAMSKILL.

Iodine lotions to the scalp or inunction of iodine ointment, used conjointly with iodide of iron and cod-liver oil internally, offer a chance of success in the advanced stage.

Ipecacuanha. The following counter-irritation is said to have produced great amelioration of the symptoms:

1275. R.	Pulveris ipecacuanhæ,	ʒij	
	Olei olivæ,	f.ʒij	
	Adipis,	ʒss.	M.

To be rubbed on freely for fifteen or twenty minutes, thrice daily, and the parts then enveloped in flannel. In thirty or thirty-six hours an eruption appears, which remains out for three or four days.

PERTUSSIS.

PROF. JOHANN STEINER, M. D., OF PRAGUE.

This judicious author remarks that we have no specific remedy for whooping cough, and of all those which have been recommended, belladonna, in doses of the extract of $\frac{1}{10}$, $\frac{1}{8}$ or $\frac{1}{4}$ a grain three or four times a day, either alone or in combination with quinine or the oxide of zinc, seems of greatest service. The dose of belladonna is to be gradually increased until symptoms of intoxication appear. When there is abundant mucous secretion and no vomiting, an occasional emetic is useful.

Prof. BARTHOLOW and others consider the best form for administering belladonna is a solution of the sulphate of atropia:

1276.	B.	Atropiæ sulphatis,	gr. j	
		Aquæ destillatæ,	f. ʒj.	M.
Two to four drops at a dose.				

He believes it most effective in the spasmodic stage, when there is profuse bronchial secretion.

MR. JOHN REYNOLDS, LONDON.

1277.	B.	Quiniæ sulphatis,	gr. xvj	
		Acidi sulphurici diluti,	q. s.	
		Tinctura aurantium,	f. ʒj	
		Aquam,	ad. f. ʒij.	M.
Two teaspoonfuls every three hours.				

MR. REYNOLDS claims for quinine a *specific abortive* power over whooping cough. With the above formula he cures his cases in two days. Other physicians report favorably of the method. To do good it must be pushed to a quantity equal to a full antiperiodic dose. To a child under three years, ten grains should be given in twenty-four hours; to a child twelve years old from sixteen to twenty grains should be given in the same time.

Dr. F. F. ROEHLER, of Cincinnati, prefers to give quinine by insufflation. For this purpose a laryngeal insufflator is used, it matters not what kind—this is introduced, and three or four of the powders the formula for which follows, are blown daily into the larynx, but especially upon the epiglottis and surrounding mucous membrane.



should at first be given every four hours, *night and day*, even should the patient require waking up. At the end of a week it need only be given every four hours during the day, and at night when the patient is awake.

The worst cases usually completely yield in a fortnight. The drug does not upset the digestive organs, and by lessening the frequency and duration of the paroxysms, puts an end to troublesome epistaxis and vomiting. Sometimes the first few doses produce a feeling of irritation about the throat and fauces, but this soon passes off. It may be given dissolved in compound tincture of cardamom, and sweetened with glycerine.

Hydrobromate of Cicutin. This salt of the alkaloid of hemlock has been employed in whooping cough, asthma, and phthisical cough, by M. LANDUR, with satisfactory results. Gr. $\frac{1}{10}$ to $\frac{1}{20}$ may be given an adult every hour or two. (*Bull. Gen. de Therapeutique*, May, 1876.) In pertussis, it is given in doses of one-twelfth of a grain, if necessary, every hour, for a child three years of age; or one-thirteenth of a grain for a child of one year, and one-sixth of a grain for adults.

Potassii Bromidum and *Ammonii Bromidum* are of value as sedatives.

Potassii Sulphuretum, commended by Dr. MACKELCAN, of Canada, in doses of gr iij–vj in sweetened water.

Quinia. See above.

Terebinthinæ Oleum, in pertussis complicated with irritative fever, bronchitis or convulsions, is praised by Dr. BEDFORD BROWN, of Alexandria, Va.

Tonka Bean has been employed with success by Dr. JOHN COOPER, of Philadelphia. Gtt. v–viij of the fluid extract every three hours, to a child five years old.

PNEUMONIA, INFANTILE.

THOMAS HILLIER, M. D., LONDON, F. R. C. P., ETC.

Usually the best treatment in the lobular pneumonia of children is to keep the patient in bed in a room of about 60°, well ventilated, without a draught, milk diet during the height of the fever, and when the temperature falls, some good beef-tea, and a simple saline mixture, such as :

1284. ℞.	Potassæ citratis,	ʒj	
	Syrupi aurantii,	f.ʒij	
	Aquæ,	q. s. ad. f.ʒij.	M.
Two teaspoonfuls <i>pro re nata</i> .			

The tendency of the disease in children is to recovery. The

great point is to do nothing which will interfere with rapid convalescence. Antimony is seldom desirable or necessary; if given at all, it should be confined to those cases in which the pulse is full and strong, the temperature very high, and the skin and mucous membranes very dry and injected, and it should be given only for a short time, at an early stage of the disease. Counter-irritation is not much to be relied upon. When there is severe pain in the side, a mustard plaster is of service. Blisters are seldom or never to be recommended, certainly not in the acute stage. If resolution comes on very slowly, and there is persistent pleuritic pain, an occasional flying blister will be of service. Calomel is not to be recommended except as an occasional aperient. If the pneumonia is complicated with bronchitis, and the bronchi contain much mucus, a stimulant expectorant is indicated, such as :

1285.	R.	Ammoniae carbonatis,	gr.viij-xij	
		Tincturae scillae,	℥xx	
		Syrupi,	f.ʒij	
		Decocti senegae,	q. s. ad. f.ʒij.	M.

Two teaspoonfuls for a child three years old.

During convalescence, the use of iron, in a mild form, is of service, as :

1286.	R.	Ferri et quinae citratis,	ʒj	
		Syrupi limonis,	f.ʒij	
		Aquae,	q. s. ad. f.ʒij.	M.

Two teaspoonfuls thrice daily.

EUSTACE SMITH, M. D., LONDON, M. R. C. P., ETC.

1287.	R.	Liquoris ammoniae acetatis,	f.ʒiv	
		Potassae nitratis,	ʒj	
		Potassae bicarbonatis,	ʒiiss	
		Spiritus aetheris nitrosi,	f.ʒiiss	
		Aquae carui,	q. s. ad. f.ʒvj.	M.

A tablespoonful every third hour for a child six or seven years old, in cases of "pulmonary phthisis." At the same time, the chest should be kept covered with hot linseed-meal poultices, frequently renewed, and the child confined to his nursery or bedroom.

After the cough has become loosened, and the oppression of the chest has subsided, expectorants should be given with an alkali :

1288.	R.	Spiritus ammoniae aromatici,		
		Spiritus aetheris nitrosi,		
		Vini ipecacuanhae,	āā	f.ʒj
		Potassae bicarbonatis,		ʒj
		Infusi calumbae,	q. s. ad. f.ʒvj.	M.

A tablespoonful every sixth hour.

Afterward, when the secretion is free, easily brought up, and the fever has disappeared, an astringent is useful, combined with expectorants and a little opium :

1289. R.	Liquoris ferri pernitratis,		
	Acidi nitrici diluti,	ss	f.ʒj
	Tincturæ opii camphoratæ,		f.ʒij
	Oxymellis scillæ,		f.ʒj
	Infusi calumbæ,	q. s. ad.	f.ʒvj. M.

A tablespoonful thrice daily.

When unabsorbed pneumonic deposits continue, alkalies are extremely useful. The inhalation of sprays of weak solutions of bicarbonate, nitrate, or chlorate of potash, promotes expectoration.

In chronic pneumonic consolidation, irritants are sometimes useful :

1290. R.	Olei tiglij,	f.ʒj	
	Linimenti saponis,	f.ʒj.	M.

To be rubbed into a limited spot on the chest twice a day till pustulation, and then once a day for a week.

So long as there is much heat of the skin counter-irritants should not be employed.

PROF. J. LEWIS SMITH, M. D., NEW YORK.

In the earlier stages, the following is a useful formula for a child of five years:

1291. R.	Tincturæ ipecacuanhæ compositæ,	gtt.xvj-xxiv	
	Tincturæ aconiti radicis,	gtt.xvj	
	Syrupi tolutani,		
	Aquam,	ad. f.ʒj.	M,

One teaspoonful every three hours.

In the second stage, that is, when there are signs of lung hepatization, such as bronchial respiration and dullness on percussion, aconite and veratrum viride do harm. The following may then be employed :

1292. R.	Morphiæ sulphatis,	gr.j	
	Syrupi ipecacuanhæ,	f.ʒj	
	Syrupi tolutani,	f.ʒij.	M.

Teaspoonful every three hours.

In feeble children, and in secondary pneumonitis, *quinine* is preferable to any other agent for reducing the temperature and pulse, as it does so without causing depression. ←

1295. ℞. Acidi carbolici, gtt.v
 Liquoris ferri subsulphatis, f.ʒij
 Glycerinæ, f.ʒj. M.

To be applied with a camel-hair pencil, three or four times daily.

Yeast is useful in many of these cases, given in doses of f.ʒss–f.ʒ several times a day. No drink should be allowed for several minutes after swallowing it.

HIRAM CORSON, M. D., NORRISTOWN, PA.

This writer has for years been a prominent champion of the *ice* and *cold-water* treatment of scarlatina, advocated early in this century by Dr. JAMES CURRIE, of London, and later by Professor TROUSSEAU, of Paris.

He applies the ice in moderate quantities, tied up in two small pieces of bladder, and one placed on each side of the neck, over the parotid gland, and retained by a strip of muslin brought under the jaw and *tied on the top of the head*, not around the neck. If no bladder nor gutta-percha bag can be procured, fold a strip of old muslin twice, so that when thus folded it shall be three inches wide, and long enough to extend from the bottom of one ear, under the jaw, to the bottom of the other. To each end of this sew a strip of muslin of the same width and a foot or more in length, by which, when applied, it may be tied to the top of the head. Have a line of stitches run crosswise through the middle of the fold; there will then be a pocket for ice on each side of the neck. For the first application, wet this with cold water alone, and tie it on: after wetting it a few times, slip into the pouch, on each side of the neck, three or four large lumps of ice, as large as a shellbark, and keep them well stocked with ice. Give the ice freely inside, apply it over the nose, and sponge the body and limbs freely with cool or cold water.

STILES KENNEDY, M. D., OF MICHIGAN.

According to this writer, two medicines only have gained much reputation for mitigating or subduing the symptoms of fever in this disease, or the disease itself, and the profession is about equally divided as to their respective merits. One is the *chlorine mixture*, which, for ready use, may be prepared about as follows:

1296. ℞. Potassæ chloratis, ʒj
 Acidi muriatici, ʒj
 Aquæ, ʒj. M.

IX. TOXIC DISEASES.

Alcoholism (Inebriety; Delirium Tremens)—Opium (Opium Eating; the Opium Habit).

ALCOHOLISM (INTOXICATION; DELIRIUM TREMENS; CHRONIC ALCOHOLISM).

The therapeutics of alcoholism embraces the treatment of this form of poisoning as it is presented in three distinct forms: 1. *Drunkenness*, including the gastritis, headache, etc., it leaves behind it; 2. *Acute Alcoholism*, known as delirium tremens, mania à potu, etc.; and, 3. *Chronic Alcoholism*, including the numerous and grave structural changes brought about by the prolonged consumption of alcoholic fluids.

I. DRUNKENNESS.

In cases of drunkenness or coma from alcoholic intoxication, the first indication is to empty the stomach. This may sometimes be accomplished by tickling the fauces with a feather; by the free administration of warm water, or mustard and water, if the patient can swallow; or, in some instances, by the hypodermic injection of apomorphia, or the internal use of brown emetine, gr. ij–iv, which acts very promptly. These failing, the stomach pump is the next resort.

Cold affusion, especially cold water poured from a height of five or six feet upon the head, is a powerful revulsive, and may often advantageously be employed. Galvanism or electricity may also be resorted to. It is generally important to promote warmth, especially when the face is pale and the extremities cold. Sinapisms to the feet, bottles of hot water around the limbs, and mustard to the epigastric and cardiac regions, are then required. It is a great mistake to take a man who is partially intoxicated into the cold

air, under the impression that it will restore him. The change and sudden checking of the cutaneous transpiration is very apt to render him completely drunk.

When the stomach can retain fluids, the patient may take very strong, hot coffee, without milk or sugar, in tablespoonful doses every five minutes. Or one of the following mixtures :

1300. ℞. Ammonii acetatis, ʒiij
Syrupi aurantii florum, f.ʒiiss. M.
To be taken in tablespoonful doses, in a small cup of tea, at quarter of an hour intervals.

1301. ℞. Ammonii acetatis, ʒijss
Sodii chloridi, ʒj
Syrupi, f.ʒjss M.
To be given in a small cup of strong coffee in two doses at a quarter of an hour interval.

The following is recommended by Dr. JAMIESON, of the Mercer Hospital, Dublin, as very efficacious in dispelling drunkenness :

1302. ℞. Sesqui-carbonate of ammonia, ʒj
Table vinegar, f.ʒj. M.
This amount for one dose ; to be repeated in half an hour if necessary.

This is a cheap extemporaneous plan of preparing spirits of mindererus.

The nausea, vomiting and irritable stomach consequent upon alcoholic excess may be treated with iced milk diluted one-half, Vichy, Apollinaris, or Saratoga water, or with lime water, a tablespoonful every five or ten minutes. A bladder of ice to the epigastrium is also efficient.

In the persistent retching and vomiting that sometimes follows a debauch, *liquor potassæ arsenitis*, in one drop doses every hour or half hour, either alone or combined with a few grains of capsicum, is extremely efficacious.

For the nervous prostration, sense of anxiety and of impending misfortune, *uux vomica*, gtt.v-xv of the fluid extract, has been highly commended. This amount may be taken three or four times a day.

"Bitters" of different kinds are very popular as restoratives. *Quassia* is supposed to be peculiarly efficacious, but almost all the vegetable bitters are employed. The following is a palatable combination :

1303. R. Liquoris ammoniæ acetatis,
Tincturæ aurantii amari, ℥ss gtt.xx
Syrupi aurantii amari, f.ʒj.
Aquæ,

For one dose ; to be repeated every half hour or hour.

For the headache and wakefulness which follows a debauch, Dr. A. McLANE HAMILTON prescribes *monobromide of camphor*, finding that it possesses peculiar hypnotic power :

1304. R. Camphoræ monobrom., ʒj M.
Confect. rosæ, q. s.

Make twelve pills. One to two as required.

Dr. A. A. SMITH, of New York, states that the first indication is to remove the alcohol from the intestinal canal. For this give of rhubarb and magnesia calcined, each a half drachm, and then give the following :

1305. R. Spiritus ammoniæ aromat., ʒij
Tincturæ camph., ʒjss
Tincturæ hyoscyami, ʒijss
Spiritus lavandulæ comp., q. s. ad. ʒij.

M. Sig. ʒj every hour until the headache is relieved, and then give capsicum gr. ij, and quinine gr. iij before each meal for several days. If there be sleeplessness, give :

1306. R. Sodii bromidi, ʒss
Chloral. hydrat., ʒijss
Syrupi aurantii cort., ʒss
Aquæ, ʒiijss.

M. Sig. ʒss at night, repeat in two hours if necessary to produce sleep. (*A. Y. Medical Record.*)

The following "quieting mixture" has been long used with the greatest success by Dr. F. PEYRE PORCHER, of Charleston, S. C., and is confidently recommended :

1307. R. Chloral hydratis, ʒjss
Potassii bromidi, ʒij
Spts. aetheris compos., f.ʒij
Tincturæ valerianæ, f.ʒij
Aquæ, f.ʒvj. M.

A tablespoonful every two, three or four hours in the nervousness following a debauch, commencing delirium tremens, excessive nervous excitement, etc.

II. ACUTE ALCOHOLISM OR DELIRIUM TREMENS.

PROF. WILLIAM AITKEN, M. D., EDINBURGH.

The two indications for treatment are: 1. The elimination of the poison; 2. The sustenance of the patient during this period. Our author opposes bleeding and the administration of opiates or stimulants in large doses. The strength is to be supported by *nutritious diets*, such as yolk of eggs, soups, beef-tea, and egg-flip, in small quantities and often.

The danger in the first instance is from exhaustion, which is to be met by careful nursing. *Opium* may only be administered in protracted cases, and then never in doses larger than would be considered safe for a healthy person of the age and sex of the patient.

G. H. BARLOW, M. D., LONDON.

1308. R.	Camphoræ,	gr.ij	
	Ammonii carbonatis,	gr.iv	
	Tincturæ hyoscyami,		
	Tincturæ lupulinæ,		
	Syrupi aurantii,		
	Mucilaginis acaciæ,	ʒiij	f.ʒj
	Aquæ camphoræ,	f.ʒj.	M.

For one dose, to be taken at bedtime, after the action of an aperient.

J. WARING CURRAN, M. D., DUBLIN.

1309. R.	Zinci oxidi,	ʒj-ij	
	Confectionis rosæ,	q. s.	M.

For 10 pills; one thrice daily.

When morphia or cannabis has done its duty in this disease, the after treatment by oxide of zinc is something to be observed rather than described; the constant dread, restlessness, and disturbed sleep are quickly overcome by the bracing agency of the drug. (London *Lancet*, October 24th, 1868.) In administering the oxide of zinc, care must be taken not to give it upon an empty stomach, as it produces nausea and a dislike for the medicine.

PROF. R. J. GRAVES, M. D., DUBLIN.

1310. R.	Antimonii et potassii tartratis,	gr.iv	
	Tincturæ opii,	f.ʒj	
	Camphoræ,	gr.xv	
	Alcoholis,	f.ʒss	
	Aquæ destillatæ,	f.ʒviiij.	M.

Powder the camphor by the aid of the alcohol, add the water, pass through a piece of fine linen, and then add the tartar emetic and the laudanum. Give a tablespoonful every two hours.



G. M. JONES, M. D., JERSEY, ENGLAND.

1311. R. Tincturæ digitalis, f.ʒiiss. M.
 A tablespoonful (f.ʒss) to be given at a dose, mixed with a little water.
 If the first be not sufficient, which, however, it generally proves to be, a second, equally large, is to be administered in about four hours. If a third dose be, in rare instances, required, it should not exceed a dessertspoonful (f.ʒij).

Under the influence of this medication, it is stated, the pulse becomes fuller, stronger, and more regular, the skin grows warm, and the cold clammy perspiration ceases. These effects are followed by a sleep of several hours' duration. No action on the kidneys nor any alarming symptoms are observed.

This treatment answers best when the symptoms have assumed a resemblance to those of acute mania, and when there has not been much exhaustion.

DR. LYONS, HARDWICKE HOSPITAL, DUBLIN.

1312. R. Pulveris capsici, gr.xx-xxx
 Mellis rosæ, q. s.
 Make a bolus.
 For one dose.

This usually suffices to produce quietude and sleep. In exceptional instances, however, a second and even a third dose is required before full tranquillity is secured. The drug is well borne, and quiets the stomach in cases in which irritability and vomiting are present. Our author sums up (*British Medical Journal*, November 7th, 1869), his experience as follows: 1st. Capsicum is a valuable and reliable drug when opium fails or is for any cause contra-indicated. 2d. It is a safe drug for general employment in delirium tremens, and as such may be confidently recommended. 3d. It is not open to the objection which attaches to the continued use of opium, which, when it fails to tranquilize and produce sleep, adds to the state of excitement, and when pursued beyond a certain limit may induce opium coma. 4th. Capsicum has been employed in the delirium of fever when opium has failed to cause sleep, and with marked success in certain cases.

III. CHRONIC ALCOHOLISM.

PROF. WILLIAM. A. HAMMOND, M. D., OF NEW YORK.

In the treatment of chronic alcoholism the physician should peremptorily insist upon entire cessation from the use of alcoholic

DR. T. D. CROTHERS, OF HARTFORD, CONN.

In the practice of this able specialist, the liquor is taken from the patient *at once*, and the following given:

1316. ℞. Ammonii bromidi, gr.xl
Tincturæ zingiberis, ʒj
Aquæ, ʒj.

This, with the addition of tinct. cinchonæ, is often given every three hours.

The first and second night the following is used:

1317. ℞. Chloral hydratis, gr.xv
Tinct. zingiberis, ʒj
Aquæ or syrupi, ʒj. M.

If this acts well it is used until natural sleep is restored.

In some cases the following is prescribed:

1318. ℞. Spiritus ætheris sulphurici compositus, ʒj
Syrupi cinchonæ, ʒj. M.

This is often a substitute for liquor, and if it does not disturb the stomach may be freely used. *Congress* and *mineral waters* are given freely.

1319. ℞. Bromidi ammonii, gr.xxx
Quassia infusi, ʒij. M.

Is often used freely with good results.

Phosphoric acid and *cinchona* form the basis of all the tonics given. The *iodide* and *bromide of potassium* are valuable, but are not certain and often disagree with the stomach. Bathing and electricity are always good, although the latter is not well borne in many cases. Remedies that derange the stomach are avoided if possible. The first want of the disordered system is rest. Neuralgia and changeable insomnia follow in nearly every case. Of the iron preparations the *citrate* is the most useful, with *cinchona*; *quinine*, unless indicated by the presence of malaria, frequently causes cinchonism. No effort is made to cause sleep until night, then one of the above remedies is given. Fluid extr. lupulin is excellent with bromide of ammonia.

All *tinctures* and *alcoholic* extracts are carefully avoided after the first few days. Infusions and other preparations are used. Fruits of all kinds are recommended. Bathing and reclining, with some

of the above remedies, will often suspend the depression complained of. As a gentle tonic, nothing is more useful after the system recovers from the immediate effect of liquor than

1320. ℞. Potassii chloratis, gr. x
 Infusi calumbæ, ʒj. M.
 Taken four times a day for a long time.

After the patient has been under treatment a few days the following cathartic is excellent:

1321. ℞. Hydrargyri pilulæ, gr. x.
 With Seidlitz powder in the morning.

The treatment varies somewhat with each case. In some instances no medicines are tolerated, and only external means, with exact hygienic rules, can be applied. In others, general alterative plans of treatment give good results. Narcotics are always transient in their effects, and more or less uncertain; and stimulants are frequently irritating, and complicate the trouble. In delirium tremens, *constant nursing, nutritious food, bathing, chloral at night, with the bromides, mineral waters, etc.*, are the most effectual means. Occasionally Dr. C. gives *milk punch* in protracted delirium, but does not think it the most valuable remedy. A steam-vapor bath is equally as good. *Milk, and tea and coffee, are given ad libitum.*

DR. N. KEELER MORTON, PHYSICIAN TO THE NEW YORK INEBRIATE ASYLUM.

This physician gives the following plan of treating the partial nausea, loss of appetite, nervous irritation, prostration and headache, which follow prolonged excessive alcoholic indulgence, symptoms to which the Germans apply the significant name, *Katzenjammer* (*Medical and Surgical Reporter*, April, 1875.)

If, in such cases, we continue the exhibition of alcohol (brandy and soda, etc.) we temporarily alleviate the suffering, but are surely adding fuel to the fire. Experience has shown that if we can substitute the stimulus of nourishing food for liquor, we can accomplish our end without running any risk to our patient. But to do this we must create an appetite for the food, and cause it to be retained and assimilated. For this purpose Dr. MORTON universally pursues the following plan:

A double Seidlitz powder is administered in as large a quantity of water as possible, for the purpose of producing a rapid and thorough evacuation of the stomach and bowels. This is followed by:

1322. R.	Etheris chlorici,		gtt.xv	
	Glycerinæ,		fʒ.ss	
	Tincturæ capsici,		gtt.iiij	
	Syrupi zingiberis,			
	Tincturæ cinchonæ comp.,	āā	f.ʒss	
	Aquæ,		f.ʒiiss.	M.

For one dose.

This is only given two or three times, once each morning, followed during the day by a teaspoonful of the following every three hours:

1323. R.	Lactopeptini,		ʒiij	
	Acidi hydrochlorici,		gtt.xxx	
	Glycerinæ,		f.ʒss	
	Aquæ aurantii,		f.ʒiij.	M.

For a mixture: The result of this treatment is almost always satisfactory.

DR. S. B. MERKEL, OF PENNA.

1324. R.	Quinæ valerianatis,		gr.v	
	Ferri sulphatis,		gr.x	
	Spiritûs myristicæ,		f.ʒss	
	Aquæ menthæ piperitæ,		f.ʒiij.	

A teaspoonful whenever the craving for drink is felt. (*Tilden's Journal of Materia Medica*, May, 1877.)

The following formula, similar to the above, has been considerably employed for the same purpose:

1325. R.	Ferri sulphatis.		gr.v	
	Magnesiæ,		gr.x	
	Aquæ menth. pip.,		ʒxj	
	Spir. myristicæ,		ʒj.	

This amount twice daily to appease the craving for liquor, is said to remove it entirely, and prevent the physical and mental prostration that accompanies the absolute cessation.

Or the following:

1326. R.	Pulv. calumbæ,			
	Pulv. pruni virginianæ,	āā	ʒiij	
	Pulv. capsici,		ʒj.	

Mix well and sift. A teaspoonful in a glass of cold or hot water, when needed, to allay the desire for stimulants.

1327. R.	Tinct. capsici,	℥ ʒj	
	Tinct. digitalis,	℥ ʒj	
	Aquam camphoræ,	ad. ℥ ʒvj.	M.
A tablespoonful as required.			
1328. R.	Tinct. capsici,	℥ ʒj	
	Tinct. nucis vomicæ,	℥ ʒj	
	Acid. nitro-hydrochlorici diluti,	℥ ʒj	
	Infusum gentianæ.	ad. ℥ ʒxvj.	M.
Two tablespoonfuls as required.			

Either of the above preparations is stated by writers in the *Lancet* (June, 1877,) to be very useful in allaying the craving for alcoholic stimulus, and removing the sense of sinking and faintness, so much complained of by intemperate persons who have ceased indulgence in their wanted stimulus.

The *oxide of zinc* has also proved of much service in these cases. Dr. ROBERTS BARTHOLOW recommends that it be combined with pepper.

1329. R.	Zinci oxidi,	ʒj	
	Piperinæ,	ʒj.	M.
For twenty pills. One three or four times a day.			

These, he says, relieve the trembling, and the gastric catarrh, and diminish the appetite for stimuli. When commencing the administration of oxide of zinc, it should be given on a full stomach, otherwise it is apt to produce nausea.

MR. C. O. GROOM NAPIER, ENGLAND.

This gentleman pointed out, in a paper read before the British Association for the Advancement of Science, in 1875, that a vegetable diet materially decreases the desire for alcohol in those addicted to its use. Most people find that they can take wine with animal food, but not with farinaceous or amylaceous food. Hence vegetarianism is a valuable aid in checking habits of inebriety.

Mr. NAPIER states that certain articles of vegetable diet are especially antagonistic to the taste for alcohol. These are: Macaroni, haricot beans, green dried peas and lentils, soaked for twenty-four hours and well boiled, onions, celery, rice, and highly glutinous bread. It is well known that nations who consume but little meat, subsisting principally on fruits and vegetables, are conspicuously temperate; and individuals, who for other reasons adopt an

exclusively vegetable diet, soon lose their desire for even an accustomed stimulant.

RÉSUMÉ OF REMEDIES.

Alcohol. Most practitioners used to believe that in acute alcoholism in feeble subjects, moderate doses of alcohol are indicated. The latest authorities generally deem it needless.

Ammonii Bromidum has been employed in delirium tremens.

Ammonii Carbonas is valuable in inebriety. (F. 1308.)

Ammonii et Potassii Tartras is much employed by German physicians in this affection, but little used in America or England, excepting in combination with opium, when it often induces sleep after the failure of opium alone.

Arsenicum. Fowler's solution in one-drop doses proves serviceable in the vomiting after a debauch, and in the morning vomiting of chronic alcoholism, either alone or combined with from three to five grains of capsicum.

Asarum Europæum. The leaves of this herbaceous plant enjoy a great repute in Russia as a remedy for the deranged state of health consequent on habits of intoxication. They are used in infusion (ʒij-iv to aquæ Oj) or powder (gr. iij in pill).

Atropia, hypodermically, is recommended by BARTHOLOW when there is obstinate insomnia with great restlessness, weakened action of the heart, coldness of the surface, clammy sweat, and a failure of nutrients, bromide of potassium, chloral and hypodermic injections of morphia.

Camphora is recommended by Dr. LAVCOCK in delirium tremens in persons of a nervous habit, where the exhaustion is great, and morphia inadmissible.

Cannabis Indica is regarded by Dr. ANSTIE as preferable to opium when there is any reason, from the quality of the pulse, to believe the circulation much enfeebled. He prescribes gr. $\frac{1}{4}$ - $\frac{1}{2}$ of a good extract. TYRRELL records (*Medical Press*, March 13th, 1867,) a case of delirium tremens, in which, after three doses of ℥xx of the tincture of cannabis indica, every third hour, the benefit was marked, after the failure of capsicum, and when opium was contra-indicated.

**Capsicum* in large doses is strongly recommended by Dr. LYONS and others.

Chloral has been successfully combined with bromide of potassium in the indescribable nervousness, uneasiness and malaise which supervenes in chronic alcoholism :

1330. R.	Chloral hydratis,	gr. x	
	Potassii bromidi,	ʒj	
	Syrupi simplicis,	f. ʒj	
	Aquæ,	ad. f. ʒj.	M.

This amount every hour.

Very much larger doses have been given by some physicians (ij of chloral at a dose, Dr. F. BRADNACK, in the *Buffalo Medical and Surgical Journal*, Sept., 1871). But the practice is undoubtedly dangerous. It has been shown beyond reasonable doubt by Dr. MADISON MARSH, of Louisiana, and later by Dr. ERNEST MAGNAN of Paris, that drunkards do not bear chloral at all well. Its use by them even in moderate doses is liable to be followed by sudden death. The latter physician abjures it entirely in alcoholic cases.

Cinchona in strong infusion is said to act very happily in inebriety and in the tremulousness which affects habitual drunkards.

Conium is recommended by Dr. HARLEY, in combination with opium, thus :

1331. R.	Succi conii,	f. ʒiv-vj-viiij
	Tincturæ opii,	℥xx-xxx.
	For one dose.	

Dr. KITCHEN recommends full doses of the fluid extract of conium to control the muscular action in alcoholic nervousness and delirium tremens.

Fermentoleum Solani. Dr. MAGNUS HUSS recommends the empyreumatic oil, which gives that special flavor to Irish whisky or potato brandy, the *fermentoleum solani*, in doses gr. j-ij, five or six times a day, in a capsule or in pills. This remedy seems to act principally in diminishing the epigastric pains and pyrosis, and appears to have given much satisfaction.

Herba Serpylli. The wild thyme is a popular remedy for habitual drunkenness in Russia. A teacupful of an infusion, ʒj to Oj, is given every half hour the first day, every two hours the second day, and then four to six times a day for two or three weeks, when the cure is complete. The thyme at first causes vomiting, diarrhœa, diuresis and diaphoresis; afterwards increased desire for food and acid drinks, for which lemonade, etc., should be supplied.

Ipecacuanha has been very successfully used in delirium tremens by Dr. W. L. SCHENCK (*N. Y. Medical Journal*, October, 1872,) in doses of ʒj of the powder every fifteen minutes until ʒij are taken. Emesis is not necessary, and is often not produced by these doses. It has also been used with success to destroy the appetite for liquor in inebriates. The patient is confined to his room, on a low farinaceous diet, but allowed his favorite stimulus in any quantity. After a preliminary purge of calomel, he is given the next day ʒj of powdered ipecac., and this daily repeated. Its effects are said to be almost certain, and permanent. (*Cincinnati Lancet and Observer*, July, 1877.)

Nux Vomica is a valuable tonic in the nervous prostration of inebriates (p. 566.)

Oleum Morrhuæ. Professor LIEBIG, in his *Animal Chemistry*, long since pointed out that the use of cod-liver oil has a tendency to pro-

mote the disinclination for the use of wine. It is therefore especially useful in the exhaustion from prolonged alcoholism. The great art in giving it is to commence with small doses, f.5ss-f.3j, and it is rarely necessary to increase these to more than double this quantity.

Opium is no longer employed indiscriminately in heroic doses in every case of delirium tremens. To give it in large and repeated doses, on the principle that sleep must be produced at all hazards, is to run the risk of killing the patient. Dr. ANSTIE (*The Practitioner*, July, 1868,) asserts, that great mischief was formerly done by the custom of plying the patient with larger and larger successive doses of opium, to drown the delirium in narcotic stupor, and says that opiates should never be given by the mouth when the hypodermic injection of morphia is possible. Prof. GRAVES recommends, in young, robust subjects, when there is much vascular excitement, the following combination :

1332. R. Tincturæ opii,
Vini antimonii, āā ℥.xx

To be repeated every three or four hours, according to circumstances.

When the patient is old, and when there is much depression, the opium may be advantageously combined with carbonate of ammonia (gr. iij-iv), or quinine (gr. ij-iiij), or with camphor. Prof. STILLE says the best method of administering opium in delirium tremens is to begin with gr. $\frac{1}{4}$ or its equivalent, and progressively augment the dose by small and hourly additions until sleep is produced, or a sufficient degree of tranquillity obtained.

**Potassii Bromidum* is recommended as of conspicuous benefit, by removing the delusion, calming the delirium and procuring sleep in the earlier stages of mania-a-potu, before the delirium has become furious. It is also of service in removing any delusions that may remain after the attack has been partially subdued.

**Quiniæ Sulphas* is the nervine tonic in which Dr. ANSTIE has the most confidence, in grain doses two or three times daily. It should be given from the first, if possible, being, if the stomach is very irritable, administered in effervescence with bicarbonate of potash and citric acid.

Sinapis. In that stage when a timely emetic will cut short the attack, none is so appropriate as mustard.

Strychnia. On account of its excellent powers as a nerve tonic, strychnia is often given to restore the tone of the system after alcoholic excesses. It is said to be an ingredient in several of the "bit-TERS" used as "pick-me-ups" among habitués of saloons. Dr. H. C. MOREY relates a case of a drunkard who, after long habit would take a number of grains at once to restore his tone. (*Pacific Medical Journal*, 1875.)

Zinci Oxidum is a most valuable nervine sedative in the tremor and exhaustion from alcoholic excess. (p. 570.)

OPIISM (OPIUM EATING; THE OPIUM HABIT).

DR. C. H. HUGHES, OF LOUISIANA.

This physician recommends the substitution of *quinine* for the opium. He administers gr. ij-iv for every grain of morphia withdrawn. Should the prostration become very great, tinctura cannabis indicæ will usually relieve it. For the pains which are usually complained of, he exhibits elixir valerianæ ammoniatæ, f. ʒii-ʒiv, and chloral at night. Instead of the latter, camphor may be substituted. Should the discharges from the bowels be sufficient to weaken the patient, the use of tannin will generally check them. The patient will require constant surveillance for a few weeks, especially when passing through the crisis of reduction. (*New Orleans Medical and Surgical Journal*, January, 1877.)

DR. W. C. BLALOCK, OF GEORGIA.

The treatment successfully adopted by this physician is as follows (*Atlanta Medical and Surgical Journal*, Feb., 1877): Having ascertained the exact amount of the opiate which the patient is accustomed to consume daily, he administers a somewhat less amount, combined with *strychnine*. For instance, if the amount taken is six grains of morphia daily, he prescribes :

1333.	R.	Morphiæ sulphatis,	℥iv	
		Strychniæ sulphatis,	gr. j	
		Aquæ,	f. ʒij	
		Syrupi simplicis.	f. ʒvj.	M.

Dose.—A teaspoonful three times a day.

This is a reduction from six grains down to four. It is continued until it is exhausted, which will be fourteen or sixteen days, when the following is prescribed :

1334.	R.	Morphiæ sulphatis,	℥vj	
		Strychniæ sulphatis,	gr. j	
		Aquæ,	f. ʒij	
		Syrupi simplicis,	f. ʒvj.	M.

Dose, same as before.

This is a reduction from gr. iv to gr. ijss of morphia per diem. After another two weeks another reduction of gr. ss is made, and so on until the strychnia solution alone is given. The quantity of strychnia is never diminished. It gives tone to the large bowel and nervous system, and to some extent takes the place of opium.

During the treatment, constipation must be guarded against, and digestive troubles met by appropriate diet and remedies.

SIR ROBERT CHRISTISON, OF EDINBURGH.

After considerable experience in the management of opium eaters, this author doubts if success can be obtained by the gradual reduction of the amount consumed. He believes the drug can safely be left off abruptly, even after many years' indulgence. The nervous irritability which ensues he treats with full doses of bromide of potassium ; and the insomnia with chloral. For the first three days after the cessation of the habit the patient suffers from great mental depression, nausea and vomiting ; but by the fourth night these symptoms usually disappear ; the patient obtains a refreshing sleep, after which the progress is satisfactory. The diarrhœa apt to occur he treats with suppositories of morphia.

He acknowledges, however, that there is great danger of a relapse after apparent cure.

DR. J. B. MATTISON, OF PARRISH HALL, BROOKLYN, N. Y.

This writer, who has long given special attention to the treatment of opium eating, believes in the gradual and systematic reduction of the accustomed dose. As a tonic, he has found *cod-liver oil* of signal benefit ; also *arsenic*, as liq. potassæ arsenitis, gtt. v-x, *ter die*.

For the obstinate insomnia which usually arises on the withdrawal of the drug, he prescribes *hydrate of chloral*, or the following combination :

1335. R.	Potassii bromidi,	gr.xx	
	Tinct. hyoscyami,	f.ʒij.	M.
	This amount at night.		

Full hot baths are also very useful to dispel the insomnia.

Another source of annoyance is profuse hydrosis. This may be checked by atropia, gr. $\frac{1}{6}$ hypodermically. This drug, too, exercises an excellent effect on the obstinate constipation, which is a frequent feature of such cases.

The bromides—preferably of sodium—are beneficial for the nervousness, given in full doses, two to eight drachms per diem, according to requirement. A moderate degree of bromism is usually essential. Hydro-bromic acid is sedative, and, with some,

mono-bromide of camphor acts kindly. The lesser soporifics have a value, and various combinations will suggest themselves.

During the opiate withdrawal, strong nerve tonics are demanded, and among these strychnia, iron, and arsenic hold a leading place. The following combinations are valuable.

1336. R. Tinct. ferri chloridi, ℥iv
 Liq. potass. arsen., ℥ss
 Strychniæ, gr. j
 Glycerinæ, ℥iijss. M.

S.—Take two teaspoonfuls in water after each meal.

1337. R. Elix. iron, strych. and quinine (Wyeth's).
 One to three teaspoonfuls after meals.

1338. R. Ferri pyrophos., ℥ss
 Strychniæ,
 Acid. arseniosi, āā grs. ij
 Ext. gentianæ, ℥j. M.
 Fiat pilulæ, No. 60.
 S. Two pills after each meal.

Good food, proper exercise and cold salt sponge or shower baths, all exert a distinctly roborant effect. Whatever remedies be employed, it is essential to success that the treatment be conducted under frequent professional supervision, moral as well as physical, and, as restraint is sometimes requisite, the best results follow treatment in inebriate institutions, or under the private care of those who devote themselves exclusively to the management of this disease. Successful self-treatment is very rare.

DR. T. D. CROTHERS, OF HARTFORD, CONN.

This physician is accustomed to reduce the amount of opium gradually in some cases, rapidly in others. The more rapid the reduction the more marked the insomnia, anæmia and nervous exhaustion; but if these can be combated successfully, the final recovery is more positive and permanent.

After the opium is discontinued, the following nerve-tonic is often used with good effect:

1339. R. Tincturæ nucis vomicæ, gtt. xij
 Acidi phosphorici diluti, gtt. xx
 Syrupi pruni virginiani, i. ℥ss. M.

This amount, at one dose, twice a day.

Another very excellent tonic for the nerve depression, always present in these cases, is:

1340. ℞. Acidi phosphorici diluti, gtt.xx
 Tincturæ cinchonæ, f.ʒss
 Syrupi simplicis, f.ʒss.

This amount three or four times a day.

The following is also a favorite for the nerve depression:

1341. ℞. Ammoniaë bromidi, gr.xxx
 Tincturæ cinchonæ, f.ʒss
 Syrupi, f.ʒj. M.

To be taken every three or four hours.

Also the following, which is varied from time to time, combining with it fluid ext. lupulin, or *valerian*, or some of the bitter tonics:

1342. ℞. Chloral hydratis, gr.xx
 Syrupi cinchonæ, f.ʒi. M.

Taken every three hours.

The ferri et quiniæ citras is given in many cases, but cinchona and some of the vegetable tonics seem to work best. In addition to medicines, he orders a hot or tepid bath every day, enjoins outdoor exercise, light nutritious diet, and the galvanic current over the spine.

For the *insomnia*, he only gives remedies at night, after a warm bath, usually one of the following:

1343. ℞. Chloral hydratis, gr.xxv
 Syrupi, ʒss. M.

To be repeated in two hours, if it does not act well.

If this does not work well, but is followed by nausea, or other disturbances, next day, the following may be used:

1344. ℞. Ammoniaë bromidi, gr.xl
 Tincturæ zingiber., ʒj
 Aquæ, ʒij. M.

This may also be repeated.

No other remedies in his experience seem more certain than these. *Electricity* frequently increases the insomnia. *Valerian*, *belladonna*, and *lupulin*, occasionally work well, but are not alike in their effects, and derange the stomach. *Tea*, *coffee*, and *port wine* act well in many cases, taken just before bedtime. Rubbing and bathing and perfect quiet, in good surroundings, and the entire confidence of the patient, are essentials. The diarrhoea seldom

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II. INDEX OF REMEDIES AND REMEDIAL MEASURES.

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