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EUGENICS IN ITS RELATIONSHIP TO THE WELFARE OF THE PUBLIC.*

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Eugenics is the science of the improvement of the human race by better breeding, or, as Sir Francis Galton, who was the leader of the science and who died in 1911, expressed it: "The science which deals with all influences that improve the inborn qualities of a race." The agriculturalist, who has long practiced the science, believes that permanent advance is to be made only by securing the best "blood." Man is an organism—an animal; and the laws of improvement of grain and of stock hold true for him also. Many eugenists believe that, unless people accept this simple truth, and let it influence marriage selection, human progress will cease. Yet, from apathy, false modesty, ignorance and prejudice, the laws of eugenics have been almost entirely disregarded so far as the improvement of the human race is concerned.

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

In the last decade, at least, we have been hearing a great deal on the subject in the meetings of various medical and other associations, as well as in the public press. An active campaign of popular education is being waged by those who believe that eugenics, or the observance of the established laws of heredity, constitute the chief factor in bringing about a betterment of the human race. There are many who believe that the improvement of the race is not to be chiefly attained through regulating by education and by law who shall or shall not marry, and who maintain that in environment and improvement of the social conditions of the people lie the solution of the problem. At the banquet of the First International Eugenics Congress which opened in London on July 24, last, Mr. Arthur J. Balfour, the principal speaker of the evening, after referring to the differences of opinion existing among men of science, reminded the members that eugenics suffered from the fact that every faddist seized hold of the eugenic problem as the machinery for furthering his own particular method of bringing the millenium upon earth.

The study of eugenics in this country has been stimulated by a gradual realization of the enormous number of insane and other dependents who have become a public charge and by the stupendous expense the people are put to provide for their maintenance. Few people realize that, according to Charles Benedict Davenport, there are about half a million insane, feeble-minded, epileptic, blind and deaf in the United States, and that the number is increasing at the rate of three or four to every thousand of increase of population; that there are 80,000 prisoners and 100,000 paupers, and that it costs the people of the Republic over \$100,000,000 annually for their support. An epidemic that rendered this proportion of our population, chiefly at the most productive age, not merely incompetent, but a burden costing \$100,000,000 annually to support, would instantly attract universal attention. Yet, as it is, we remain perfectly complacent and accept this appalling situation as a matter of course.

Most of the leaders in the study of eugenics are conservative, and admit their present purpose is to gather data showing the influence of heredity on the production of insanity, crime and pauperism, with the view of formulating laws that may lessen their prevalence or completely eradicate them. A rapidly growing belief that a more general dissemination of a knowledge of the modern

principles of heredity will lead to the future enactment of laws that will tend to a general uplifting of the human race, has resulted in the organization of several important societies and the establishment of various laboratories and bureaus for the study of eugenics and for collecting accurate data showing the effect of hereditary influences on the production of insanity, feeble-mindedness, epilepsy and criminals. It may not be without interest to refer to some of the more important of these.

Stimulated by Galton's work, England has been more active than any other country. A number of years ago there was organized the Eugenics Education Society, which published the *Eugenics Review*. This society was responsible for the organization of the First International Congress of Eugenics, which was held in London in July, 1912, and before which several valuable papers were read by students of the subject from various parts of Europe and this country. This society has fostered the establishment of numerous branches in the United Kingdom. For several years Sir Francis Galton maintained a eugenics laboratory, directed by Prof. Karl Pearson, which has published a "Treasury of Human Intelligence." This laboratory was well endowed by Galton at his death.

In the United States, one of the first undertakings in eugenics was that of Alexander Graham Bell, who was much impressed by the consequences of the marriage of the deaf in America. In 1887 he founded the Volta Fund, which has grown to over \$100,000. Out of this was established the Volta Bureau, which collects all valuable information that can be obtained with reference not only to deaf mutes as a class, but to deaf mutes individually. In this bureau can be found the names of over twenty thousand deaf persons and the particulars concerning their history.

In October, 1910, the Eugenics Record Office was started at Cold Spring Harbor, Long Island, N. Y., in connection with the eugenics section of the American Breeders' Association on a tract of eighty acres. Mr. H. H. Laughlin is its superintendent. At this office the collecting and cataloguing of record goes on actively. It is the purpose to establish here a very completely indexed collection of published genealogical and town histories for the United States, as well as the manuscript reports of the field investigators. The main work of the office is the investigation into laws of inheritance of traits in human beings and their application to eugenics. Two series of publications are issued—an octavo series

of Bulletins and a quarto series of Memoirs. This office gives its services free of charge to persons seeking advice as to the consequences of proposed marriage matings. It is essentially devoted to the advancement of the science and practice of eugenics. The Carnegie Institution of Washington, recognizing the importance of the study of eugenics, makes an annual appropriation, and has established a Station of Experimental evolution, at the head of which is Charles Benedict Davenport, who has been the most active investigator of these problems in this country. Some of his papers are published by the Eugenics Record Office. Most valuable work is being done in various institutions for the feeble-minded in different parts of the country. There has recently appeared a very interesting report by Henry Herbert Goddard, director of the Research Laboratory of the Training School for Feeble-minded Girls and Boys at Vineland, N. J., which will be referred to later.

Another important organization is the National Committee for Mental Hygiene, of which Dr. Lewellys F. Barker, of the Johns Hopkins University, is president, and which recently held a conference and exhibit in the College of the City of New York. It is waging a campaign for funds to further the plans for a nation-wide educational campaign on mental hygiene. One philanthropist has promised \$50,000 towards an endowment fund for this purpose, provided \$200,000 could be raised from other sources. There are three distinct fields in which this committee hopes to wage the campaign for better acting minds. They include the field of advanced research and investigation for the prevention and cure of the various forms of insanity; the spreading of all knowledge already ascertained among the people of the nation by means of exhibits, literature and press accounts; and the proper organization of all agencies by which the campaign can be carried on.

In Germany, an International Society of Race Hygiene has been organized. Only in the last few weeks word has come from France that, as the scientists have about given up all hope of remedying race suicide—that is, bringing about a proper proportion between the birth and death rates—a movement has now been started to improve the race by means of marriage selection. Emulating the eugenic societies of England and the United States, there has just been formed “A French Society for the Study of Questions Relating to the Amelioration of Generations,” which has just issued

a circular to every one whose name can be found in Tout Paris. The following extract may be quoted:

“It is our intention to appeal to the competence and good-will of all administrators, or those in a position to judge of the life of others—the fathers of families as well as employers and heads of bureaus, biologists, horse and cattle breeders, lawyers, doctors, moralists, veterinarians and all in a position to supply us with valuable material for our work. The diversity of source will greatly increase the value for purposes of the comparison of the evidence collected.”

Before taking up some of the evidence showing that human traits—including feeble-mindedness—can be inherited, it may be of interest to review some of the established facts concerning the laws of heredity. Most of these are founded upon what is known as the Mendelian Law. Johan Gregor Mendel, while Abbot of Brunn, began some hybridizing experiments on the cultivation of peas in the cloister gardens in 1854. As a result of his experiments he established a law of heredity which was entirely forgotten, and he died unrecognized in science. He had the personal satisfaction of realizing, however, that he had established a law of heredity as to the numerical ratio of the types developed in hybridizing. It was not until 1900 that DeVries in Holland, Correns in Germany, and Tschermak in Austria simultaneously re-discovered and verified Mendel's work.

In hybridizing peas, Mendel found that a quality like tallness, as contrasted with dwarfness, was transmitted as follows: If tall dwarf peas were crossed, he found in the first generation nothing but tall peas. But, if these peas were allowed to grow and fertilize themselves, in the next generation he got tall and dwarf peas in the ratio of three to one. The dwarf peas in this case bred true—*i. e.*, when they were planted by themselves and self-fertilized there was never anything but dwarf peas, no matter how many generations were tested. On the other hand, the tall peas were divisible by experiment into two groups: first, those that always bred true, viz: always tall peas; and, secondly, another group that bred tall and dwarf in the ratio of three to one, and from these the same cycle was repeated. Mendel called the character which did *not* appear in the first generation (dwarfness) “recessive”; the other (tallness) he called “dominant.” The recessive factor is now generally considered to be due to the absence of something which, if

present, would give the dominant factor. According to this view, dwarfness is simply an absence of tallness.

In man and animals, reproduction takes place by the fertilization of the ovum or germ cells by the spermatozoon or sperm cell. The nucleus of these two cells contains a material called chromatin. After the fertilization of the ovum, and in the process of division of the latter, this chromatin, equally contributed from the sperm cell and ovum, divides into a number of minute masses called chromosomes. Each kind of the plant and animal has its own number of chromosomes, ranging from six to over a hundred or more in number. It is the chromosome, consisting of the material chromatin, that is now universally recognized as the organized carrier of transmissible characters from parent to offspring.

Davenport has quite recently summarized the principles governing heredity in the following terms:

"First of all, we find useful the principle of the unit character. Whether it be ultimately accepted or discarded, it is useful to-day, and so we accept it as a guiding hypothesis. According to this principle, characters are, for the most part, inherited independently of each other, and each trait is inherited as a unit or may be broken up into characters that are so inherited.

"Next it must be recognized that characters, as such, are not inherited. Strictly, my son has not my nose, because I still have it; what was transmitted was something that determined the shape of the nose, and that is called, in brief, a 'determiner.' So, the second principle is that unit characters are inherited through determiners in the germ cells.

"And, finally, it is recognized that there really is no inheritance from parent to child, but that parent and child resemble each other because they are derived from the same germ plasm—they are chips from the same old block—and the son is half-brother to his father, by another mother.

"These three principles are the cornerstones of heredity as we know them to-day, the principles of the independent unit-characters each derived from a determiner of the germ plasm."

Davenport states that he has no doubt that all human traits are inherited in accordance with these principles. He accepts without reserve the general principles of the Mendelian law. It is found that many physical traits, such as color of the hair, color of the iris of the eyes, albinism, polydactylism, syndactylism, are transmitted

from parent to offspring according to this law. Investigation has of late been extended to the study of mental traits by eugenists. Rosanoff has shown pretty clearly that the law applies in the case of insanity, while Davenport and Weeks have produced evidence that it holds good for epilepsy. Goddard is inclined to think that it also applies in the case of feeble-mindedness. It will be illuminating to give an instance of the dire results that may result from the freedom of marriage of members of a feeble-minded family. In September, 1912, there appeared from the press a book entitled "The Kallikak Family," written by Henry Herbert Goddard, who, as already stated, is director of the Research Laboratory of the Training School for Feeble-minded Girls and Boys at Vineland, New Jersey. It embodies the results of an investigation into the ancestry of a young girl, Deborah Kallikak, who had been admitted to the institution eight years before. It is probably the most complete and most illuminating of all the studies in heredity that have been made, with the view of showing the descent of mental deficiency. A brief summary of the main facts concerning this family (the name Kallikak is, for obvious reasons, an assumed one) will prove interesting:

Several generations ago there settled in the United States a healthy man who married a healthy woman, and for four generations their descendants were perfectly normal. Then, about the time of the American Revolution, one of the sons, Martin Kallikak, himself perfectly normal, had an illegitimate child by a feeble-minded girl. She gave the child the full name of the father, and so bequeathed to posterity the family name and her own weakness. Subsequently, this man married a woman of his own quality and social standing, and since then there have been six generations born. From the lawful wife, who was a normal woman, all the descendants have been normal, with one or two exceptions of a trifling nature, and which may easily be explained as coming from the other side of the marriages. They number 496 in direct descent. On the other hand, the descendants of the feeble-minded girl reveal a different story. There were 489 descendants from this illicit union; 143 of these are known to be feeble-minded, while 46 have been found normal. The rest are unknown or doubtful. Many of these feeble-minded descendants married people of about the same grade of mentality, and, as might be expected, the descendants showed a

number of confirmed alcoholics, prostitutes, epileptics, and a large number of deaths in infancy.

Goddard has made charts of both branches of the family which show in a most striking manner the transmission of feeble-mindedness. Each of these branches is traced through the line of the eldest son down to a person of the present generation. On the bad side it ends with Deborah Kallikak, an inmate of the Training School for Feeble-minded at Vineland, N. J.; on the good side, with the son of a prominent and wealthy citizen of the same family name, now resident of another State. Many of the members of this branch of the family have occupied positions of trust and prominence in their community. It would seem that there is a certain amount of ground for believing that feeble-mindedness is a unit character, and is perhaps transmitted according to Mendelian expectations in the same proportion as the color of the hair, color of the eyes, physical abnormalities, such as albinism, polydactylism, cystinuria, etc.

Reverting to the Kallikak family, we find there were 41 matings where both parents were feeble-minded, and they bred 249 feeble-minded children and two others that were considered normal. If Mendel's law applies to human traits in children where both parents were feeble-minded, all the children should be feeble-minded, but these two exceptions may possibly be accounted for in another way. There were eight cases where the father was feeble-minded and the mother normal, and there were ten normal children and ten defective. There were twelve cases where the father was normal and the mother feeble-minded, with seven feeble-minded children and ten normal, and both of these are suggestive of, but not in complete accord with, Mendelian expectations.

Family histories similar to the Kallikak family might be multiplied. One of the most noted of these was the "Jukes" family, reported by Dugdale in 1877, which showed a startling array of criminals, prostitutes, paupers and diseased individuals. Whether more thorough investigations will show that mental traits are transmitted according to the Mendelian law or not remains to be seen. The fact remains, however, that mental traits *are* passed on from parent to offspring. Each family investigated has been shown to be stamped with a peculiar set of traits, depending upon the nature of its germ plasm. One family will be characterized by political activity, another by scholarship, another by financial suc-

cess, another by insanity in some members with or without brilliancy in others, another by imbecility and epilepsy, another by larceny and sexual immorality, another by suicide, another by mechanical or literary ability or by vocal talent.

No one who takes the trouble to look into the matter can help but come to the conclusion that the filling of the asylums with insane persons, and our prisons with criminals, is in a large measure due to the transmission of some defect in the germ plasm from progenitor to offspring, and to the freedom with which these defectives marry and produce their kind. As will be seen from the Kallikak family, a line of degenerates may be started by illicit intercourse of a normal father with a feeble-minded mother who was permitted to be at large and to procreate. Here, from one feeble-minded girl, it is positively known that 143 defective descendants originated.

It is a well-known and amply-demonstrated fact that the birth rate among the feeble-minded is very much higher than it is among normal persons. Statistics show that, proportionately, they have twice as many children as do the normal. This is no doubt responsible, in a considerable measure, for the enormous number of insane persons in this country, and also for the fact that insanity is increasing at the rate of three or four to every thousand of increase in population. This is due in part to the fact that there is less sexual control on the part of defectives. Just as in France, the birth rate among the better classes is constantly falling in this country. Davenport has shown that a Harvard class does not reproduce itself, and, at the present rate, one thousand graduates of to-day will have only fifty descendants two hundred years hence. On the other hand, recent immigrants and the less effective descendants of the earlier immigrants still continue to have large families, so that from 1,000 Roumanians in Boston to-day, at the present rate of breeding, there will come 100,000 two hundred years hence to govern the fifty descendants of Harvard's sons. Such facts as these, he says, have awakened the people to a sense of the great importance of human breeding.

If we accept the views of the Eugenists that mental defects, in their various types, are largely dependent upon inheritance of these defects from progenitors through the germ plasm, what are the remedies they propose to lessen insanity, feeble-mindedness, epilepsy, etc.? Goddard has shown that about 65 per cent of all the feeble-

minged owe their condition to heredity. It would seem then to the Eugenist that the one great problem in the prevention of feeble-mindedness is the prevention of reproduction by those who are thus afflicted.

The recommendations made and even carried out by some Eugenists may be taken up in sequence and more or less in detail :

1. It is recommended that reproduction be prevented by a surgical operation, which unsexes or sterilizes the male or female. Castration in the male and ovariectomy in the female were the operations first advised. These have been largely superseded by the operation of vasectomy in the male and its counterpart of ligation of the Fallopian tubes, tuberotomy or tuberectomy in the female. The operation of vasectomy is considered preferable to that of castration in the male, owing to its simple character and owing to the greater objection to the latter from the standpoint of mutilation. Both ovariectomy and the operations on the Fallopian tubes in females are more serious, in that each entails the opening of the abdominal cavity.

These operative procedures as preventive measures against the transmission of mental defects are revolutionary and have met with and always will meet with a great deal of opposition from the standpoint of prejudice. The Eugenists believe, however, that with education of physicians and the public this prejudice will be gradually overcome. Revolutionary as the treatment is it is rather surprising to learn what education of legislators has already accomplished in the way of securing legal enactments making the treatment lawful. Already eight States—Indiana, Washington, California, Connecticut, Nevada, Iowa, New Jersey and New York—have passed laws which provide for some form of sterilization of the feeble-minded and certain other criminal types. Kansas and Nebraska have both made experiments with this method of dealing with sexual offenders. For political reasons both of these States have had to abandon the practice, at least temporarily. On April 1 of this year the lower house of the Minnesota Legislature, by a vote of 61 to 45, passed a bill providing for sterilization by the State of defectives and habitual criminals. The State of Indiana was the first State to enact a law to prevent procreation of confirmed criminals, idiots, imbeciles and rapists. It went into effect on February 10, 1907. It is in this State that the experiment has been given the most thorough trial. The Act reads as follows :

“An Act entitled ‘An Act to prevent procreation of confirmed criminals idiots, imbeciles and rapists—providing that superintendents or boards of managers of institutions, where such persons are confined, shall have the authority and are empowered to appoint a committee of experts, consisting of two physicians, to examine into the mental conditions of such inmates.’

‘Whereas heredity plays an important part in the transmission of crime, idocy and imbecility; therefore be it enacted by the General Assembly of the State of Indiana that on or after the passage of this Act, it shall be compulsory for each and every institution in the State, intrusted with the care of confirmed criminals, idiots, rapists and imbeciles, to appoint upon its staff, in addition to the regular institution physician, two skilled surgeons of recognized ability, whose duty it shall be, in conjunction with the chief physician of the institution, to examine the mental and physical condition of such inmates as are recommended by the institutional physician and board of managers. If, in the judgment of this committee, procreation is inadvisable, and there is no probability of improvement of the mental condition of the inmate, it shall be lawful for the surgeons to perform such operations for the prevention of procreation as shall be decided safest and most effective. But this operation shall not be performed except in cases that have been ‘pronounced unimprovable.’”

Connecticut’s law, which was passed in 1909, forbids under heavy penalty, indiscriminate and unwarranted performance of either operation named in its act. This should form a part of every law of this kind in every State. If rigidly executed it will prevent the creation of a class of operators who, in the columns of the public press, may advertise an office operation which might be sought after by the pervert and degenerate who desire to escape the penalties of their unlicensed sexual indulgences.

Up to the year 1910 over 800 inmates of institutions in the State of Indiana had been sterilized by vasectomy. It is interesting to know, so it is stated, that over 200 of these were operated on at their own request. It can be safely said that in the aggregate many thousands have been vasectomized up to the present time in the institutions of the eight States where the operations have been legalized. It is, of course, too early to draw any definite conclusions as to what the results of the operation are going to be. When one reflects that had the feeble-minded girl, with whom Martin Kallikak had illicit

intercourse, been sterilized, the community would have been spared 143 defective progeny, it is possible to get some idea what the benefits of these operations will be should those operated on ever be allowed to go at large.

The public is gradually becoming educated to the importance of sterilization of defectives and prejudice is gradually being overcome. Distinguished members of the legal and medical professions are educating public opinion by discussing the subject in the popular magazines. It is more than probable that other States will in the future enact laws legalizing this operation.

2. The second method is the segregation throughout the reproductive period of the feeble-minded below a certain grade. One faces here three difficulties; in the first place the problem of ascertaining who are the feeble-minded individuals; secondly, the difficulty in taking care of them when they are known; and lastly in determining when the procreative period ends in men. For women it is easily determined, as it ends with the appearance of the climacteric.

The expense of segregation would at first be enormous. At the present time it is estimated that only approximately one-tenth of our mental defectives are being cared for. Davenport believes that if segregation were carried out thoroughly there is reason to anticipate such a reduction in defectives in 15 to 20 years as to relieve the State of the burden of further increasing its institutions, and in 30 years most of its properties, especially acquired to accommodate all the seriously defective, could be sold.

Many of our States think that they are already being over-taxed for the care of the insane and defective, so that it is with great difficulty that legislatures can be induced to appropriate enough money to care for those already in institutions. It seems impossible to entertain the thought of caring for ten times as many. It is for this reason that sterilization is more likely to appeal to the legislator than segregation. It is possible to conceive that the time will come when we shall have State laws that will force defectives to be sterilized whether in institutions or not, in the same way that the law compels a small-pox patient to go to an isolation hospital because he is a menace to the community. If sterilization becomes more popular than segregation it will be the dollar and cents argument that will make it appeal most to the legislator.

3. A third factor advocated for the lessening of feeble-mindedness in the community is that marriage between two persons shall not be allowed without the license being accompanied by a certificate from one or more physicians stating that the contracting parties are healthy in every respect. It is also being advocated as a means of preventing one innocent member of the contracting party from developing venereal diseases and their resultant complications from the other. One or more Episcopal clergymen in Chicago have already publicly announced that they will refuse to marry any persons unless they bring medical certificates stating that they are in good health. One can see that if such a procedure became law it would prove of little use unless such certificates came from the individual's family physician who would be most likely to have knowledge of his patient's physical or mental defects. Here an obstacle would at once be met with, as the family physician would naturally from sentimental reasons, hesitate to put any obstructions in the way of marriage of one of his patients. The only possible method would seem to be that a special board of examiners should be appointed by the public health authorities before whom all applicants for marriage should appear for examination. Such a regulation is not likely to be endorsed in the near future.

4. A more thorough control of the class of immigrants allowed to enter this country is also strongly advocated. Undoubtedly there lies in this direction a most potent means of lessening feeble-mindedness in this country. With our immigrants coming into the United States at the rate of about 1,000,000 annually, the major portion at present from Southeastern Europe, many defectives must be added to our population yearly. These, with their offspring, soon become public charges and add to our criminal class. At present, unless obviously diseased or obviously mentally defective, these persons are permitted to enter this country from Ellis Island so long as they possess the necessary \$25 in cash. A Board of Medical Examiners trained in making the proper mental tests might be able to hold up a good many who are now permitted to enter the country and who should be deported. It has been suggested that the immigration agents abroad should look into the family history of all prospective immigrants and should discourage the emigration from their native land of those in whose families mental deficiency has been existent. This of course would be a Herculean task and few of our agents probably are capable of making the proper dis-

crimination. Were this procedure carried into effect it would require a great increase in the immigration force and would entail great additional expenses. It would probably be a great saving, as ultimately the nation would be spared the greater expense of caring for the defective immigrant and his progeny.

I have reviewed in a rather fragmentary way the views the Eugenists hold concerning the factors which they believe are largely responsible for the prevalence of feeble-mindedness, insanity, crime, etc., and some of the remedies they advance for their correction. The writer retains an open mind on the question as to what measures should be adopted and is still open to conviction. He is convinced, however, that the investigations that are being made by the Eugenic Societies are bound to prove of great value in the general uplift of the human race.

Admitting, as we must, the importance of hereditary tendencies in determining man's physical traits, his behavior, and his diseases, we cannot overlook the question that must occur to all. What relations have the facts of heredity to those of Euthenics or environmental influence? According to many, environment alone is important and these hold that good training, exercise, food and sunlight can restore anyone to a "normal" condition. This, of course, is going to the other extreme and it is certain that if an individual has had handed down in his germ plasm certain mental defects through several generations of ancestors, environment may materially help him, but will not eradicate his mental deficiency. Accumulated experience seems to show definitely that it is best for the community that such individuals should not be permitted to reproduce their kind. Most of the active workers, who are striving for the uplift of the human race, recognize the importance of both environment and heredity and endeavor to use both in acquiring the end they are seeking.

The attitude of those who tend to scoff at the influence of heredity and who believe that environment is the all important factor, is well illustrated in a recent article in the December *Atlantic Monthly*, by Simeon Strunsky. It is supposed to portray the views of one Cooper, who has no confidence in eugenics and one Harding who is a believer in eugenics. I shall quote the concluding paragraphs of this article, as they express in an amusing way the views of those who believe that environmental are more important than hereditary influences.

“Cooper said that if a dear friend of his with a tendency toward heart disease fell in love and wished to marry, the proper thing apparently was to go out and buy a late sporting edition. If the Mendelian law was still in force there was nothing for it but a tragic farewell to his friend’s dream of happiness. But if the cable dispatches were for environment, and against Weissman, they could send out cards.”

“Harding said that environment had not a scientific leg to stand on.”

“But Cooper had read somewhere of an investigation that had been carried on among school children in Edinburg and Glasgow, where they found that the children of drunkards were quite as fit in body and mind as the children of total abstainers; so much for heredity. On the other hand, see what one investigator did recently in New York City. He took a number of immigrant children and measured their facial index, and determined their prognathic angle, and tested them for dolichocephaly and brachycephaly, and subjected them to many other tests not prohibited by the S. P. C. C. And this is what he discovered: As a result of the peculiar climate and other environmental facts that obtain south of Houston Street, Young Giusseppe Bruno, whose father was a long-head, was visibly tending toward the short-skull type; whereas young Moses Greenberg, whose father was of the short-head type, was plainly growing a long skull. Here, then, argued Cooper, was environment shaping a new race in a single generation. Cooper said that he would not lay emphasis on the further highly interesting fact that, under the same stress of environment, Giusseppe Bruno grew up and became Joseph Brown, while Moses Greenberg changed into Maxwell Graham. Could eugenics show any such startling transformation?”

“Here Harding lost his temper and said a man needn’t be an ass because he was speaking about serious things.”

“But Cooper insisted that that was not the point. Admitting that he was an ass, was it heredity or immediate environment that made him one? If he did not seem qualified to master the secrets of eugenics, it was because his instincts and training ran all the other way. He liked to believe that we are born into the world with no irremediable doom upon us. It seemed a much more manly thing to wipe out slums, and suppress child labor, and pension widowed mothers, than to blame it all upon one’s grandfather.

With so much important work at hand, what was the use of crossing dwarf peas with giant peas and guessing which pea lay under which thimble?"

There is no question but that best results are going to be obtained by a judicious combination of both eugenics and eutherics. Those who are most active in spreading the knowledge of eugenics among physicians, lawyers, legislators and the people at large recognize the importance of improving the environmental conditions of the members of the community who are feeble-minded. What they are endeavoring to emphasize, however, is the fact that feeble-mindedness, in the vast majority of cases, is an inherited trait, and is due to an inherent defect in the germ plasm rendering the individual liable to become an epileptic, a criminal, or a male or female prostitute. While environment will help these individuals, it will not prevent them from reproducing their kind. The subject therefore becomes one of vital public interest, not only from a public health standpoint but also from a financial standpoint, when the tax-payer has to pay for the support of these unfortunate defectives and criminals in institutions for the feeble-minded and in jails.

WHAT THE GENERAL PRACTITIONER SHOULD KNOW ABOUT GONORRHEAL IRITIS.*

By R. L. HARRELL, M. D., Alexandria, La.

The object of this paper is to bring before this society a subject that seems to be almost wholly unrecognized by the general profession; and one about which the specialist has had less to say than the gravity of the disease would seem to warrant.

Unlike gonorrhoeal ophthalmia, it is brought about by the spread of the gonorrhoeal bacteria or toxins throughout the system, and not by direct inoculation.

Two forms of the disease are described—an acute, non-relapsing, and a more sub-acute, or chronic relapsing form. According to the experience of our best authorities who have made special study of this subject, in a certain per cent. of cases of gonorrhoea which begin as a local, specific urethritis, there occurs an absorption of bacteria or toxins from the urethra which invade the entire system, which

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body. Most of these cases manifest themselves at first in the form of a gonorrhœal arthritis of one or more joints, but we may have pericarditis, endocarditis, peritonitis or meningitis. I use the word arthritis in contra-distinction to rheumatism, as is often used, because it is not in any sense a rheumatic affection. This places the affection of the eye in a class to itself.

The disease generally accompanies or follows an attack of gonorrhœal arthritis, but not always. We sometimes have the affection come without any joint disease. Mr. E. Treacher Collins, London, says when the system is once invaded by gonorrhœal toxins, the patient is not entirely free from a liability of attacks of iritis for a period of ten years.

The affection in many respects is not unlike the other forms of iritis, but taking into consideration the elective affinity of these toxins, or germs, it is probable that we have to deal with more than a simple iritis; but in most cases, with an irido-cyclitis, a plastic irido-choroiditis or uveitis. It is quite possible for us to have the affection begin in the deeper structures of the eye, the iritis coming on as a secondary affection. When the disease attacks the deeper structures, there is usually a free exudation, and sometimes the pupil is occupied by a considerable mass of bluish-gray lymph. Its onset is sometimes marked by fine, dotted deposits upon the posterior surface of the cornea and opacities in the vitreous. This lowers the vision very materially in some cases and each subsequent attack furnishes more of these exudates, increasing the loss of function, and in many cases these deposits never clear up entirely, but remain to interfere with the full function of the eye. I recall a case I had four years ago who had one relapse, during which time the vision went down very low, he being able to see fingers only at about three feet. After convalescence set in his vision improved rapidly, but has never quite reached the normal. This case, which was treated the first two weeks by a general practitioner, still has exudates in the vitreous, and a slight posterior synechia.

In the local treatment of these cases, we use atropin, collyria and hot compresses. Dionin in solution of 10 per cent. instilled twice or three times daily is one of the best remedies we have, as its first effect is to bring about a great increase in the blood supply to the eye, followed by a recession, producing a sewage that opens up the lymph spaces and relieves the eye of a certain amount of the diseased process, and also assists in the control of pain. The con-

stitutional treatment consists in the use of the anti-gonococic serums and vaccins. Dr. Arnold Knapp reports good results in the use of Torrey's serum. I have used the H. K. Mulford bacterins which had a decided effect in relieving the symptoms. During convalescence I use the iodids and continue the dionin.

Gonorrhéal phylacogen, a serum originated by Dr. A. F. Schafer, Bakersfield, Cal., and manufactured by Parke, Davis & Co., is a remedy upon which very favorable reports have been made in the treatment of this disease. One prominent physician has announced to the manufacturers that he will soon report in one of the leading medical journals a large series of cases thus treated, with almost 100 per cent. cures. Let us hope that such will be the experience of many others with this remedy.

ACUTE PHARYNGEAL TONSILITIS (ACUTE ADENOIDITIS)*.

By HOMER DUPUY, M. D., New Orleans.

The Charity Hospital, through its children's wards, has offered me unusual opportunities to corroborate an impression formed some years ago that many of the so-called severe head^m colds in early life were not of nasal origin. The adenoids seem to have deserved the brunt of the blame and more than a mere academic interest attaches itself to this phase of the adenoid question.

Practical results, such as the prevention of a chronic hypertrophy of the pharyngeal tonsil, the reduction of infectious processes in the middle ear, the prevention of a cervical adenitis, with its possible extensions and end-results, may follow the prompt recognition of the acute and sub-acute infections of the adenoids.

My own records show that young subjects are chiefly affected. It is not infrequent in infants. The "snuffles," as it has from time immemorial been aptly called, I have seen in babies just a few days old. It is more frequent in children from two years of age to about six. In the adult the persistence of the adenoid tissue not infrequently gives rise to acute catarrhal exacerbations which are the cause of those well-known, suddenly-developed, and quickly-subsid-

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ing, post-nasal discharges. In the adult it may prove only subjectively uncomfortable.

The proximity of the Eustachian tubes to the seat of the infection invites extension of the trouble into the middle ear. But it is particularly in infant-life and child-life that I have seen those rather severe local and systemic reactions which entitle acute adenoiditis to a distinct and separate pathologic entity. For this reason I will limit myself to a consideration of this affection as it occurs in early life.

Were we to transfer our knowledge of the well-known and frequently observed changes in the faucial tonsils to the adenoids there would follow a correct interpretation of the symptom-complex in the acute infections of the pharyngeal tonsils. We have the usual hyperemia with its attendant enlargement of the lymphoid mass. There is hypersecretion, rises in temperature, from 99 to 102 degrees. The lymphatics in the neck respond to the influence of the infectious process in the post-nasal space. The features which individualize acute and sub-acute affections of the adenoids are chiefly those referable (1) to the nose, (2) the ear, (3) the lymphatics of the neck. Inability to breathe through the nose, first attracts attention. Inspection shows widely opened nasal cavities. There is a profuse post-nasal discharge of muco-purulent secretions. The obstruction to normal breathing is evidently post-nasal. The child "snuffles," and this may be associated with such a degree of post-pharyngeal stenosis that the infant experiences the greatest amount of trouble in nursing. Congenital syphilis, with nasal manifestations, will also cause this snorting respiration. The presence of other pathognomic signs of lues will usually permit differentiation. It is well to emphasize, however, that every snuffling babe is not syphilitic.

The ears bear their share of the trouble. Recurring earaches whenever the adenoids become acutely inflamed is a frequent signal of distress. If infants could make known their subjective experiences we would find some impairment in hearing and the existence of tinnitus aurium. Suppurations of the middle ear not infrequently originate during an acute adenoiditis—the infection traveling along the route of the Eustachian tubes.

The third individualizing feature of adenoiditis is the involvement of the cervical lymphatics. The posterior cervical lymphadenitis is not infrequently associated with a severe infectious process

beginning and ending in the adenoid tissue. The anterior cervical lymphatics also drain the nasopharynx and they participate in the inflammatory reaction.

The faucial tonsil has its lymphatic drainage in the anterior cervical lymphatics only. The adenoids have such connections with both cervicals, but the posterior lymphatic glands would seem to bear the brunt of the infection. The degree of enlargement in these glands will sometimes furnish a clear and unmistakable index as to the severity of the adenoiditis.

When it is realized that we often mistake effect for cause in these so-called head colds of early life—it must be admitted that a recognition of the clinical features pointing to acute affections of the adenoids will at once initiate therapeutic measures which will conduce to the present and perhaps future, well-being of the little patient. In acute adenoiditis sprays and douches as they may carry infection to the middle ear are rather dangerous. To reach the post-nasal space fluids such as argyrol 20 to 30 per cent., adrenalin solutions 3,000 to 4,000, adrenalin inhalent 1 drachm to liquid albolene 1 ounce, are gently dropped through each nostril, the head of the child during this instillation is dropped backward, thus facilitating the flow of the fluids towards the naso-pharynx. These solutions to effectively reduce the congestion in the adenoid tissue should be instilled every two or three hours. Free purgation, rest in bed, etc., will meet some of the indications.

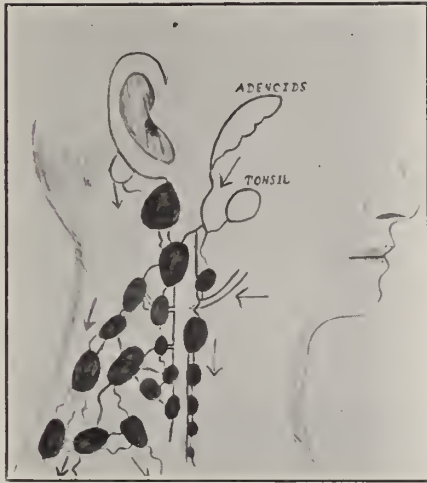
As repeated tonsillar inflammations mean ultimate hyperplasia—the tonsil in young subjects being left larger after each attack of tonsillitis—the proper treatment of these acute adenoid inflammations may, and does in my personal experience, sometimes prevent those chronic hypertrophies with their various end-results. Unquestionably, once there is genuine and permanent hypertrophy of the adenoids surgical measures promise the only logical relief.

SOME REMOTE EFFECTS OF CHRONIC SINUS SUPPURATION.*

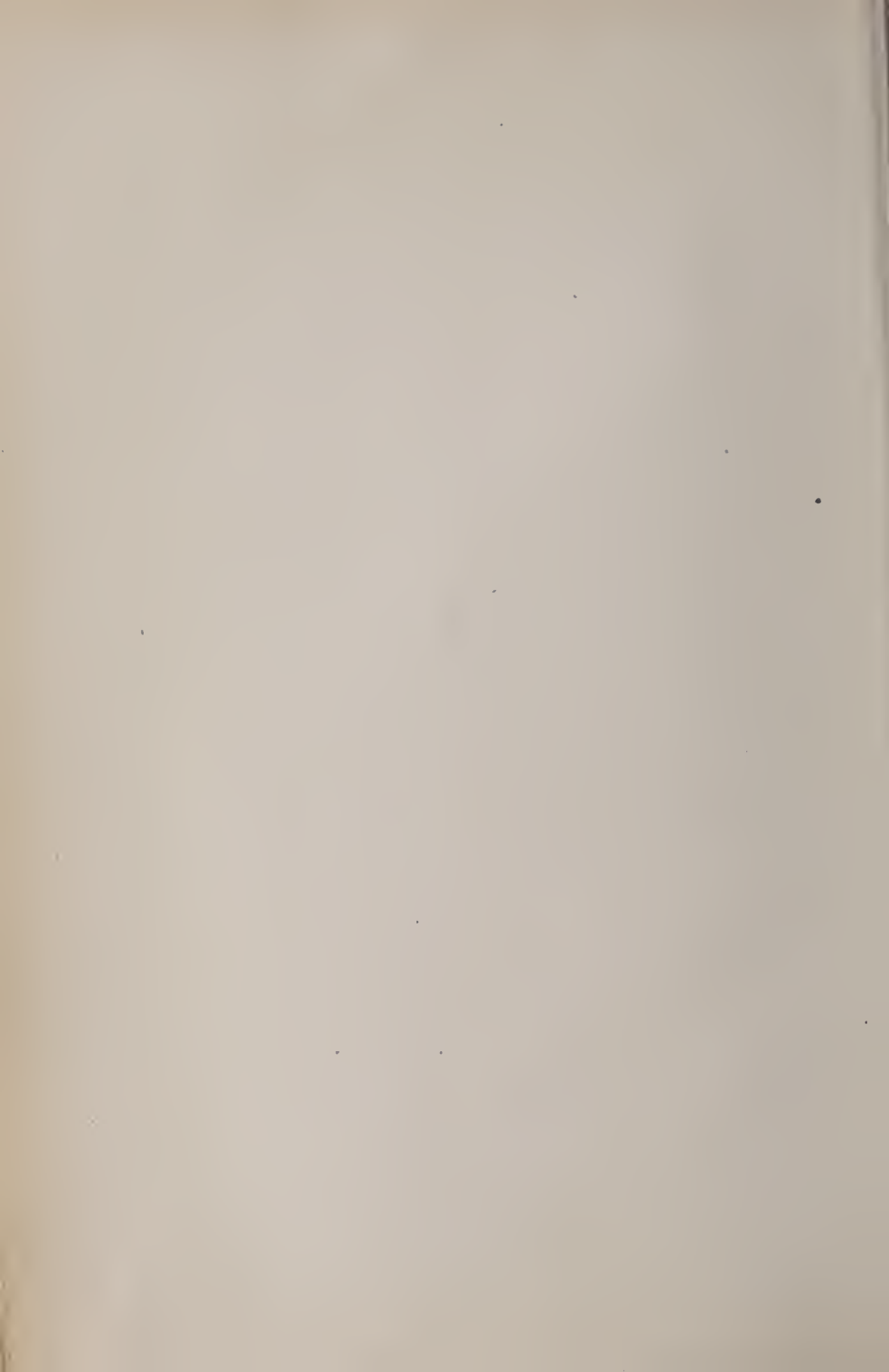
By R. C. LYNCH, M. D., New Orleans, La.

The remote effects of chronic sinus suppuration have attracted but little attention thus far, judging from the sparcity with which one meets such subjects either in the special or general literature.

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ILLUSTRATING DR. DUPUY'S ARTICLE.



It is not my wish to dwell upon the relation of sinus suppuration to eye lesions, or to cerebral abscess, or meningitis, all of which conditions are well recognized, nor to consider the constitutional manifestations of acute sinus suppuration, but to have you look upon, or think of the accessory sinuses of the nose where they are the seat of a very chronic, indolent suppuration as an etiological factor of such conditions as arthritis, furunculosis, thyroiditis, cholecystitis, asthma, chronic intestinal disturbances and osteomyelitis.

The type of sinus disease encountered by me in this class of cases is of the most chronic kind, there being few symptoms by which one can recognize the source of the infection, and usually these few were of such little consequence, as far as the general comfort of the patient was concerned, as to utterly disregard the sinus, or nose, as bearing any relation to the general pathological state into which the system had been submerged. For this reason, then, one is required to inquire, most carefully, into the history of such cases before the true source of infection can be determined. In my own experience, especially at first, the source of the trouble was discovered almost by accident. When, however, I became more alive to the association of these chronic sinus conditions, and the general pathological state, I was impressed with the frequency with which they occurred. This can be best illustrated by reporting, to you, typical cases in each division. For brevity these histories date from onset of sinus condition, or constitutional state produced by the sinus.

Dr. J. D. suffered an acute attack of maxillary empyema some five or six years ago, for which he was treated by irrigations through the natural opening, until all pus discharge had ceased. With each recurring cold, however, he felt some discomfort in the old sinus, but was usually relieved in 24 or 36 hours by a free discharge of pus. Being a busy man, who paid but little attention to his own ails, time and fair health, led him and his sinus apart, so that after a very strenuous period of hard work, he began to suffer with stiff neck, trapezius myalgia, intervertebral disk inflammation, mild arthritis of the shoulder joint, and then a rather severe attack of arthritis of the right knee; he lost himself all association with the old antrum condition.

Rest to the affected parts, by strapping and splinting, internal administration of many anti-rheumatics, produced only the most transient results.

An X-ray revealed a suspicious fringing of head of the tibia, with a spot suspicious of joint tuberculosis. A cast was applied to the knee, rest and a sojourn to the country was ordered. This advice was followed scrupulously, for a month, when he returned for another X-ray. No change was noted, either in the knee, or in the general condition, nor had he increased in weight, and he began to feel his doom of joint tuberculosis.

Finally, a confrere advised a nasal examination as a possible cause.

Nasal cavity was clear, the mucous membrane normally pink and not degenerated, and septum was straight. By transillumination the left antrum was dark, and close questioning developed the early association.

Irrigation revealed a small quantity of muco-pus from the cavity, which was filled with pus organisms of all sorts. Daily irrigations proved to be of little benefit, and a radical operation was performed, from which he recovered quickly.

After convalescence, a return to the country was advised. In one month he gained 14 pounds, and came home with the splint off. X-ray showed marked improvement, this has been most steady, until at present we consider him perfectly well, having not the slightest trace of his original condition. Neck, knee and shoulder perfectly free from the former pathological state.

John B. Murphy says: "It is my conviction that every type of non-traumatic joint inflammation is a metastatic manifestation of a primary infection in some other portion of the body. It is my further conviction that there is no idiopathic, rheumatic arthritis, any more than there is an idiopathic peritonitis." The above case surely bears out the conviction of Dr. Murphy, and I hope may impress you with the necessity of more careful search for the source of infection, in such conditions.

Miss M. suffered intensely from tooth-ache. Some four years ago, during the process of nerve filling, the root was fractured, this was repaired and the tooth capped. About this time there was facial neuralgia with what was supposed to be a bad cold, and a purulent discharge from one nostril. A parent became seriously ill, requiring most scrupulous care and nursing. This long fight finally ended after 18 months of struggle. During this time of self-sacrifice and devotion, all association of the original infection was lost. Following the depression and sorrow, patient began to have furuncles. A crop first appeared in the external auditory canals of both ears; during the convalescence a trip abroad was taken, with the hope of rebuilding the lost energy, and while in Europe a second crop appeared under the arms, and an autogenous vaccine was prepared and used in Paris.

After a period of rest, isolated furuncles developed over the body. The nasal discharge, which had been continuous, now began to be noticed, because of a slightly indefinite sense of bad odor, and she again came in for treatment.

Chronic maxillary empyema was found, and then it was that the previous history developed. Following a radical antrum operation the furuncles disappeared, and now, after about six months, she still remains free from any trace of her previous condition.

I am quite sure that recurring crops of furuncles would have appeared ere this if the antrum condition had not completely cleared up. The greatest trouble this little lady suffers from now is to keep from gaining weight.

Mrs. S. dates her trouble to 9 years ago, when she suffered a blow from a broom handle, across the right face. Free nasal bleeding occurred, this was followed, in a month or so, by thin purulent discharge to which no attention was paid. Soon after evening temperature from 102° to 103° developed, and this, with slight cough (reflex) warranted the diagnosis of tuberculosis. For seven years patient consumed creosote pills by the hundred, and cod liver oil by the quart; loss of weight, peculiar septic color to the skin, and a general malaise were characteristic, except that she remained in statu-quo. A nasal examination for the cause of the

discharge was finally consented to, and a chronic antrum infection discovered. About one ounce of foul smelling pus was washed out, daily irrigation through large naso antral opening, has worked wonders. Temperature normal, skin clear, disposition bright and weight increased six pounds. She has not yet consented to radical operation, and until then, she will not be restored to perfect convalescence.

Miss McK., school teacher, suffered from right, recurrent, nerve paralysis, due to pressure from sudden increase in size of thyroid gland. Routine examination showed Chr. fronto ethmoid sinusitis. A modified Killian operation on these two sinuses, cleared up the source of infection, since which she has no further trouble, either from the voice or from the thyroid. The gland subsided rather rapidly after the operation, and the paralysis cleared as quickly. She has remained free from symptoms now for three years and eight months, and the gland has become almost impalpable.

The relation of thyroid enlargement to chronic tonsil infection has been dwelt upon, but I am unable to find reference to sinus as source of infection. Your discussion, I hope, will clear me on this point.

Mrs. B. has been a nasal patient for many years. Moving from Ohio to this neighborhood, with the hope of being freed from asthma which she contended was the result of the nasal state. She submitted, at various times, to a sub-mucous operation, adenotomy, double middle turbinectomy, double antrum puncture without relief from asthma. A chronic ethmoiditis, non-suppurative, had evidently been overlooked, for following evisceration of the ethmoid labyrinth and a thorough curettage of the sphenoid, the asthma has definitely cleared up; she having remained free from a recurrence since June a year ago.

Reflex asthma, from nasal lesions, is thoroughly well recognized; the sinuses in this case had been overlooked and for this reason it is reported.

The pathology and treatment of this class of cases is of special importance. We must not expect to deal with a cavity whose lining membrane is thin, and which furnishes warmth and moisture to the respired air and which cavity gives individual tone to the voice. We must expect to deal with a human incubator, whose lining has become so thick, so degenerated that it actually reeks with pathological organisms. With warmth, moisture and free from disturbances they grow to their joy, to force their poisonous emanations into the lymphatics, and to be carried to some locus minoris resistentia to there develop some special pathology, as pointed out to you before. If this may help you to retrace the infection along its tortuous path to the incubator then my time is well spent. It remains, then, to break up the incubator as radically as you know how. Mere drainage and ventilation will not suffice. Only by the most thorough, complete, radical removal of every vestige of the degenerated mucous membrane, lining these cavities, will be awarded the prize of a complete recovery. And this point I must firmly insist upon.

SYMPTOMS AND DIAGNOSIS OF DIPHTHERIA.*

By LEON J. MENVILLE, M. D., Houma, La.

The success of a physician lies in his proper interpretation of symptoms so as to arrive at a correct diagnosis, failing in this, he brings ruin upon himself and unbridles untold suffering to his patients. This is principally true of diphtheria.

Diphtheria being endemic and often epidemic, as was found in New Orleans last Fall, becomes a disease of great interest to every practitioner in Louisiana. Much depends upon the proper interpretations of the symptoms in order to arrive at a correct diagnosis, and for a speedy administration of its specific, thereby saving thousands of lives.

The symptoms of this disease vary so markedly in their different forms, that they deserve at all times our serious consideration. Diphtheria runs its course as a mild case, a septic case, or as a stenosis one; we can never prognosticate at the onset whether a case will progress favorably or terminate fatally. Some cases have such mild attacks that they very often are unrecognized as such, and are the beginning of a serious epidemic.

Modern text books tell us that the onset of diphtheria is marked by chills, or, in children, by a convulsion, followed by a rise of temperature; there is headache, bodily pain, nausea, vomiting and prostration; but in mild types these symptoms may be very slight. The temperature is not a marked feature—it rises to 102 or 104 degrees. The pulse, rapid 120 to 140; enlarged lymph nodes are frequently noticed.

In order that we may arrive at a more intelligent understanding of its various symptoms, I believe it wise that we study each symptom separately.

Temperature.—Temperature varies with the type, but has certain characteristics which may be recognized. For instance, even in the fibrinous type which is the least febrile, there is a rise of temperature with the beginning of the formation of the membrane. It is commonly said that this type is not attended with fever, yet fever will be found, and there will be a recurrence of elevated temperature with each new invasion by the pseudo-membrane. In all types of diphtheria there is an increase of tempera-

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

ture with such extension of the local field of infection. There is a greater fluctuation of temperature curve in the mixed infection and the septic type than there is in the catarrhal and fibrinous varieties.

Pulse.—Pulse rate is always increased in uncomplicated cases in the beginning in proportion to the toxic products eliminated. In infants it is especially fast. Slowing of the pulse rate, if persistent, is a grave symptom, as also an intermittent pulse.

Respiration.—Hutterbrenner finds the Cheyne-Stokes respiration in many cases. Otherwise the respiration is as in all other infectious diseases.

Blood Pressure in diphtheria is almost invariably low and bears a direct relation to the severity of the disease. There is, however, no exact relation between blood pressure and pulse rate, though highest blood pressure, like highest pulse rate, occurs in the first week and lowest in the second week. In early paralysis, there is a lowering of blood pressure, but in late paresies, i. e., after the second week, a fall in pressure is exceptional. Janeway's Clinical Study of Blood Pressure tells us that in diphtheria a subnormal blood pressure prevails, averaging generally about one hundred M-systolic and a corresponding high diastolic during the severe part of the disease.

Throat.—The true membranes found in the throat as well as in pseudo-diphtheria present many variations from a thick and cheesy, to a thin and veil-like deposit; occasionally the surface appears as though smeared over with pus, and frequently we notice an infiltration of the mucosa without detachable membrane. The latter form may persist for weeks if antitoxin is used, and if the local treatment is at all harsh and irritating. The throat is of a dusky red brownish color. The pharynx and tonsils are inflamed and swollen, and upon the latter there are yellowish spots which gradually enlarge, becoming grayish in color, until by the third or fourth day the tonsils are entirely covered and the pillars of the fauces and the soft palate may be involved to such an extent that the opening of the pharynx may be wholly occluded.

Lymph Nodes.—The cervical glands are swollen in most cases, the severer the case the more pronounced they become, and aid materially in making a tentative diagnosis. In about a week or ten days the glandular swelling disappears with the false membrane.

Nose.—In nasal diphtheria, the onset is marked by the usual

constitutional manifestation and an increased nasal discharge, having a foul odor, which irritates and often excoriates the upper lip. The glands beneath the angles of the mandible are swollen and indurated. This enlargement is characteristic, and is probably due to the fact that the nasal mucosa is particularly rich in lymphatics. Many cases of nasal diphtheria are of severe type with marked constitutional symptoms with frequent antral, aural or ocular complications. A peculiar form is sometimes met in which constitutional manifestations are absent; the nostrils are occluded by typical membranes in which the bacilli are present, but the infection is characterized by a benign course.

Membranous croup has been shelved by modern methods of diagnosis, and replaced by its proper term. Laryngeal diphtheria is characterized by a laryngeal cough at the onset and by gradual development of obstruction. The latter, however, appears suddenly at night. The respiration is rapid and difficult, the expiration particularly is being interfered with, the abdomen and lower thorax are retracted in inspiration and the mucous membranes and extremities become cyanotic from lack of oxygen. The patient becomes restless and may fall into a semi-coma and die of asphyxia. In milder instances, the paroxysm may last but a short time and the patient will gradually become quiet. The attack is, however, likely to be repeated during the following night. At times relief will follow the coughing in part or as a whole of the membrane. The constitutional symptoms are often marked, but when there is an accompanying pharyngeal membrane the opposite is usually the case.

Membranous croup is of two varieties: Their clinical appearances and symptoms are so similar as to prevent their differentiation, except by bacteriological examination. Their cultures alone will determine whether the affection is due to the streptococcus or to the diphtheria bacillus. I will exemplify this condition with a case, showing the differential diagnosis of laryngeal diphtheria and catarrhal laryngitis.

CASE I. E. M., age 7 years, began on July 10 with a loud ringing cough with difficulty in breathing. This condition continued without any moderation during the next day, July 11; on this night she slept but very little on account of her difficulty in respiration. She was no better the following morning, becoming very hoarse. She became cyanotic and unable to take nourishment. Her temperature during these days was very light, ranging from normal to 100. Her mother examined her throat on several occasions, but never could discover anything. I saw her for the first time on July 13, at 10 p. m.

Physical Examination: She was strong and well nourished. She was sitting in bed with her head bent forward, and very much cyanotic. She had a croupy cough, with a noisy inspiration, and could not talk above a whisper. Her cervical lymphnodes were very little enlarged. Ear and nose were free from any discharge. Examination of the tonsils showed them only slightly enlarged and somewhat reddened, but found no exudation upon them. Examination of the lungs showed nothing of interest except of a few loud, dry and coarse, moist rales, over both lungs, front and back, showed these rales. The heart, liver and spleen were normal. Temperature was 100° F., the pulse 155, the respiration 29.

Diagnosis: The cyanosis proved that there was some obstruction to the entrance of air into the lungs, but did not show where this obstruction existed. The position of her head was characteristic of obstruction and was in this position in order to make breathing easier by straightening the upper air passages. The normal condition of the nose and throat proved that the obstruction was not above the larynx. The rales heard over the lungs were not sufficient for such a cyanosis, also the fact that the rales were heard over both chest; that they were not made in the bronchi, but above. The relatively low rate of respiration showed that the trouble in the lungs was not the cause for such cyanosis. The noisy, harsh and croupy cough, and the hoarseness were characteristic of laryngeal obstruction. The next thing was to determine whether this obstruction in the larynx was catarrhal or diphtheritic. The progressive increase in the difficulty in respiration was almost pathognomonic of laryngeal diphtheria and was entirely different from catarrhal laryngitis, in which the obstruction is not progressive and continuous but occurs in paroxysms, being always worse at night. The light fever is met in either condition, but is higher in the catarrhal than in the laryngeal. The fact that the throat showed but a slight inflammation and the lymph nodes only slightly enlarged did not count against laryngeal diphtheria, because in primary laryngeal diphtheria the throat is not involved, and as there is but little absorption from the larynx, the lymph nodes are but slightly enlarged. A sterilized laryngeal applicator was passed to the larynx and from a culture the Loeffler's bacillus was found, thereby confirming the diagnosis of laryngeal diphtheria.

Constitutional Symptoms.—The symptoms of constitutional infection in mild infection are not marked. In most severe instances, three or four days after the onset, the patient's condition becomes one of great weakness, the heart's action is feeble and cerebral symptoms supervene. In other patients, the constitutional symptoms are prominent, from the beginning the temperature is high and the evidence of toxemia is pronounced. As a rule the constitutional symptoms are directly proportional to the local involvement.

Blood.—A marked leucocytosis is usually present in diphtheria, even that of a mild type, otherwise the blood shows nothing of interest.

Urine.—F. Reche states that in 3,826 cases of diphtheria and acute angina of which 3,200 were acute diphtheria, acetonuria was present in 60 per cent. This important observation is of interest to us. Albuminuria is one of the most constant symptoms of diph-

theria. Babinsky observes that nephritis may occur as well in mild cases of diphtheria as in severe cases.

Complications.—It is perhaps wise in this instance to mention some of the complications of this disease, which are as follows: Adenopathy, gastro-intestinal, hyper leukocytosis, heart lesions, nervous affections, post-diphtheria paralysis, skin, broncho-pneumonia. Post-diphtheric paralysis is of such importance and of rather frequent occurrence, that I believe it worth while to dwell on this at this time. This complication is often more alarming to the patient and relatives than the disease itself.

Babinsky, of Berlin, tells us that post-diphtheria paralysis attacks adults just as frequently as children. In its various forms it is by far the most common of the nervous sequels of this disease. Cerebral hemiplegia rarely follows diphtheria. Polyneuritis appears to occur just as often in cases treated with or without injection of serum. Slawyk noted it respectively in 5.3 and 5.5 per cent of his cases. It must be borne in mind that in the opinion of a great majority of physicians, many more severe cases of diphtheria are now cured than was formerly the case. Woolcott regards a greater frequency of paralysis after serum treatment in a direct ratio to its decreased mortality.

The first and most common symptom of paralysis following diphtheria is paralysis of the palate, which usually accompanies hyperesthesia of the pharyngeal mucous membrane and the loss of the soft palate reflex. It may appear at the end of the first week of diphtheria but usually not until the beginning of the second week or even after six or eight weeks. Very exceptionally, the condition is unilateral. The soft palate becomes perfectly flaccid and droops; even reflexly there is no contraction, and this accounts for the nasal tone as well as the regurgitation of fluid through the nose. Paralysis of the soft palate may be the only paresis. This is probably the most common condition; but in many cases other pareses follow, primarily of the mucosa of the pharynx, of the esophagus, and of accommodation.

The first is shown by impairment of the power of deglutition. The contents of the mouth find their way into the larynx; this is partly due to hyperesthesia of the entrance to the larynx. The disturbance may even lead to deglutition pneumonia. Hyperesthesia is caused by alteration of the superior laryngeal nerve, but the inferior

laryngeal nerve also may be attacked, as is proven by the fact that paralysis of the vocal chords has been observed a few times.

I will give you a case of post-diphtheria paralysis with a complete diagnosis:

J. W. M., 7 years old, had sore throat the first week in July. His illness was of such a mild nature that no physician was called. About the latter part of August his mother noticed that his voice was somewhat unnatural, and liquids began to come through his nose when drinking. He complained a week later that his eye-sight was affected, he could not see as well as before, also that he felt weak on his legs, being unsteady. When I first saw him, August 6, he presented the symptoms as already stated.

Physical Examination: He was well nourished, but somewhat anemic looking. His throat was normal except the soft palate moved little when he spoke. His voice was somewhat hoarse. There was moderate internal strabismus on the right. The pupils were equal and reacted to both light and accommodation. The heart, lungs and abdomen were normal. Both spleen and liver were not palpable. He moved his arms freely and had a good grip. His walk was unsteady, but moved his legs freely, and showing but little muscular power. Kernig's and Babinski's sign were both absent. The abdominal and cremasteric reflexes were somewhat diminished, and knee-jerk were absent on both sides. His sensation to touch was blunted but to pain normal. There was no tenderness anywhere. I could not find any enlargement of peripheral lymph nodes.

The urine was normal.

Diagnosis: The paresis of the legs coupled with the loss of knee-jerk, might in a measure suggest infantile paralysis. A slow onset and a paraplegic distribution of the paralysis are uncommon in infantile paralysis. The sensation of touch being blunted shows that the lesion is in the peripheral nerves, and not in the anterior horns. The paresis of the soft palate and of the right external rectus is not consistent with infantile paralysis, because it would be hard to conceive of a poliomyeloencephalitis resulting in paresis of the legs, one muscle of one eye and the soft palate and nothing else. The only condition that I can think of in a combination of symptoms, as is presented in this 7-year boy, is a peripheral paralysis.

Upon due reflection we can well think of the combination of symptoms as is presented in this case as being pathognomonic to diphtheritic paralysis. Considering the absence of pain, the history of a sore throat a few weeks before the onset of the paralysis makes the diagnosis of diphtheritic paralysis a positive one. Lead poisoning occurs in childhood as a form of peripheral paralysis, but this can easily be eliminated in this instance on the distribution of the paralysis and the absence of pain and tenderness as well as the characteristic lead line on the gums. Also no stippling of red blood corpuscles.

Diagnosis.—Many of our physicians depend too much on the clinical symptoms for a diagnosis and in this way they are often led astray, to the detriment of the patient. This is an age where bacteriology reigns supreme, and with the assistance of this science

we can arrive at a positive diagnosis of this disease in a few hours. The only necessary thing is a culture medium which is furnished free by the Louisiana State Board of Health. An incubator, or an ordinary thermostat bottle answers as a very good substitute.

The acceptance of the Kleb-Loeffler bacillus as the specific causative factor in diphtheria has made it necessary to give a name to membranous sore throat in which the bacillis are not found, but in which various cocci are invariably present. This variety is at present called pseudo-diphtheria; and some modern text books speak of primary and secondary true diphtheria and primary and secondary pseudo-diphtheria. It is well known that in the localities in which diphtheria is endemic, the majority of cases eventually prove to be a mixed infection; consequently the physician will be wise to look upon all acute throat affections in children, attended with fever and swelling of the lymph nodes, or upon membranous rhinitis without fever, or upon hoarseness and slow progressive stenosis, as suspicious of diphtheria, and treat them accordingly.

Another point worthy of brief consideration is the difficulty of distinguishing clinically between follicular tonsilitis and diphtheria. No amount of experience will enable the physician to distinguish between these two affections. What looks like a tonsilitis to-day may be a virulent diphtheria to-morrow; such cases should be isolated and treated as diphtheria. In practice the physician who acts according to these views will have more success in the management of such cases than he who poses on an ultra-scientific pedestal, waits for the cultured tests in diphtheria, and writes death certificates.

The physician should be thoroughly trained in recognizing the Klebs-Loeffler's bacilli, both in stains and in culture, so that it will no longer be necessary for him to require the proofs from another source; even though it may be necessary to erect laboratories of investigation to aid the busy practitioner, the physician must be master of the methods of procedure in these investigations. The examination is easy and may be carried out by any physician who has the slightest training. It is only necessary by means of forceps which have been sterilized, to take from the throat a shred of the pseudo-membrane; this should be washed in sterile water, and stroked upon Loeffler's blood serum, which may be obtained, as stated before, from the Louisiana State Board of Health, then placed in an incubator or in a thermostat bottle at the temperature

of the body. In from five to twenty-four hours the characteristic growth of Loeffler's bacilli may be macroscopically determined, which naturally must be confirmed by the microscopic examination of the dry stain preparation to determine the presence of the bacillus by its morphological properties. This can be learned and performed by every practitioner; and if this appears too difficult for him, he may at least take directly from the pharynx a small particle of the diphtheritic mass, wash it, smear it upon a cover glass, allow it to dry and stain it to determine at once the microscopic picture; therefore, to demonstrate the presence of Loeffler's bacilli without culture. The physicians who believe that they are unable to perform this method of examination can and should take a swab from the pharynx of the patient infected, and send same, in a proper container, as furnished by the Louisiana State Board of Health, to the Louisiana State Board of Health Laboratory, where a prompt diagnosis will be made for him free of charge. In this way it would be impossible to mistake a scarlatina angina or a follicular tonsilitis for diphtheria, but also the former diseases will not be assumed if actual diphtheria is present, to the detriment of the patient, which would be the case if it became too late to be recognized and to be treated with active remedies.

In closing I wish to invite the physicians of the State to become more interested in the working of the laboratories of the State Board of Health, and make frequent use of its facilities, which in return will be of untold value to everyone, especially in diphtheria, when a prompt diagnosis is made for you. It is astonishing to know the small number of physicians who take advantage of this splendid institution.

I wish again to express myself as forcibly as possible, in demanding of the medical profession of Louisiana to make their own diagnosis by means of microscopic and culture methods, and apply to the laboratory of the State Board of Health, only to corroborate their previous diagnosis. To rely solely on the State Board of Health for a diagnosis means valuable time is lost, particularly for those living away from New Orleans; the further from New Orleans you live, the longer will it take for you to receive your report.

A NEW TECHNIC FOR THE INTRAVENOUS INJECTION OF NEOSALVARSAN.

By ABNER H. COOK, M. D., Hot Springs, Ark.

Salvarsan, or its modification, neosalvarsan, has come to stay. Its indications are growing less numerous and less confidence in it as a permanent cure for syphilis in all of its manifestations and degrees of development is being daily expressed, but the fact that it will heal all productive lesions of syphilis, kill the spirocheta pallida when reached by it and readily render the Wassermann negative, gives this drug a field of usefulness and a permanent place in the therapy of syphilis, though not to the exclusion of other justly valued remedies.

A vast majority of accidents and disagreeable effects following the intravenous administration of salvarsan (or neosalvarsan), which is the preferable method of administration, can be directly traced to faulty technic, therefore greatest simplicity is essential. With this in view I have gradually simplified the method of administration. Now the following is used by me as routine practice:

The apparatus is carefully sterilized by thorough boiling and rinsed with distilled water, the arm prepared by approved methods and a tourniquet is placed around the arm above the site of injection. The neosalvarsan is dissolved in 10c.c. of re-distilled water and drawn into a 10c.c. Luer glass syringe; an ordinary 1 $\frac{3}{4}$ -inch hypodermic needle is inserted into the vein, the tourniquet is released and the syringe, already filled with the solution, attached to the needle and its contents slowly forced in. After the needle is withdrawn the arm is held in an upright position for a few minutes, after which the point of entrance is covered with collodion or small piece of Z. O. adhesive. The dose of neosalvarsan may vary as the case indicates, without changing the quantity of water. A dose of .9 gram (dose no. vi) is usually employed by me.

Extreme care should be exercised in sterilization, freshly re-distilled water invariably used, the temperature of the solution between 60-70 degrees C, and administered very slowly, consuming from four to five minutes, or longer, to force in the 10c.c. The administrator must be absolutely certain that the needle is in the vein before the injection is begun, which is ascertained by the flow of blood through the needle, and the injection begun before the blood has had time to coagulate in the lumen of the needle. A

small quantity of the solution in the tissues will cause considerable pain.

The advantages of this method are: (1) Less bulky paraphernalia, hence more accurate sterilization and more readily portable. (2) No special apparatus necessary. (3) Small quantity of total solution, hence chance of introducing toxic matter obviated or greatly diminished, therefore disappearance of toxic symptoms or so-called reaction; admits of the administration in cases with heart and perhaps kidney lesions in which the larger solution is contra-indicated; the introduction of a large solution cold sometimes produces shock, hence this is obviated in the small solution. (4) Does not produce the psychological effect that is produced by the excess of paraphernalia and large quantity of solution injected into the circulation. (5) The method has the simplicity of the intramuscular injection minus its pain, nodules and occasional suppuration, combined with the more efficacious intravenous method minus its bulky apparatus, disagreeable after-effects and permits of its use in some cases otherwise contra-indicated.

In the fourteen cases in which this method has been employed by me no ill effect has been noted and the therapeutic results have not been deteriorated, if not enhanced.

The method described is for the administration of neosalvarsan, salvarsan having been discarded by me some months ago.

THE SURGICAL ASPECTS OF GOITRE.*

By URBAN MAES, M. D., New Orleans.

The surgical treatment of diseases of the thyroid gland dates from the first successful operation by Rehm in 1884. From that time, when only an occasional operation was performed on extreme cases, and the surgeon was called in to administer "extreme unction" to patients suffering from thyroid disease, until the present day, the technique has undergone such changes as to make the operation one of every day occurrence. The operative mortality has been reduced from 25 to 30 per cent to 1 per cent in some clinics. We are indebted to Kocher, Reverdin, DeQuervain and others in Europe, while Halsted, Ochsner, Crile and the Mayos are largely

* Read before the Orleans Parish Medical Society, March 24, 1913. (See discussion in last issue of the JOURNAL, page 884.)

responsible for popularizing the surgical treatment of goitre in this country.

At the last meeting of the Southern Medical Association in Jacksonville (Nov. 12-14, 1912), Dr. Stuart McGuire gave a summary of the subject as it is understood at this time. He concludes that this is the era of thyroid surgery, just as we have had special periods of appendix, gall-bladder, stomach and kidney surgery.

With the study of the thyroid there came the study of the parathyroids. That tetany and death followed their removal has been known for some time. Their function as regulators of calcium metabolism was demonstrated by McCallum and Voegtlin in 1908.

In dealing with the surgical phases of goitre, we find that the simple (cystic), the colloid cysts and the true cases of Grave's, Parry's, or Basedow's disease are the ones that usually present themselves for treatment. True tumors are seen, but are comparatively infrequent. As the treatment of all but the tumors is based on the management of the true Graves cases, I will confine my remarks more particularly to the consideration of this class of patients.

It would seem that since hyperfunction is the predominant feature, removal of some of the redundant tissue would be the proper procedure. Normal physiological function does not always follow. The amount of thyroid tissue required for normal physiological balance we can only approximate. C. H. Mayo claims that one-sixth of a gland causing symptoms of hyperthyroidism is sufficient for normal function. This question of the amount of gland to be left behind is even more difficult to decide in some of the simple cases. Such a problem presented itself to me recently. In two patients with simple goitre in which the enlargement was retrosternal, with antero-posterior flattening of the trachea causing dyspnea, I removed one lobe and the isthmus, and then wondered if I had left enough active gland for function. This anxiety may have been caused by the fact that my attention had been called to two patients with marked hypo-thyroidism following goitre operations.

The operations which have stood the test of time and are now advocated, are ligation of one or more of the main vessels, polar ligations, partial and complete lobectomy, and resections as advocated by Mickulicz and now practiced by C. H. Mayo and DeQuer-

vain. Sympathectomy as advocated by Jonesco has given good results, but it is too difficult and uncertain for general use. Crushing, mass ligation, exenteration and exothyropexy have been abandoned for the more certain operations already mentioned.

The patients presenting themselves to the surgeon for treatment have usually been in the care of the internist. The time at which goitre patients should be referred to the surgeon has not been definitely decided. Some of the internists, notably Solomon Solis Cohen and Hoover and Marine, are rather extreme in their views. I am informed, however, that Marine is referring more patients to the surgeon than was formerly his custom.

When we recall the early mortality from goitre operations, the internist certainly cured more of his patients than the surgeon, but the figures are now more favorable from the point of operative mortality and recovery from symptoms. In an early series, Kocher had a mortality of 3.5 per cent in 254 operations. In the first ten months of 1911 there were 900 cases operated in the Mayo clinic with a mortality of 1 per cent. These operators now have a record of 278 cases between deaths, with 75 per cent complete cures, and the remaining 25 per cent have been more or less benefitted. Kocher's present death rate is 3 in 1,000, with 85 per cent complete cures. I do not mean to have you infer, however, that all goitre patients should be submitted to immediate operation. One-fourth to one-half of all cases of hyperthyroidism recover without operation, and a very small number die of the disease *per se*. Medical treatment, however, seems to have very little influence on the cystic cases.

The best results are certainly obtained by lobectomy or resection in early cases. The profoundly toxic patients may be relieved by vascular ligation or by polar ligation (Stamm's operation), which procedure controls the symptoms, and puts the patient in a better condition to survive a radical operation. Patients with a pulse rate of 120 or more, with or without cardiac dilation, irregular pulse, delirium cordis, ascites and diarrhea are unfavorable for anything but ligation, and then with local anesthesia or Crile's anoci-association. This observer claims that patients are usually in better condition to stand operation the first day they enter the hospital when the nervous phenomena are quiescent. If this is not the case operation had better be postponed for a week or ten days, and then his suggestions for "stealing" the thyroid followed.

The question of anesthesia is an important one. Kocher prefers local or regional anesthesia. This is certainly wise in view of the danger to the recurrent laryngeal nerve. The flattened (sabre) trachea with absorption of the tracheal rings from pressure greatly increases the risk from a general anesthetic. The gland is attached to the trachea by a dense fibrous structure which keeps the trachea patulous and allows collapse after removal of this support. Mayo prefers ether by the drop method with care to isolate the vessels at the lower pole, thereby dealing with the isolated inferior thyroid vessels, and minimizing the risk of hurting the recurrent nerve with consequent vocal cord paralysis. The anoci-association of Crile may be valuable in preventing an acute outbreak of nervous phenomena after operation. This was formerly thought to be due to the absorption of toxic substances forced into the circulation by manipulation. This fact has been disproved, as we have seen such outbreaks after simple ligation of one set of superior thyroid vessels. Chloroform is advocated by some of the English surgeons as a means of diminishing the venous engorgement. The anesthesia, whether general or local is best preceded by a hypodermic of 1-4 gr. morphin with 1-150 gr. atropin.

Except in single cysts or local and well-defined enlargements, the incision usually employed is the "collar" incision of Kocher. In the case of tumors or single cysts, it may be better to incise over the long axis of the tumor. The collar incision has the advantage of being in the normal cleavage line of the skin of the neck, heals more kindly, and with a minimum of scar formation. We carry our incision through the fascial planes and platysma which is raised with the flap. Now search for the median line of the neck and from this point isolate the sterno-thyroid and sterno-hyoid muscles, which are divided transversely between clamps, over the most prominent part of the enlargement. After reflection of these muscles we come to the proper capsule of the gland which is best divided in its long axis. The capsule must be handled carefully, as it is easily torn. It is best separated from the gland by wiping with gauze. After this has been accomplished, a careful anatomical exposure of the thyroid vessels must be made, before we attempt their ligation, in order to avoid injury to the surrounding structures, especially the recurrent laryngeal nerve in its close relation to the inferior thyroid artery. Enucleation or resection is now effected, being careful to preserve the posterior capsule, thereby insuring

the safety of the parathyroids. When it is necessary to cut across the isthmus or part of a lobe, the bleeding is controlled by clamp and subsequent suture. Venous bleeding is frequently annoying and must be carefully checked by clamping.

Suturing of the capsule and divided muscles is next in order, and a drain is left in the most dependent portion of the wound to carry off the great discharge of serum which is always present. In one of the writer's cases, where a kinked drain failed to perform its function, infection followed with sloughing of part of the remaining lobe. Signs of hypo-thyroidism supervened, which were relieved by thyroid feeding, and the patient has since borne a full-term child. Separate suture of the platysma will prevent subsequent stretching of the scar. The skin is closed by Michel clips or a subcuticular suture.

After operation, patients seem to be more comfortable in the semi-recumbent posture. Swallowing is painful for 48 to 72 hours. Semi-solid cold foods are tolerated best. If there has been much hemorrhage or undue handling, proctoclysis for 24 hours will prove beneficial. Proctoclysis is probably beneficial in all of the patients with marked toxic phenomena. If stimulation is needed, coffee added to the proctoclysis solution is most dependable. Small doses of morphin should be used to relieve pain.

The sequels or complications which are to be met are acute hyperthyroidism, which is best combatted by proctoclysis; post-operative pneumonia is no more frequent than after other operations; according to Wilson, fatal embolism has occurred twice in 3,266 operations on the thyroid; tetany is avoided by preservation of the posterior capsule; secondary hemorrhage should be guarded against by careful ligation of all bleeding points. Small punctiform oozing and the tendency to secondary hemorrhage also call for immobilization of the neck for two or three days after operation, or until nausea and vomiting have subsided. Injury to the recurrent nerve is to be avoided by great care in securing the inferior thyroid vessels.

The resection operation suggested by Mickulicz, and advocated by DeQuervain in the Kocher Festschrift (*Deutsche Zeitschrift für Chirurgie*), has the advantage of restoring the symmetry of the neck, leaves less dead space for infection, minimizes the risk of injury to the important structures in relation to the thyroid and gives the best opportunity for preservation of the parathyroids.

As the cystic goitres are more asymmetrical and do not yield to medical treatment, the symmetry of the neck is best restored by this plastic operation on the most prominent part or parts of the enlargement.

The writer has had no personal experience with this cuneiform excision, but has had the good fortune to have witnessed several of these operations by Dr. C. H. Mayo, and has assisted Prof. Matas with two cases in his clinic at the Touro Infirmiry. The exposure of the gland is accomplished by the method already described. The following points mentioned by DeQuervain are worthy of note.

1. In the prophylactic control of hemorrhage, one vessel, preferably the superior thyroid or its anterior branch, must be spared to keep up the blood supply of the gland. This same rule applies when we are using the ligature only in the treatment of hyperthyroidism.

2. Better control is secured by ligating the inferior thyroid vessels if only one set is to be secured. The arteries are best ligated first, so as to allow the veins to empty themselves before the ligature is applied to them.

3. Preserve the isthmus on account of the collateral blood supply in case all the vessels of a lobe require ligature.

4. Final hemostasis is secured by a fine cat-gut suture of the raw surface left after the cuneiform excision.

In conclusion I wish to state that partial relief of symptoms is not a discredit to surgery, but simply shows that there has been insufficient removal of the redundant tissue. These patients are usually much improved and are in better condition to stand removal of more of the diseased gland.

As the Medical Aspects of Goitre have been dealt with by my confrere, Dr. Lemann, I have refrained from the discussion of any but the surgical aspects as specified by the title of this paper.

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"PELIOSIS RHEUMATICA."*

By JEROME E. LANDRY, M. D., New Orleans.

Purpura, on account of its well-known characteristics, has been known to physicians from time almost immemorial. To Hippocrates, in describing the condition of "blood under the skin," we are indebted for the term *peliosis*. Superficial hemorrhages from every possible cause have heretofore been grouped together, bringing about diagnostic confusion; thus, in many instances, purpura arising simply as a symptomatic feature has been viewed as an independent or distinct disease.

About the year 1775 Werlhof recognized the differences existing between the various purpuric conditions; and of one he drew a distinct clinical picture, to which he gave the name *purpura hemorrhagica*. In later years this disease bore the name of its discoverer. It was not long before other divisions were made in the group of hemorrhagic diseases. *Purpura simplex* and *purpura urticans* have been described as distinct affections. And finally Schonlein brought forward the term *peliosis rheumatica*.

Now, are we justified in making such a division, creating, as it were, independent diseases of these different purpuric affections?

It is to-day conceded by all authorities that the individual purpuric diseases are not essentially different, but are, in a general measure, due to the same cause, and vary only in degree; that is, variety is dependent upon the grade of intensity of the affection.

Occasionally these differences are presented clinically to us in such a manner that we are led to believe that we are dealing with an entirely different clinical picture, and a condition in which there exists no common relationship.

Therefore, it is evident that these clinical variations of the condition form indistinct transitional stages which merge one into the other, and only with great care are we able to establish differences.

Apart from the facts demonstrated by bacteriology, which it is hoped will be more certainly confirmed in the near future, purpura is an affection due to the action of unknown, deleterious agents, occurring sporadically and showing a transitory tendency to different varieties of hemorrhage. In contrast to hemophilia there is no congenital or hereditary factor, and unlike scurvy there is no tendency to epidemiologic and endemiologic distribution, and the

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hemorrhages are not associated with severe constitutional disturbances.

Scurvy is distinguished by the fact that it not only occurs sporadically, but also epidemically or endemically. More characteristic, however, is its dependence upon external conditions. It is almost invariably the expression of a severe nutritive disturbance produced by obscure disease or by the long continuance of insufficient or improper food. Its etiology has not been definitely established.

In most cases it is impossible to determine any immediate cause for purpura; the affection appears in typical cases spontaneously. Other symptoms of purpura appear during convalescence from severe infectious diseases, particularly after typhoid and malaria. The affection has also been observed during pregnancy.

Few authors have been able to isolate the causal organisms of purpura, or their toxins circulating in the blood stream. Some investigators believe it to be due to the action of toxins. In many quarters it is looked upon as an infectious disease. Very recently Johnson and Greenville isolated a diplococcal organism in the lesions of purpura.

According to reports the disease is of frequent occurrence. Females appear to be somewhat more predisposed than males. An age limit does not exist, but at middle life attacks appear to be more numerous.

Chilling or wetting of the body, damp dwellings and insufficient food are cited as possible causes, but people of the best environment are also subject to the disease.

Purpura has been reported in a young girl as a result of a severe nervous shock. This particular case ran a very rapid course and proved fatal.

By purpura we understand an affection which appears spontaneously, its chief and most predominant feature being transitory hemorrhages of the external skin, the serous and mucous membranes, as well as hemorrhage in the parenchyma of the internal organs.

Under purpura we include only such hemorrhages as denote the character of the disease and view it as an independent disease or affection.

The first form of the disease, in which bleeding occurs exclusively in the skin, is designated *purpura simplex*. When bleeding occurs not only in the previously mentioned anatomical structures it is

designated *purpura hemorrhagica*. Finally, when the hemorrhages are accompanied with pain and swelling of the joints and the condition follows a well-defined course, it is referred to as *peliosis* or *purpura rheumatica*. We might go down the line and continue indefinitely the terminology according to the most predominant symptoms.

The description given by students of Shonlein of the disease that bears his name, is as follows: "The areas never coalesce, the patients have either formerly suffered with rheumatism or they exhibit rheumatic phenomena, such as mild periodic pains in the joints, in the ankles, in the knees or in the shoulder. These joints are edematous and painful to the touch. The spots are characteristic of the disease and appear in the majority of the cases—first upon the extremities, particularly upon the lower extremities, and then only up the knees. The hemorrhagic areas are the size of a lentil or millet seed, light red, not raised above the skin, and gradually turns a dirty brown and desquamates. The eruption occurs in crops during a period lasting often for weeks, and change of temperature, no matter how slight, may cause a new eruption to appear."

The affection is usually accompanied by fever of a remittent type.

Osler describes the disease as follows: "This remarkable affection is characterized by multiple arthritis and an eruption which varies greatly in character, sometimes purpuric, more commonly associated with articularia or with erythema exudativum. The disease is most common in males between the ages of twenty and thirty. It not infrequently sets in with sore throat, a fever, from 101 to 103, and articular pains. The rash which makes its appearance first on the legs or about the affected joint may be simple purpura or may show ordinary urticarial wheals. In other instances there are nodular infiltrations not to be distinguished from erythema nodosum. The combination of wheals and purpura urticans is very distinctive. Much more rarely vesication is met with, the so-called pemphigoid purpura. The amount of edema is variable; occasionally it is excessive. These are the cases which have been described as febrile purpura with edema. The temperature ranges in mild cases is not high, but may reach 102 or 103 degrees."

The diagnosis of Shonlein's disease offers no difficulty. The asso-

ciation of multiple arthritis with purpura and urticaria is very characteristic.

The frequency with which sore throat precedes the attack, and the occasional occurrence of endocarditis or pericarditis, are certainly very suggestive of true rheumatism.

CASE REPORTS.

CASE No. 1. Mr. A. W., aet. 39, has had several attacks of dry pleurisy and is now suffering with pulmonary tuberculosis; has never suffered with rheumatism. On November 15, 1912, had a fainting spell while at work; returned home that same day apparently well. Three days later while riding a bicycle he received a jolt that gave him a severe pain in the side of the chest. Ascribed pain to a return of pleurisy. That same night he was awakened with severe pain in the right ankle. Next day ankle was swollen, very tender and exceedingly painful; temperature 101, slight chills, some nausea, anorexia, and constipation. November 19 noticed small subcutaneous hemorrhage in the neighborhood of the ankle, extending to middle third of leg. Soon the left ankle became involved, then the knee and right wrist joint. In the region of these swellings was the purpura eruption, except on the arm it did not appear. Over the chest there was a slight eruption.

Treatment: Codea and aspirin was given for the pain and temperature, which gave relief. P. D. & Co.'s horse serum was given 1 cc. every eight hours for 3 days. Ten days after the onset patient was up and about the streets following his usual occupation that of a collector. Up to this date he has not had any recurrence of the trouble.

CASE No. 2. Mrs. L., aet. 54, P. H. neg., May 13, 1912. Began suffering with pain in right knee joint and upper right thigh, very much nauseated and constipated, temperature 101, ranging to 102; insomnia was a marked feature in this case. On my next visit, which was the following day, my attention was directed to a rash on her lower extremities. In fact, from the pelvis to ankle on both sides were these small purpuric spots.

Urine showed trace of albumin. Few hyaline cast.

Treatment: Codea and aspirin given every four to six hours, hot applications were applied to knee. Rest enjoined. Uneventful recovery ensued after four weeks. No serum was given in this case on account of patient's antipathy to this mode of treatment.

THE EINBORN DUODENAL TUBE AND ITS USES.*

By SIDNEY K. SIMON, A. B., M. D., New Orleans.

The direct intubation of the duodenum, affording as it does a simple method of obtaining the duodenal contents for examination and analysis, as well as offering a new and effective means of introducing food into the organism, has recently found its place as an established clinical procedure of considerable value. The history of this accomplishment dates back but a comparatively brief time,

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when in January, 1910, Max Einhorn and Morris Gross, both of New York, almost simultaneously announced the success of their efforts in securing the duodenal secretions for examination by means of a tube specially constructed, of small diameter, with perforated, metallic olive tip. This tip, sufficiently weighted, it was found, when swallowed readily reached the duodenum, after tarrying but a comparatively short while in the stomach. Some years previous, it may be recalled, Einhorn had succeeded in obtaining small quantities of duodenal contents for direct examination by means of a miniature gold bucket attached to a corded silk thread. The disadvantage of this apparatus, however, lay in the intermingling of gastric with duodenal contents which almost invariably ensued upon the withdrawal of the bucket and thereby rendered the analysis of uncertain clinical value. This objection is overcome effectively by the tube, since when, once the metallic capsule has passed the pylorus, the aspiration of pure duodenal secretions without contamination is assured.

The mode of procedure in the introduction of the tube follows closely that of the stomach tube, with just a few points of detail requiring special mention.

The metallic tip, about the size of a 00 capsule, having been moistened with warm water, is placed well back into the pharynx and the patient instructed to swallow, assisting himself with several mouthfuls of water. Once the tip has passed over the epiglottis into the oesophagus, it readily descends through the cardia into the stomach. The patient is now asked to lie on the right side and to breathe quietly with no further attempt at swallowing. In the course of from half-hour to five hours it will be found that the tube has found its way through the pylorus. The important fact of its having reached the duodenum is established with certainty, either by testing with Congo red paper the fluid obtained by aspiration, which in the absence of HCL does not turn blue, or by giving the patient a swallow or two of milk, when, if the tip is still in the stomach, the milk will be found to come up promptly upon aspiration.

The X-ray may also be used in outlining the location of the tube, but this is required only in exceptional instances, or as a means of verifying the other tests.

The varied uses to which the duodenal tube may be put in clinical

work may be grouped for convenience under the separate headings of diagnostic and therapeutic.

In the field of diagnosis, its value has now been amply attested by a host of competent authorities. By means of it a clearer insight may be gained than has been hitherto possible, of the more or less obscure disease conditions, not only of the duodenum itself, but also of its intimately associated glands, the pancreas and the liver and their digestive secretions. In our efforts, in the past, to arrive at a more definite knowledge of the important disturbances of the pancreatic secretion more particularly, we have had to rely either upon special test diets directed towards an inspection and analysis of the feces, or upon various chemical reactions, which, though ingenious in many respects, are at best uncertain in their interpretation.

The obtaining of the pancreatic juice at first hand, so to speak, from the duodenum now permits of a direct examination of its proteolytic activity, either as a whole or with special regard to the deficiency or absence of its three constituent enzymes.

The presence of bile in the duodenum or its absence may likewise be determined with great accuracy by aspiration through the tube. I have at present under observation a patient with severe jaundice in whom I have been able to determine positively by this means a complete obstruction of the biliary secretion into the intestine.

In its application as a therapeutic measure, the duodenal tube would likewise seem to serve a wide range of usefulness, judging from the manifold suggestions recorded in the recent literature on the subject. Einhorn himself was among the first to suggest the new instrument as a means of securing stomach rest, particularly in cases of peptic ulcer. While it might be urged in this connection that the presence of the tube, serving as a foreign body, would tend to retard rather than promote the healing of a pyloric ulcer, such apparently has not been the experience of Einhorn and others. The assurance of a sufficient quantity of nourishment from the start, with its introduction beyond the site of the ulcerated area, are points that have been urged in favor of this plan. The principle of stomach rest afforded by direct alimentation into the duodenum may be given a very much wider application in the general field of gastro-intestinal diseases. During the past six months I have had occasion to employ the duodenal feeding in two cases of obstinate vomiting in both of whom other methods had proved of little avail.

These cases, though differing somewhat in etiology, responded promptly to the plan of securing absolute stomach rest by the employment of the duodenal alimentation. In one, a white female, aged 33, there had been a history of vomiting, evidently of nervous origin, over a period of a year, with marked mal-nutrition. In the other patient, also a white female, aged 26, there were periodic attacks of vomiting of great severity, having as their basis extensive peritoneal adhesions, possibly of tuberculous origin. She had been operated upon twice with no relief of the recurrent spells of vomiting. In her also the introduction of the duodenal tube was promptly followed by a subsidence of the vomiting. I believe it but fair to say that in both cases the rest afforded the stomach over a period of several days permitted it to regain its tolerance for food, though in the strictly neurotic patient the possibility of the psychic element should not be overlooked.

Again, in a very recent article, Jutte has called attention to another possibility of the duodenal tube, in connection with what he has termed transduodenal lavage. "This is to the small intestine what enema is to the colon," to quote from the author, and is indicated in all conditions in which it is desired to irrigate the bowel thoroughly in the channel of its normal drainage from the pylorus downward. From 1,000-1,200 c.c of normal saline is employed by the drop method, attaching the duodenal tube to an ordinary irrigating apparatus.

The disease conditions, which improve under this plan of upper intestinal flushing, according to Jutte, are the intestinal toxemias with their many-sided sequelæ and the various types of catarrhal enteritis.

Lastly, the suggestion has been made that the direct introduction of drugs into the duodenum through the tube might be tried when the stomach has proven otherwise intolerant.

In those cases of amebic dysentery, for example, in which ipecac causes retching and vomiting in spite of a liberal coating of salol, Beck has succeeded in overcoming the difficulty by injecting a mixture of the powdered ipecac with water through the duodenal tube. I have recently had occasion to make use of this suggestion in one case with entirely satisfactory results.

**RELATIONS THAT SHOULD EXIST BETWEEN SURGEON
AND ANESTHETIST.***

By ANSEL M. CAINE, M. D., New Orleans.

Since the work of the surgeon and of the anesthetist are so intimately associated, it seems to me that confidence is essential. This confidence should be mutual, and without this feeling neither can do his best work. Should the surgeon be uneasy with the anesthetist, he cannot be expected to do his very best work, for few men can do their best at anything when the mind is divided, being constantly diverted from the work in hand. On the other hand, if the surgeon has perfect confidence in the ability and conscientiousness of his anesthetist, he can devote his undivided attention to his work. The same can be said regarding the anesthetist. He should have confidence in the operator in order to do his best work. This is the ideal. Of course it is not always possible that these relations exist. The surgeon has not always the choice of the anesthetist, nor has the anesthetist the choice of the surgeon. The surgeon should do all in his power to bring this condition about so far as he is concerned. As it is usually left to the surgeon to select the anesthetist in private practice (and that is right), he should not be influenced by anything but the desire for the safety of his patient. His aim should be to find the man who delivers the goods.

There should be a feeling of sympathy between the two, which cannot exist without confidence. If the surgeon is in deep water and the patient is not doing well, it is not the function of the anesthetist to keep the operator worried. He should post the operator, of course, but both know a certain amount of work must be done, and while the surgeon is doing his best to do all necessary, the anesthetist should let him alone and do all in his power to get the patient through. For that reason the anesthetist should know about what is being done. He must know the anesthetic agent in hand, its action, relative safety, etc. He must know the other possible agents available, and their relative actions and indications. He must be able to judge where his patient is. He must know where his patient was physically before he commenced. He must know the action of stimulants, and their indications, the dosage, and effect to expect. He must know the indications for infusion, and when the patient has received enough. He should

* Read before the Orleans Parish Medical Society, May 12, 1913.

be able to give or direct an infusion in an emergency. Knowing these things, and the surgeon knowing that he knows them, will relieve the operator of worry, and enable him to do quicker and better work, thus giving the patient a better chance.

If the operator knows anything in the history of the patient that will possibly have bearing on the physical condition, the anesthetist should be informed.

Every good anesthetist should know something about operating. He should know the relative shock connected with various operations. So every operator should know something about the administration of anesthetics, as well as their various actions. The choice of the anesthetic agent should be by mutual agreement, or left to the anesthetist if he knows his business and the patient in hand. He should know and not forget that a forced anesthesia is usually a poor anesthesia. If the anesthetist knows his business, and is doing his best, there is about as much judgment shown in continuously informing him in an impatient way that the patient is not relaxed (should that be the case), as there would be shown by an anesthetist who in the midst of a pan-hysterectomy, insisted that the patient could stand no more, and that the operation must cease. Forcing the anesthetist to force the anesthesia, if he will let himself be forced, only works ill to patient, operator and anesthetist. I have seen operators open an abdomen, wall off the pelvis and work for possibly an hour with ease and comfort. Then remove the packs and palpate the gall-bladder, and blame the anesthetist because the patient resisted, and threw out the intestines when he wanted to sew up the peritoneum. Just as if it was the fault of the anesthetist, and not his own.

When the anesthetist returns with the patient, he can assure the people as to the condition of the patient, but should refer all questions as to what was done at the operation to the surgeon.

It is the duty of the anesthetist to keep quiet in case of a suit for malpractice involving the surgeon, where he knows the surgeon was not doing illegitimate work, even when the surgeon made an error in judgment.

The surgeon should notify the anesthetist before arranging time for the operation, so as to be sure of his services at the hour set. The anesthetist should not overcrowd his engagements. Both the operator and anesthetist should make special effort to be on time. There are instances when both are excusable for being late, but all

legitimate means should be exerted to be on time. Should the anesthetist make a habit of being late at appointments as do some surgeons, he would soon lose all the practice he has. The anesthetist should realize that he is only a means to an end, but the operator should not forget that he is in essential means.

I am now going to mention a question of professional duty. If the anesthetist has an engagement for a healthy person, and an emergency arises in which his services are needed very much in a bad case, in my opinion he is justified, and should be justified by the surgeon, in taking the case where he is needed most, even if there is a good fee in the first case and none in the second. He should make provision for the first case, however, if possible. I may be wrong in this, but believe I am right.

Regarding fees, there should be an understanding, some general working rule between operator and anesthetist. That seems to be a stumbling block in the way of the professional. I have thought of the matter from all sides and from all angles, very carefully. It is impossible and unfair for the professional anesthetist to have a fixed fee for all cases. It is the physician's first duty to have his services at the disposal of those in need. If they are poor his services should be freely given. The man of small means does not want to have his bills discounted. He wants to pay what is charged, but wants that to be within his means. The surgeon governs himself by this rule, and I feel that it is only just and right, the only way. I feel, too, that it is only just for the anesthetist to govern his fees in like proportion.

A REVIEW OF ABOUT 650 ANESTHESIAS*.

By E. L. KING, M. D., New Orleans.

The anesthetics forming the basis of this paper, number 664, including my last 619 cases, up to May 1, and 45 collected from other sources for purposes of comparison, or on account of some special feature of interest. Classified according to agent used, my 619 cases are as follows:

Ether, drop method.....	75
“ “ “ preceded by ethyl chloride.....	128
“ “ “ “ “ nitrous oxide	1
“ “ “ “ “ chloroform	8

* Read before the Orleans Parish Medical Society, May 12, 1913.

Ether, drop method, followed by warm vapor.....	124
“ “ “ with ethyl chloride as preliminary...	126
“ “ “ “ “ “ “ “ “	
preceded by nitrous oxide.....	72
Chloroform.....	2
Ethyl chloride, ether and chloroform.....	3
“ bromide	4
Nitrous oxide and oxygen.....	51
“ “ oxygen and ether.....	20
“ “ and oxygen, (failed); ether, drop method	5
<hr/>	
Total	619

In three cases it was found impossible to secure sufficient narcosis with ethyl chloride or ether and a change had to be made to chloroform, with satisfactory results. In five gas and gas-ether cases I had to change to ether, drop method. However, in all of these five the change was necessitated by apparatus trouble or insufficient gas supply, and not by failure of the method.

Classified according to operations performed:

Laparotomies	144
Laparotomies and vaginal work.....	46
Vaginal plastic, including curettage.....	112
Kidney	8
Ear, nose and throat.....	156
Esophagoscopy.....	1
Rectal and genito-urinary	45
Breast	19
Head, neck and face.....	20
Goitre	5
Chest	1
Liver	2
Abscesses	3
Skin graft	3
Cesarean section	1
Eye	5
Extremities	32
Labor and abortion.....	16

Of these cases I have kept card-index records of 356. Of this number, eleven died after operation, at intervals varying from a few hours to two weeks; four (as many as I can learn) died after returning home, and one died on the table.

The causes of the eleven dying in the hospital were as follows: One died a week later from hemorrhage and toxemia, after removal of stone in common bile duct; one died a few hours after operation for strangulated umbilical hernia, most probably of shock (age 63); one died a week after operation of septic endocarditis; one died of septic infection eight or ten days after operation for sloughing uterine sarcoma; one died six days after operation for appendiceal abscess (subhepatic), from what appeared to be pulmonary embolus; one, moribund at operation, died in one and one-half hours of diffuse suppurative hepatitis; one, 67 years old, died two weeks after operation for a malignant growth of left groin, cause not definitely determined; one died two weeks after operation for intestinal obstruction, cause not definitely determined; one died forty-eight hours after posterior gastro-enterostomy for pyloric carcinoma, from what appeared to be a broncho-pneumonia (age over 70 and very weak); one died of peritonitis two or three weeks after operation for appendiceal abscess, secondary operation being of no avail, and one died of inanition nine days after operation for extensive abdominal adhesions, due to inability to retain food or drips. This case, the case of intestinal obstruction and the case of suppurative hepatitis, were gas cases; the others were ether cases.

The death on the table requires detailed consideration. The patient was an exceedingly stout woman, about 65 years of age, in weakened condition from a strangulated umbilical hernia. She was very tympanitic and dyspneic, and could breathe with some degree of comfort only when sitting up. She had previously had a hypodermic of morphin and strychnin. The operation was started with local analgesia, and the constriction found before gas and oxygen were commenced. The patient took the anesthetic well and was anesthetized quickly. She retched a little, but did not vomit, in about ten or fifteen minutes. Pulse was 96, of fair volume, and regular. Everything progressing nicely, I did not lower her head, as probably I should have done, not wishing to disturb the operator. When the resection was almost completed there was a regurgitation of two or three quarts of fluid with a strong fecal odor, patient became deeply cyanotic, ceased breathing, then gasped once or twice,

and the heart stopped beating in a very short time, in spite of all efforts to revive her, such as intra-tracheal insufflation of oxygen, artificial respiration and tracheotomy. Condition was diagnosed by the surgeon as "fœcal drowning," cases of which have been reported by others. We can hardly term this an anesthetic death, though the slight cyanosis of the gas oxygen anesthesia may have been a contributory factor. The lowering of her head and insertion of a stomach tube at the beginning would no doubt have averted the outcome. This I did in a later similar case with good effect.

As noted above, I have card-index records of 356 cases, kept as accurately as possible, with special regard to the post-operative vomiting and to the urinary changes. The cases were practically all prepared in the usual manner—a purge, castor oil, as a rule, the afternoon or evening before; one or more enemas in the early morning, liquids, except milk, up to 4 a. m., nothing after 4. Some of them had preliminary hypodermatic injections of morphin, or of morphin and atropin; this was the rule in the gas-oxygen and gas-oxygen-ether cases. Two or three were given xv grains chloroform by mouth one-half to one hour before operation, as it is claimed to diminish post-operative vomiting. No opinion, of course, can be based on these few cases, but it did not seem to be of any benefit to them.

In considering the ether cases I am firmly convinced that the warm-vapor method is much superior to the cold-drop method. The patients, as a rule, seem to do better during the administration. The respiration is quieter and more natural, there is less tendency to mucus collecting in the throat and proving troublesome, and there is not as much "jaw trouble" as with the drop method. I find it easier to maintain an even anesthesia with a minimum of the anesthetic, though I cannot report the marvelous reduction in the amount of ether that has been reported by some. After operation the patients seem to have a better convalescence and to suffer less shock than those anesthetized by the drop method.

Pulmonary complications of any serious consequences were not encountered in my vapor cases, if we except the case of the 70-year-old patient, much weakened, who died in forty-eight hours. A diagnosis of broncho-pneumonia was made, but this case would not have been a fair test of any method. Another case, a gall-bladder case, developed a transient pleurisy.

I do not find that post-operative vomiting or urinary changes

differ materially from the results after the drop method, though some observers state differently, not, however, producing many statistics to substantiate their claims. Some writers, notably Seelig² and Cotton³ and Boothby,³ claim that anesthetic vapors cannot be warmed to stay warm. Others, for example, Gwathmey⁴ and Teter⁵, claim the opposite, and Gwathmey, in a series of careful experiments, demonstrates that it can be done. He also states that the rectal temperature of patients anesthetized in this way at the end of an operation is one or two degrees higher than in the case of the drop method.

I use the Caine apparatus, which is much superior to others that I have seen. In order to get the full benefit from its use, the heater should be boiled for twenty to thirty minutes, and the tube to the cone should not be too long nor of too small bore.

Various agents were used as preliminary to ether. In the earlier cases I used ethyl chloride, but found this unsatisfactory. It often causes an abnormally rapid and labored respiration, which may persist throughout the operation, and has a marked tendency to produce "bronchorrhea"—a bad name, by the way, for mucus in the throat. Besides, I am convinced that it also increases the frequency and severity of postanesthetic vomiting. At present I use it very seldom, and use only enough to produce unconsciousness.

Chloroform was used as a preliminary in a few cases, but only for a brief time, as the danger of sudden death from this agent seems to be greatest during the second stage. Of late I have used nitrous oxide with gratifying results. This, followed by warm ether vapor, seems to me to make an ether anesthesia as agreeable and as safe as is possible at present.

Here let me urge, parenthetically, the necessity of at all times keeping a free air-way and avoiding cyanosis. With the warm ether vapor we do not have as much trouble as with the drop method, but we do have some. The recent article by Gatch, Gann and Mann¹ emphasizes the dangers of cyanosis in the Trendelenberg posture, especially when accompanied by struggling or compression of the abdominal viscera.

Vomiting: Records of 45 drop-method ether cases show these figures: None, 13, or 28.8%; transient, 15, or 33.1/3% moderate, 14, or 31%; severe, 3, or 6.6%. Records of 170 ether-vapor cases are as follows: No vomiting, 52, or 30.6%; transient, 56, or 32.9%; moderate, 46, or 27%; severe, 16, or 9.4%. The records of these

cases give 62% of the drop-method cases and 63% of the vapor cases in which vomiting was absent entirely or of every little moment. The tonsil and similar nose and throat cases were not included in these figures, as they nearly all vomit bloody fluid. The figures for these cases are: No vomiting, 7, or 11%; transient, 15, or 24.6%; moderate, 39, or 64%; total, 61 cases. For comparison I secured records of 29 drop-method cases given by other anesthetists. The figures are: No vomiting, 5, or 17%; transient, 7, or 24%; moderate, 11, or 38%; severe, 6, or 20%. Twelve, or 41%, had little or no trouble with vomiting.

I observed that many cases were not troubled with nausea or vomiting till their stomachs were insulted by such things as Ducro, orangeade, etc. These things have no food value, and, when we desire to give our post-ether cases anything to drink, let it be water, at least for the first eighteen or twenty-four hours.

Urinary Changes: I have complete records of only 11 drop-method ether cases. Ten were normal before operation, 1 had casts. After operation 6 were normal, 3 had casts, and 2 had albumen. Of the ether-vapor cases I have records of 101, in which the urine was examined both before and after. Eighty-two were normal before operation, 8 had casts, 10 had albumen, and 1 had a trace of sugar. After operation, 54 were normal, 38 had casts, 8 had albumen alone (12 had both casts and albumen), and the patient with a trace of albumen before operation had a trace after. Deducting from the 46 abnormal after operation the 18 abnormal before operation leaves us 28 normal before operation becoming abnormal after, or 34%. I took especial pains to examine the *first* post-operative specimen, as I have observed that in many cases this specimen will show casts, subsequent ones being negative. In a number of cases normal before operation, however, casts persisted for several days after. I remember one case, a boy at the Charity Hospital, in whom the casts persisted up to the day of his discharge. I also had two cases in this series not reported in these 101 cases, the urine not being examined previously—emergency cases—which developed most intense nephritis after the operation, one passing blood, albumen and casts, and one developing partial suppression. Both recovered.

During the past four years I have seen four deaths from suppression of urine, one from suppression and hepatic toxemia, and one from pneumonia, all after ether, one being a gas-ether case. I

have also heard of four other deaths, one from suppression, one from acute hepatic degeneration, and one from acopia, shortly after the operation, all after ether anesthesia. Total, 10. There have no doubt been others of which I have not heard. When we consider that during this time there have been given between 35,000 and 40,000 ether anesthetics in this city, we realize that the after-effects of ether, especially the renal after-effects, deserve more consideration. I think the remedy lies chiefly in a more careful study of our cases prior to operation. Most of these suppression cases showed abnormality before operation. Not every case of casts before operation shows severe changes afterwards, but when a patient is fifty or sixty years old, with slight or moderate arteriosclerosis, blood pressure above normal and a few hyaline casts in the urine, it is certainly in order to study the functional ability of his kidneys, say with the phenolsulphonthalein test. J. Fisher⁶, in a study of 550 patients with high blood pressure, gives these figures: 62% of patients with pressure above 140 and 80% of those above 160 had signs of pronounced kidney disease; 42 post-mortems in the series showed kidney disease in every one. It seems, from observation, that an acute nephritis stands ether much better than a chronic one. Perhaps some of these cases of suppression would have done better under chloroform. M. H. Fisher's⁷ treatment of these cases along the lines of his colloid-chemical theory has saved some, and is certainly worthy of a trial here.

Considering the gas and gas-ether cases with reference to vomiting, my figures are as follows: In the pure gas cases, of 47 of which I have record as to vomiting, there was no vomiting in 24, or 51%; transient in 13, or 37%; moderate in 8, or 17%; severe in 2, or 4%. In 25 gas-oxygen-ether cases there was no vomiting in 10, or 40%; transient in 8, or 32%; moderate in 5, or 20%; severe in 2, or 8%. That is, 88% of the pure gas cases and 72% of the gas-ether cases had practically no trouble from vomiting. Several of these cases, however, had been vomiting before operation, and we cannot expect gas to stop them.

Regarding urinary changes, while nitrous oxide *per se* is non-irritant to the kidneys, yet I found casts in several cases after gas, where there were none before. Bearing in mind that we have in these cases an increase of CO₂ blood content, and hence an increased acidity, we are forcibly reminded of Martin H. Fisher's⁷

colloid-chemical theory that nephritis is due to an increased acidity of the kidney tissue. However, the irritation excited by the gas-oxygen anesthesia is not nearly as severe as that after ether, and is very transient. Here are the figures for gas-oxygen: Normal before, 15; normal after, 13; albumen before, 4; albumen after, 4; casts before, 5; casts after, 7. One case is of especial interest, a patient 56 years old, good physical condition, few hyaline casts, no acetone, before operation. Operation, amputation of breast; time, one hour and twenty minutes. *First* post-operative specimen showed many hyaline, finely granular and granular casts, no albumen, acetone present. Voided freely and did not vomit. No ether used. In 11 gas-oxygen-ether cases the figures were: Normal before, 10; casts before, 1; normal after, 8; casts after, 3. The case showing casts before and after showed a marked increase in the number present after operation.

In both the ether and the gas cases I made several observations on acetone before and after, also in one spinal case. These limited observations agree with those of Chalfaut,⁸ who reported 750 cases, concluding that there is no relation between the acetone and the vomiting, except, of course, in case of acidosis or hepatic degeneration. Seventy-six cases were examined for acetone after operation; it was found in 50. Forty-two of these 76 were examined before operation also; acetone was found in 7 before operation and in 22 after operation. The gas cases show acetone after operation, as well as do the ether cases. One spinal case, prepared for a general anesthetic, showed no acetone before, but a small amount after. In these cases the *first* post-operative specimens were examined as soon after passage as possible.

One of the main contentions of the advocates of nitrous oxid oxygen anesthesia is the marked diminution of shock which is so prominent a feature after using this agent. Practically all the patients to whom I have given it have suffered little or no shock, and have had smoother convalescences than the ether cases. My longest case under pure gas-oxygen was two hours and thirty-seven minutes; pulse at start, about 85; at end, 130. As a comparison, I selected pulse records of eleven patients under ether for from one-half to two hours, and eleven nitrous oxide-oxygen patients for similar periods, irrespective of the operation. The average pulse of the ether cases at the start was 82; at the end, 104. The averages of the gas cases were 81 and 88, respectively.

CONCLUSION.—No definite conclusions can be based on this report of a few hundred cases, but we can formulate several opinions. We should realize that ether, by its after-effects, produces a very considerable mortality, no higher here than elsewhere, for ether is given as well here as in any other city of this country. More attention should be paid to the use of local analgesia in selected cases. Spinal analgesia is frowned upon by most of the authorities, but many cases present themselves where it is indicated. The same is true of chloroform. Nitrous oxide-oxygen is certainly the anesthetic of choice in cases of severe shock or hemorrhage, and in cases where necessary relaxation can be obtained. Rectal work and tonsillectomy, as performed here, cannot at present be done under nitrous-oxide-oxygen alone; furthermore, most laparotomies in the average fairly vigorous patient require ether as an adjunct.

In conclusion, I wish to thank the several surgeons for kindly permitting me to study their patients and charts before and after operations, and also the various members of the Touro resident staff for their cheerful coöperation.

NOTE.—Since reading the above paper I have made an interesting experiment on the temperatures of ether as given by the warm-vapor and cold-drop method. First, the heater of the Caine apparatus was boiled for about one-half hour. Then the apparatus was rigged up just as for an anesthesia, with a three-foot tube to the cone. The temperature of the vapor at the end of this tube was 90° F. Second, using an ordinary cone, placed on a thick, folded towel, with the same thermometer placed on this towel under the cone, ether was dropped at the rate usual during the early part of the surgical stage of anesthesia. By the time two ounces had been dropped on the cone, being careful that none dropped on the thermometer, the temperature registered was 36° F. The surrounding conditions were practically the same as in an operating-room. Of course, respiration would raise the temperature under the mask, but it seems clear enough that this procedure would abstract heat from the body.

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THE USE OF HEATED ETHER VAPOR AS AN ANESTHETIC.*

By HARRY E. NELSON, M. D., New Orleans.

In the fall of 1909 Dr. Ansel M. Caine, of New Orleans, designed an apparatus for the administration of warm ether vapor as an anesthetic. The apparatus was described in the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* in May, 1910.

The apparatus consists of a small foot bellows, a glass receptacle for the ether (the ether bottle), and a small metal heating-tank. The ether bottle is fitted with a rubber stopper containing two perforations. Into one of the perforations fits a metal plunger with small metal drum attached to the end within the ether bottle, while the end without the bottle is connected with rubber tubing to the foot bellows. Into the second perforation fits a small metal tube connected by means of a short rubber tube to the heating-tank.

The heating-tank is of metal and contains several feet of copper tubing arranged in a coil. One end of the coil is connected with a short rubber tube to the small metal tube of the ether bottle, while the other end is connected with a short rubber tube which delivers the warm ether vapor to the patient.

The copper coil of the heating-tank, through which the ether vapor passes, is surrounded with sodium acetate, which is liquified by immersing the heating-tank in boiling water for a period of from fifteen to thirty minutes just before using.

The apparatus is operated in the following manner: By working the foot bellows gently, air is forced into the ether bottle by way of the metal plunger, the drum of which is now high above the surface of the ether. The ether vapor passes from the bottle through the heating-tank and is warmed, and then passes on to the patient through a short rubber tube, to the end of which is attached a Gwathmey mask, or a special mouth or nose-piece, according to indications. The amount of the ether vapor given to patient is regulated by the action of the foot bellows, and, if necessary, by compressing the rubber tubing connected to the ether mask or special mouth-piece. The position of the metal drum in the ether bottle is usually in contact with the surface of the ether, as it is from there that vaporization takes place.

Lately there has been devised a hot-water jacket, consisting of

* Read before the Orleans Parish Medical Society, May 12, 1913.

a metal cup into which the ether bottle may be placed and surrounded by hot water. This is of service in prolonged anesthesia, where there may be some trouble in the vaporization of the ether.

The apparatus was designed originally to fulfill the requirements of the throat surgeon—namely, a method of administering ether continuously, thus enabling the surgeon to perform his work uninterrupted. It fulfills this purpose admirably.

About three years ago I began administering warm ether vapor, by this method, to throat cases—*i. e.*, tonsil, adenoid, superior maxillary sinus operations and the like, using, in these cases, the special mouth-piece. During the past eight months I have used it in all cases and have used the Gwathmey mask in all, except the throat cases.

Up to date I have administered the warm ether vapor, with this special apparatus, to 648 patients. Observations made in these cases, as compared with those made in the administration of ether in 697 cases in which the ether vapor was not heated, convince me that the decided advantage in giving the ether vapor by this method has been a prevention or a marked diminution in the hypersecretion of bronchial mucus.

One of the objections made to the use of this special apparatus has been that the amount of ether vapor delivered to the patient cannot be regulated. My experience has been that the amount of anesthetic vapor can be easily controlled and that anesthesia can be gradually induced, and an even plane of anesthesia maintained throughout the operation.

There are on the market many kinds of apparatus designed for the purpose of administering warm ether vapor, but none seems to fulfill all the requirements as does the Caine apparatus. It is portable, simple and inexpensive, occupies very little space, does not easily get out of order, and may occupy a position beneath the head of the operating table, where it can be easily operated by the anesthetist. A sufficient amount of ether may be placed in the ether bottle to last during the entire operation. The anesthetist's hands are free, thus enabling him to feel the pulse or to pull the jaw forward or sponge the throat when this is necessary.

It has been my experience that it is an advantage, especially in throat operations, to begin the anesthetic with the heated vapor, because in those cases in which the anesthetic is begun with the unheated vapor the patient may get a hypersecretion of bronchial

mucus before the anesthetist is ready to shift to the warm vapor.

If the employment of warm ether vapor has the advantage of preventing or reducing hypersecretion of bronchial mucus—and experience has convinced me that it does possess this advantage—it is indeed a method worthy of consideration.

Orleans Parish Medical Society Proceedings.

MEETING OF APRIL 28, 1913.

DR. E. M. DUPAQUIER reported

A Case of Enlarged Heart in a Child.

I wish to show you this boy, aged 15, of undeveloped stature, who, for five years back, has presented an unusually large heart for his age. The lack of proportion in size between the chest and the heart is striking. Note the bulging of the whole left side of the chest. Note the apex beat reaching the anterior axillary line, indicating that the apex is really further back yet. The outline of the heart is traced by my index. It extends beyond the right edge of the sternum here. The lower limit of the liver and stomach is much below the umbilicus here. There is a plain systolic tricuspid murmur, no mitral murmur co-existing, a systolic reduplication and a systolic venous pulse. Retraction of the intercostal spaces is not sufficient to indicate symphysis of the pericardium, and there is no water hammer pulse. So, the enlarged heart, here, is not connected with the two usual causes of enlarged hearts.

The repeated attacks of pulmonary congestions and hemoptysis are easily explained; yet, they were mistaken for signs of tuberculosis by others some time ago.

The child is living rather comfortably, under the circumstances, and no drugs can be used to help him in a radical way. The only hope is to make room for the heart by developing the chest. My object is merely to show you the patient before undertaking a course of gymnastics with the chest development in view, and to show the results some time hence.

The classical passive gymnastics shall be followed and a new

departure in mechanical treatment innovated, namely, seeking relief from pressure by changes in attitudes and postures, such as suspension with head and arms down, by degrees.

Any suggestion in the direction of the mechanical treatment mentioned shall be welcome.

DISCUSSION.

DR. ASHER: I saw a case, an exile to Siberia, who had the most enlarged heart on record. He lived six or eight years after I saw him. He was 33 years old then, and his heart had become enlarged under the hardships of his exile. This is the only case of which I know that one could stop his heart beating at will.

DR. E. D. MARTIN reported the following cases:

CASE I. *Cholelithiasis, Complicated by Pancreatitis.*—Middle-aged woman, with history of gallstones. I suspected stone in the common bile duct. Found no stone there or in cystic duct, but found 32 stones in the gall-bladder and practical obliteration of the gall-bladder. The head of the pancreas was very much enlarged, damming the bile back into the liver. I suspected cancer of the pancreas or acute pancreatitis. Could not pass the sound through into the intestines after cleaning out the gall-bladder. I removed the gall-bladder and the cystic duct and found the common duct patulous.

Post-operative History: No bile appeared through the drain for three or four days. This drain was a rubber tube, into which I had drawn the duct. Drainage was established and the jaundice has cleared up a great deal. The stools were clay-colored, but are now normal. I think the liver was not secreting, due to this damming back. If the pancreatitis is acute and not chronic the drainage should relieve the condition.

CASE II. *Appendicitis, with Jackson Membrane.*—This was a complete Jackson membrane, the first that I have seen. I made a gridiron incision and found this membrane entirely surrounding the head of the cecum, supporting it as in a sling. The appendix was retrocecal and covered by the membrane. I split the membrane, found the appendix and removed it. It was inflamed and full of pus. Some authors advise removing these membranes; I think this is a mistake, as more adhesions may form. I believe in removing or cutting away only such adhesions as may be interfering with peristalsis.

DR. SIMONS' PAPER ON THE EINHORN DUODENAL TUBE.

DISCUSSION.

DR. ASHER: Dr. Simon states that he differentiates the fluid obtained whether gastric or duodenal, by the Congo red test. It seems to me that the tube would fill with stomach contents in its passage, and hence the first fluid aspirated would be the stomach contents.

DR. LYONS: In view of the fact that Beck reports that some of his cases vomited on swallowing the tube, it is rather difficult to see wherein the method is superior to the old one of taking the solol-coated pills by mouth.

DR. SIMON (in closing): Dr. King's point is well taken. We give the bucket on an empty stomach. This, together with its shape, would tend to obviate the possibility of gastric contents being present. The bucket, however, is not as effective in obtaining duodenal contents as the tube. I have passed the bucket in some cases, pulled it up the next morning and found blood stains on the string from an ulcer near the pylorus. Answering Dr. Asher's question, I would say that we always introduce a little water through the tube first, not aspirating until we are sure that the tube is in the duodenum.

MEETING OF MAY 12, 1913.

PAPERS ON ANESTHESIA BY DRs. CAINE, KING, DELAUP AND
NEELSON.

DISCUSSION.

DR. GENELLA: Does Dr. Caine consider it proper to offer a man who has a large practice a flat rate per patient, irrespective of the patient's ability to pay?

DR. PARHAM: In regard to the selection of the anesthetic, it has been a rule for the surgeon to make the choice, chiefly because he has made a study of the patient and knows his condition better than the anesthetist; but if the anesthetist is a man of experience and has studied the patient before the operation, the anesthetist's opinion should be considered. My anesthetist is expected to see and study each patient before operation and to observe the patient afterwards, in order to profit by the observations.

For the anesthetist to do his best work he should see the patient before the operation and if necessary have a hand in directing the preparation. In regard to the selection of the anesthetic I am satisfied that our methods must be revised. We gave chloroform until we had deaths from it. I saw four chloroform fatalities on the table in one winter. Now we use ether, but it has its drawbacks, especially in long operations. In order to diminish the amount of ether used I prefer to start with ethyl chloride or nitrous oxide, preferably the latter. One disadvantage of ethyl chloride, which Dr. King did not mention, is severe respiratory embarrassment, which I have observed in a few cases. I have used nitrous oxide oxygen in many cases, in some of these using a little ether also. I have used Dr. Crile's method of anoci-association in some cases and am using it more and more. I have found it especially useful in "stealing the thyroid gland," as Crile recommends.

DR. W. T. RICHARDS: No one has mentioned the method of giving morphine as a preliminary. I give morphine, hyosine and cactine, with good results. I use the Gwathmey method entirely, as given by Dr. J. M. Koelle—we have had over 1,100 cases by this method. As some take chloroform vapor better than ether vapor, we can easily switch from ether to chloroform with this apparatus, and have no trouble.

DR. CHAVIGNY: I would like to speak of the use of local analgesia in abdominal surgery. I saw some of this work in Vienna last summer. I saw three partial gastrotomies and two gastrojejunostomies under local, with very little ether in some of the cases. He gave morphine, one-quarter of a grain beforehand, and injected the nerves as well as possible. The result has been marvelous. I have used it in several cases, with good results, very little ether being required.

DR. A. C. KING: I recall the use of chloroform about fifteen or twenty years ago and the awful experiences we had. We always started an anesthetic with one pound of chloroform and the anesthetist never seemed to be afraid to use it. We should have been glad that we lost no more patients than we did. I advocate giving morphine and atropine before the operation, this obviates the bronchorrhea and lessens the danger of post-operative trouble. I prefer besides this to start the anesthetic with a little chloroform and then continue with ether. I have been very favorably impressed by the few nitrous oxide cases that I have seen. The lowered mor-

tality and immediate awakening and lessened after-effects are very pleasant, both for patient and relatives. It seems to me that in time nearly all operations can be performed under this anesthetic.

DR. CAINE (in closing): In answer to Dr. Genella, I will say that there is no ethical question involved, but that a man doing no other work cannot afford to anesthetize all cases for a small fee of \$5 or \$10. Of course it is his duty to anesthetize a charity case if he is needed. In regard to nitrous oxide, the administration of this agent requires constant practice, and it should not be given by the occasional anesthetist. I gave nitrous oxide with about two ounces of ether for laparotomy, one of the cases referred to by Dr. King. The patient died of hepatic toxemia similar to that of chloroform. Another case in which only nitrous oxide and oxygen were given, had been under the anesthetic about an hour and was doing nicely, when she stopped breathing for ten or fifteen minutes and was only kept alive by artificial respiration and oxygen inhalation. She revived all right and the operation was completed, but this patient was absolutely crazy for about a month afterwards. This is a safe anesthetic, but it should be given very carefully and by men who know their business, and with plenty of oxygen. If relaxation cannot be obtained, we must use ether sufficiently to relax. Surgeons who are not used to nitrous oxide should be warned about this muscular rigidity. I think the anesthetic used should be mutually agreed upon by the surgeon and the anesthetist.

DR. KING (in closing): We should endeavor to choose the proper anesthetic for each case, thus getting better results than by using any one agent to the exclusion of all others.

DR. E. D. MARTIN: How can you tell beforehand what anesthetic a patient can best take?

DR. KING: We cannot always tell, but we should do the best we can in the light of our present knowledge and guided by past experience. The anesthetist should always be ready to change if necessary. For instance, I very seldom give nitrous oxide without having ether ready for instant use, but I only use ether when absolutely necessary. When giving nitrous oxide I always give enough oxygen to maintain a good color.

DR. NELSON (in closing): In regard to the use of morphine and atropine as a preliminary I can say that I used it for three years as a routine, but now I use it only in selected cases. I give it to patients more highly nervous and worried, but it certainly tends to

promote post-anesthetic vomiting. I prefer the Caine apparatus to the Gwathney, because the latter does not retain the heat for as long a time as the former; furthermore, if we want to use chloroform, we might just as well use it by the drop method.

DR. H. P. JONES: If morphin is used, it should be fresh, as it is partly converted when old into apomorphine. This might explain the increased tendency to vomiting after the use of morphine.

Louisiana State Medical Society Proceedings.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

(The papers are published in full in another part of this issue.)

DISCUSSION OF PAPER BY DR. HARRELL.

DR. GEORGE S. BEL: I would like to ask Dr. Harrell whether he made the statement the eye trouble was due to the toxin alone, or that the organisms remained in the urethra, and were not circulating throughout the system?

DR. HARRELL: No, there was a general invasion by the organism.

DR. BEL: A patient of mine had gonorrhoea, and six weeks following it he had an acute general septicemia, with acute endocarditis and pericarditis. The gonococcus was isolated from the endocardium and pericardium, showing conclusively that the germs invade other parts of the system than the urethra. The organisms were found in the tissues of the heart. This patient had a small aneurism of the ventricle which perforated into the auricle and caused sudden death.

DISCUSSION OF PAPER BY DR. DUPUY.

DR. LEON J. MENVILLE: The paper read by Dr. Dupuy is one of interest to the general practitioner, because it is to him that these cases first go, and the question of lymphatic involvement is likewise one of great interest. I recall the case of a child, six years of age, who had enlargement of the cervical glands, and this case had been diagnosed by a reputable physician as tubercular adenitis. Later on a diagnosis of sarcoma was made. When the proper diagnosis was made it was found that these enlargements

of the glands were due to adenoids, upon the prompt removal of which the glands subsided.

Another very important part of the paper, and one to which I should like to call attention, is the argyrol treatment, which I have been using two or three years very successfully through the suggestion of Dr. Dupuy. One case was that of my own child; upon his advice I used argyrol locally in the manner just described, with marked results.

General practitioners are confronted with similar cases, and they are at sea as to the cause. Necessarily, if we make a diagnosis, for instance, of tuberculosis adenitis, when we have infection due to an adenoid condition, the chagrin comes to us when the patient is sent to a specialist who makes a proper diagnosis. The question of adenoids is one of continued interest and ought to be discussed especially by practitioners in the country, because we know that there are a certain class of people in the country who are so affected, and when we tell them they should receive surgical treatment and that they should go to New Orleans to the proper institution, have a certain repugnance to going. Perhaps, they have not the financial means of going there. When the general practitioner takes up these cases he should be prepared to give them the best possible treatment, and in my limited experience this has been the argyrol treatment, and whenever the acute inflammation subsides we should resort to surgical treatment.

DR. J. A. CARUTHERS: The doctor's paper is of especial importance to the general practitioner, because the specialists all know these conditions exist and how to handle them. It is of special interest in that from 40 to 60 per cent of the children in our public schools to-day are affected with adenoids, and when we realize that fully half of the chronic catarrhal conditions of the middle ear met with in later life are due to these conditions neglected in childhood, it is evident that they should be relieved as early as possible. If they can be stopped in infancy it is of infinite importance. These acute inflammatory attacks will cause suppuration in the middle ear, adhesions will form which are impossible to relieve later on in life. I have just examined 50 children in the public school here, and of that number 37 or 38 had enlarged pharyngeal tonsils.

As regards treatment, I do not believe that argyrol is very much of an astringent, or a very powerful antiseptic, though it does thor-

oughly cleanse the mucous membrane, and in that way relieves the irritation. I follow the argyrol with dilute adrenaline all the time, which relieves the congestion.

DR. L. J. GENELLA: One hundred per cent of children in the ninth year of age have postcervical adenitis. Between the ninth and eleventh year the percentage is less, and between 11 and 14 we find very few of them. In making a diagnosis of postcervical adenitis, one should be slow in attributing it to a pathological condition in children 7 to 9 years of age.

DR. R. C. LYNCH: There is one point in the paper that has not been touched upon, and if I may be allowed to digress a little, I will consider the subject as it appears in adults. We are all accustomed to associate the presence of hypertrophy or disease of the pharyngeal tonsil with the infant or young child. I believe in New Orleans recently we have been in the midst of a mild epidemic of acute infection of the pharyngeal tonsil in the adult, giving rise to severe symptoms of toxemia. These cases have presented the symptoms that have been outlined by Dr. Dupuy, but of such severe character as to cause myalgia, cervical pain, enlargement of the cervical lymph glands, the presence of streptococci in abundance throughout the pharyngeal tonsil, etc. I mention this phase of the subject for the purpose of raising the question whether or not this peculiar epidemic or increase in the number of cases that have come to my attention in the clinic and in my private experience in New Orleans may not be the forerunner of some outbreak of meningitis. We know that the nasopharynx is a point of special selection for the development of these organisms, and I have wondered whether this acute infection, occurring in the nasopharynx, and limited to that spot, may not later be the background, as it were, for the further development of an outbreak of meningitis. These patients suffer intensely from headaches, elevation of temperature, cervical gland involvement from a general toxemia, and inspection of the pharynx reveals absolutely no pathological change. Rarely, if ever, is there injection of the posterior pillar, not much involvement of the posterior pharyngeal wall, and to the casual observer this condition might be overlooked. There does not seem to be anything special in the nasal discharge to attract attention, and unless one examines the naso-pharynx with the head mirror and with the rhinoscope he is likely to overlook this phase of the disease. This might be called malarial or some other toxic infection, and the

source go entirely unknown. Cultures taken from the ear show in many instances absolutely pure cultures of streptococci, occasionally staphylococci, and sometimes pneumococci. This is a phase of adenoid infection I would like to have discussed. I realize that the doctor probably omitted it on purpose, so as not to be confusing, but I think in view of the fact that we have seen a number of cases in the clinic and private practice, it should be dwelt on at some length.

DR. G. C. CHANDLER: Dr. Dupuy has well chosen his subject, and has ably handled it. This is not a simple disease, in my opinion, and it is one that does more to prevent proper development of the human race than any disease we have to contend with. The many injuries that it causes locally in the ear, in the enlargement of the glands, etc., are small in comparison to the injury to the constitution of the sufferer. Those of you who have tried to use your mind when you have a cold and your nose is stopped up realize how impossible it is to concentrate your attention and to learn. Just imagine a child in that condition all the time. What chance has it to develop mentally and physically into a strong and useful citizen? In addition to that these adenoids are right behind the nose where all the germs we breathe are absorbed and taken into our system; it forms a nest for the development of all kinds of diseases.

I have had cases come to me that were constantly in the hands of the regular practitioner on account of various ailments. Upon removing the adenoids these patients became healthy at once, no further treatment being given.

I do not think much of medical treatment of adenoids. Operation for their removal is so simple and quickly done that I favor it at once. After medical treatment, even if successful, the gland is still there, the probable changes in it from previous inflammation and enlargement, renders it susceptible to a fresh inflammation, and as long as it remains it is a source of serious danger. I have always felt that the medicinal treatment of adenoids was a waste of time. I have known them to be treated for a year and the patients improved, and in a few months they would be in the same condition they were before treatment.

Another thing: if you treat adenoids, before you get through the patient's parents are so tired that they will quit, and the children will be left without relief. My opinion is that the best is to remove them.

DR. DUPUY (closing): Nobody contends that we are going to treat adenoids medically. One of the objects of my paper was to fix our attention on the acute and subacute infection, especially in early life. I would by no means leave the impression that we are going to inaugurate a campaign for the medical treatment of adenoids.

Whenever the symptoms show chronic adenoid hypertrophy, with nasal obstruction, with symptoms directed towards the ear, resort to the radical measures of surgery. We must emphasize that we have such an affection as acute adenoiditis in early life; that it is oftentimes so obscure in its general features that it may escape observation.

I wish to lay stress on the point that there is a distinct enlargement of the cervical glands in the acute infection of the adenoids. Sixty per cent of the school children in Baton Rouge are affected with adenoids, as is stated by Dr. Caruthers. Dr. Caruthers has been strenuous in his efforts to secure this data. I am quite certain from previous experience that argyrol is mildly antiseptic.

I laid great stress on the symptom complex of acute as it occurred in adenoiditis of early life; not infrequently, I think the condition is dubbed syphilis. A snuffling baby on his sixth day of life is regarded as a suspect, yet it may prove to be a congenital enlargement of the adenoids, which readily gives in to local treatment.

DISCUSSION ON THE PAPER OF DR. LYNCH.

DR. E. S. HATCH: Dr. Lynch has asked me to speak on this subject from the point of joint conditions. There is no question in the minds of those of us who are doing joint work that these conditions exist in a large number of cases. That is to say, you get certain forms of joint trouble not gonorrheal and not inflammatory rheumatism, in which you find some focus of infection in the sinuses or following trouble with the genital organs, or some condition within the bowel. In this particular case it shows a distinct condition, and anyone who has seen it would make the diagnosis of arthritis of the knee. But Dr. Lynch has explained that we found no tuberculosis of the knee at all. In September there were two spots in the head of the tibia which showed apparently destructive changes. December the 2nd, according to other pictures, the condition was the same. In December the condition cleared up and showed the knee to be absolutely normal.

We see two types, one type in which there is infection of the

knee joint due to intoxication, and one in which the bacilli get into the joints themselves. I believe in this case the bacilli were in the joint. What type of bacilli happened to be in the joint we do not know, but it was certainly a more marked infection than we usually see.

I saw a case yesterday morning in which a lady had acute sinusitis followed by arthritis of the right hand, the right elbow and right shoulder, which has persisted. In that case we are getting the result of infection, but there are no bacteria in the joint.

The main treatment is to get rid of the source of infection. Dr. Lynch has gone into that. If you do not clear up the infection you will have a vicious circle all the time.

DR. JOSEPH D. MARTIN: I have seen most of these cases and have been much interested in them. I have noticed about these attacks of maxillary sinusitis that they do not seem to come on in cold weather as much as during sudden changes of mild weather. They are not severe at times. They often do not need to have the nose attended to. They have a full feeling about the face, and the voice is somewhat changed. If patient lies on the opposite side and blows the nose and can blow the antrum clear, he will be able to sleep until the next morning.

I think we find a great many cases of so-called rheumatism are due to some infection of the antrum. The first case had repeated attacks of rheumatism, usually in the left leg and right shoulder. Finally, last June the patient had a severe attack of so-called rheumatism in the cervical vertebræ so severe that he spent a month in Virginia and came back in July feeling well, but a month later he had a severe attack in the left knee. It followed a game of golf, and was attributed to some injury or twisting of the knee, which had been injured many years ago. After a long time, during which the patient was treated for the local trouble, an X-ray was taken, a diagnosis of probable tuberculosis was made. Following the slight attack of antrum trouble, the question of the antrum came up, and at Dr. Elliott's suggestion the patient went to Dr. Lynch and had the antrum washed out. Just a small quantity of pus was washed out. The patient had been in Hammond for one month without gaining in weight. His pain disappeared five days after a radical operation was done. After the operation in New Orleans the patient returned to Hammond and gained nine pounds in eighteen days. The knee improved in proportion, and continued

to improve. At the present time the patient is well. There has been no attack of rheumatism since operation. At one time there was a slight feeling of the old rheumatic pains in the left limb. The antrum was washed out and the pains disappeared immediately. For five years previous to operation there was not a month that the patient did not have a rheumatic manifestation somewhere, especially in the vertebræ.

The other cases I have seen with Dr. Lynch have all improved following operation. I think wherever we have cases of rheumatism, where a patient complains of headache, the first thing that should be done is an examination of the nose with the transilluminator. And frequently we will find trouble in the antrum and sinuses which otherwise might be overlooked.

DR. JOHN L. SCALES: I have been much interested in this paper, in the reports and comments. I would like to emphasize the fact that there are many things not dreamed of in our philosophy that are worth investigating, and it brings to mind the fact that all men who are doing any work are finding things in their work. Now and then we get cases that we cannot understand. I believe, as a rule, we are satisfied when we have made an accurate diagnosis and have instituted proper treatment for conditions about the sinuses, but we are likely to stop there without pursuing the question of remote relations. I believe we have not, as a rule, looked to the sinuses as the cause of any of these remote conditions Dr. Lynch has brought out so graphically. It is interesting in that it enlarges the field and perhaps puts us in the position of removing a source of trouble we never would have thought about before. I believe the only treatment of these cases is radical. I do not believe in temporizing. It is a waste of time, and we wear ourselves out and the patient, too, unless we institute radical treatment to begin with.

DR. HOMER DUPUY: A question which we may ask ourselves is, why should the antrum bear the brunt of the blame? Why not the frontal sinuses, why not the ethmoidal cells or the sphenoidal sinus? That question is not settled in my mind. Dr. Lynch has cited cases in which the antrum seems to be infected. Now, when the antrum is filled with pus, it affords a large surface for considerable absorption. But the antrum having an outlet away above its floor, with a large surface for absorption, which two facts may explain why the antrum becomes so easily infected, while the simple process

of suppuration gives rise to remote infections. We should emphasize the point that if we stop at the antrum our efforts will be doomed to failure. I have obtained brilliant results in one case by washing out the antrum, and the joint troubles cleared up. One week later the patient returned with more pus in the antrum. There was no pain, we kept on washing the antrum, and still the trouble continued. Why? Because I had neglected to examine the ethmoidal cells, they were draining drop by drop into the antrum, and then the trouble recurred. It is very important to insist that while the antrum apparently is made to bear the brunt of blame, it is well to remember that the ethmoidal cells are frequently as much to blame because the antrum acts as a drain or a reservoir for the cells.

With reference to asthmatic attacks, it is well known that if you treat them as a nasal reflex you will cure a great many cases. Four years ago I experimented with cauterization of the nasal septum for the relief of asthma. We must emphasize very strongly the neurotic factor in asthma. We cannot escape it. In many instances, if these patients come to you hoping to be cured, after having heard of good results in other patients, you have the mental influence. The mere fact of cauterizing the nasal septum with a cure of asthma does not prove that you are dealing with the essential cause. Asthma may be toxic or reflex. The latter form yields to various therapeutic measures.

DR. LYNCH (closing): Some of the points brought out in the discussion are well taken. With reference to the antrum being the only source of these remote manifestations, I am inclined to think that by further study we will find the ethmoidal and sphenoidal sinuses are more frequently the source. These manifestations of some points of infection are the result of long continued chronic irritation and absorption of toxins. I am not inclined to think the condition is a bacteremia with the absorption of bacteria or the presence of bacteria in the circulation, but purely a low grade indolent toxemia from the absorption of the toxins of the bacteria, anywhere within the nose; that such a surface will act as an incubator and be as a source for infection. I am sure none of us regard the nose as the only source of asthmatic attacks. Many times results bear out the truth that when the source of irritation is removed the asthma stops just the same as the arthritis stops, just the same as a furunculosis stops, and while I would not ask you to

believe that the nose is the source of a third of the asthmatic attacks, a chronic, indolent infection can act as a source of the remote manifestations. Whether it is asthma, furunculosis, arthritis, or any of the other points touched upon, it is a fact that we may look to the sinuses as a possible cause of some of the cases.

DISCUSSION ON THE PAPER OF DR. T. B. FUTCHER, BALTIMORE.

DR. CREIGHTON WELLMAN: The whole question of eugenics is one which particularly interests the medical profession. I at one time heard the science defined as the science of rearing thoroughbreds, which definition is somewhat too narrow, but is one which is of graphic helpfulness. In the breeding of animals we can bring into play artificial selection. We can choose the parents, and we can produce the progeny we like. In human affairs we can do nothing of this sort—at least, to any such extent. However, the problem is one which must be attacked and studied, and with the reader of the paper I deprecate the adoption of programs, without due consideration, but one thing we can do is to attempt to get the gospel of eugenics into the folk ways, by the folk ways meaning what is known as public opinion, and this device has great power. For instance, if one of us should go dressed as we are now to a formal function we would feel out of place. The clothes we have on are suitable for this occasion, but at a formal function we would feel much embarrassed. This is just a homely illustration of the great power of what we know as the folk way.

A lady in a decollete gown with long train, found at 9 o'clock in the morning on Canal Street, New Orleans, would feel quite out of place. Therefore, the question of the prevention of the marriage of a normal person to some one who is mentally feeble can be controlled in this way. In other words, education is the manner in which we are to work out this question. We have the primeval instinct especially of the animals to aid us. A young woman meets a young man and says, "I don't like you." She gives no reason for it. If she were a psychological analyst it might be different, but the reason why she does not like him is because he is not potentially a good parent for her to bear possible children.

Another question which interested me was this: the employment of mental tests as applied to emigrants for the prevention of rearing dependents, delinquents and defectives, and also the employment of tests that are being introduced into this country. I do

not believe in the Binet test or the form board test. Unless the test is very carefully carried out and very carefully checked, it is nothing more than a preliminary test, but the factor of safety is arrived at when all suspicious cases of emigrants are tested in that way.

The legal side has interested me a great deal. A very curious thing has arisen in regard to the New Jersey law which Dr. Futcher mentions, namely, that there is no constitutional provision for any such legislation, but the State took it into its own hands to pass such a law. That law may eventually be proven to be unconstitutional, and then anyone who has, according to that law, been sterilized, can sue the State in such an event for a large sum. Therefore, in that State and in other States, the question of securing the consent of those who are to be sterilized has been taken up, and in some of the States among the number of cases there are only one or two who refused to be sterilized.

Not taking up any more of your time, I want to close by warmly commending the paper as a whole and agreeing very heartily with the final sentence, namely, that not only eugenics is necessary, but euthenics, and only by a union of the two can we hope to accomplish this great work.

DR. FUTCHER (closing): I have nothing further to say, except to express my appreciation of having had the opportunity of appearing before this society and reading my paper.

DISCUSSION ON THE PAPERS OF DRs. DUVAL, MENVILLE AND BEL.

(The papers of Drs. Duval and Bel were not turned in to the Publication Committee.)

DR. HOMER DUPUY: I notice that the question of control is a part of the symposium. Along these lines I shall limit myself entirely to one phase of the question. One of the most vital problems in the control of diphtheria, especially when it becomes epidemic, is the recognition of the nasal type. Certainly our recent epidemic in New Orleans corroborated this. In the future, with control cultures, taken both from the mouth and the nose, we shall surely be in a position to control epidemics. We may ask, why is nasal diphtheria so chronic? If you will remember that around the nasal cavity are the various sinuses, the maxillary, the sphenoidal and ethmoidal; these form part and parcel of the architecture of the nose, and therefore the bacilli gain entrance into these cavities.

The bacilli from the sinuses continue to reinfect the nasal chambers. Ten years ago the deceased Dr. John J. Archinard, and myself, carried on a series of experiments in which we proved in six distinct cases of nasal diphtheria, by taking separate and repeated cultures, that it took eight weeks before we obtained negative control cultures. The disease is so subtle in its onset. The local reaction is so mild that unless you are looking for the disease it may escape you. We have two types of nasal diphtheria, the catarrhal and the membranous. In the catarrhal there is a profuse nasal discharge, with apparently no constitutional reaction. Sometimes there is a recurrent epistaxis. These are the only signals of distress. Unless we look for them the cases escape.

In the Charity Hospital in the last two years we have learned to suspect the so-called head colds, chronic in type. Cultures frequently bring out the evidence that the affection is diphtheritic. One of the greatest factors in the spread of an epidemic of diphtheria is nasal diphtheria, and we cannot be too strongly impressed with the idea that many so-called head colds are the innocent conveyers of diphtheritic infection.

A MEMBER: I would like to lay stress on what has been said. When we are called to see a suspected case of diphtheria we should give antitoxin early, and continue until we get results. This fact was strongly impressed upon me by a recent case. In 36 hours I gave a child of 3 years of age 135,000 units of antitoxin. The child was seen 24 hours after the initial attack, which was supposed to be false croup. Careful examination revealed no indication of a deposit of any membrane. I gave 5,000 units, and several hours later found a small deposit on the left tonsil. I immediately gave 10,000 units, and four hours later gave 15,000 units, and gave antitoxin in 10,000 unit doses every three hours until the symptoms subsided. At the end of 36 hours the disease had practically disappeared and the only sequel was a rash. There were no after effects.

DR. PAUL H. TETREAU, Larose: My experience has been that it is a good plan to spray the throat with peroxide of hydrogen. It clears the throat and dissolves the diphtheritic exudate and relieves temporarily the intense dyspnea present, and in that way helps the antitoxin, by giving it time to act, which takes five or six hours, or more; of course, it must be used about every two hours. I would not like to get along without spraying.

DR. G. C. CHANDLER: These papers have covered the subject so thoroughly that I do not think anything can be said of great interest except there is one point which I think may possibly be useful to the profession. This disease is not very contagious. I believe that an epidemic would never exist out in the open air, and so my theory is that the disease is spread in the public and private schools where children congregate.

At the time you had an epidemic in New Orleans and closed the schools, we suddenly had a similar outbreak in Shreveport. We confined the children who were infected, and stopped all children in the buildings from going to the public schools, and kept them out until the patients were well, and bacteriologic examination showed there were no germs, and the disease, in spite of the fact that every section of the city was affected, was promptly suppressed without closing the schools. At the time the State Fair opened there was not a case of diphtheria in Shreveport except one brought in from the country. After this fair opened, towards the latter part of it, the disease sprang up again over town and the same methods were used. It is the mild cases that are dangerous. The marked rarely spread the disease, because the children are protected from them. They can live in the house with a severe case with safety, but the mild cases that go to school give the disease. The way to prevent the spread is that where children in a family have the disease, all should be stopped from going to school, and before letting them go back make a bacteriological examination.

DR. A. A. HEROLD: I would like to ask Dr. Bel if he has ever tried the administration of antitoxin by mouth? I have not, but there are three physicians in Shreveport who have, because they feared anaphylactic phenomena. They have used antistreptococcic serum by mouth. One patient refused to be punctured any more. If it can be given by mouth successfully it would be a great boon.

DR. T. B. FUTCHER: One thing the members of this society ought to go away impressed with is the importance of giving large initial doses of antitoxin as soon as they suspect diphtheria or have had time to demonstrate that the case is one of diphtheria.

Dr. Park, of New York, and Dr. McCollom, of Boston, who know more about this disease than any man in this country, advocate giving one huge dose at the beginning of the disease, as much as 60,000 units. Dr. Park believes the circulation should be filled with antitoxin early, and unless you give sufficient to neutralize the

effect of the poisons produced by the germs, we will have after effects in a certain percentage of cases. Small doses given late have little effect, but a large initial dose should be given.

DR. W. H. SEEMAN: I believe the point Dr. Bel has brought out is well recognized, namely, the giving of large doses. The only trouble is that this advice is not carried out. Most of the members come to a meeting like this and listen to the experiences of men like Dr. Bel, who has treated so many cases of diphtheria, and seemingly they are convinced by his arguments, and still they go home and continue to use 3,000 or 1,500 units of antitoxin. I believe one large initial dose is worth 10 to 20 subsequent doses. We have no method of telling when we have neutralized all the toxins circulating in the blood, while there is some supposed danger of anaphylaxis, it is more likely to occur where we continually assault the system by the injection of some foreign body, no matter what. I believe an initial dose of a large amount of antitoxin is less dangerous than several doses of half the total amount.

Board of Health blanks which go with the diphtheria outfit include now the nose as well as throat cultures. The Board of Health in New Orleans keeps a sectional map on which cases of infectious diseases are marked by the pin system, and whenever cases become sufficiently numerous in a neighborhood to excite attention, that neighborhood is carefully investigated, especially with regard to schools. With the large number of cases of diphtheria which occurred last fall, it was not found necessary to suspend the school system. Certain schools were closed temporarily, but there was no general closing.

An important point with reference to the nose was brought out in the outbreak which occurred in the Orphan Asylum on Jackson Avenue, where repeated attempts to locate the infection were followed by failure. It was decided to make an examination simultaneously of every inmate, taking cultures both from the nose and the throat. Out of over 100 five or six were found to be carriers of diphtheria. They were isolated, sanitary measures taken, and the outbreak ceased.

The only advantage of a spray is the question of cleanliness, and the idea of giving the impression that you are doing something for the patient. Dr. Bel is correct when he says that any antiseptic that is strong enough to destroy the diphtheria bacilli will be strong enough to harm the resisting cells

I cannot see harm in a mild alkaline wash, simply as a matter of cleanliness, but not with the idea of having an antiseptic effect on the throat.

DR. CHARLES McVEA: I would like to ask Dr. Bel in his rejoinder to tell us how to treat anaphylaxis. While we do not have it perhaps more than once in a thousand cases, some of us are anxious to know how to treat it.

DR. C. J. EDWARDS: I desire to thank Dr. Bel for his splendid, practical paper. I will merely stress the importance of giving antitoxin early in diphtheria, or suspected cases, and in large doses. Only a few months since I saw a severe case of laryngeal diphtheria on the second day, in which I gave 107,500 units of diphtheria antitoxin within thirty-six hours, with splendid results. I gave an initial dose of 5,000 units, followed in four hours by 10,000, and then in 20,000-unit doses every six hours until amelioration of the symptoms. In severe cases it is a mistake to wait more than six hours for a change in the condition of the patient. In such cases strychnia, hypodermatically, is a valuable adjunct.

DR. E. L. SANDERSON: If you are called to see a child in a poor family and you want to give it 30,000 units of antitoxin, it will cost from \$10 to \$20. It becomes a serious proposition in the country. If you give \$20 worth of antitoxin it will arouse suspicion, and if you have not found true diphtheria on bacteriological examination, the people will come to the conclusion that you do not know your business and that you have caused them an unnecessary expense.

If you give antitoxin early in large doses you will get quick recovery, in view of which, there are those who will tell the people that the patient did not have diphtheria at all. Some doctor may say to the family that antitoxin was given for nothing. These are matters of public education. The profession should stand together in regard to giving antitoxin and explain the importance of it. I have seen patients with unquestionable diphtheria get well in a day or two with large doses of antitoxin. I have had doctors tell me that my patients did not have the disease, and I have no doubt all of you have had similar experiences.

DR. EDWARD O. POWERS: I heartily endorse what has been said in regard to large doses. In twelve years' practice in the country, where I have treated diphtheria, I have always believed in giving large doses of antitoxin. In looking over the patients I have treated

for the last fifteen years, and in using antitoxin in cases of diphtheria, I have only had two cases where I have had to give a second dose, but I never give as large doses as are recommended by Dr. Bel. I remember several years back giving as high as 10,000 units, but never had to repeat it. I have used my own judgment, where frequently I had fifteen or twenty miles to get the antitoxin. I have sent some one else to get it, and the quantity used has been large in order to cure the case with one dose.

DR. E. L. HENRY: So long as my patients recover, I do not care whether my diagnosis is correct or not. In reference to the expense, all the manufacturers will furnish it free, provided a patient is not able to pay for it. We can go to the nearest drug store and procure antitoxin, and when we get through, if we certify that the patient is not able to pay, we do not have to pay.

A MEMBER: I remember a very violent case of diphtheria which I had two years ago, and to whom I gave 20,000 units of antitoxin at a dose. I have seen such beautiful results from the administration of large doses that since then I keep in my case 50,000 units, so that I will not have to send to a drug store in order to administer it promptly.

DR. DUVAL (closing): I have but a word or two to say on the question of diphtheria carriers. Dr. Dupuy has brought out the point that the disease may lurk in the various sinuses connected with the nose, and that brings the question of the germs lurking in the crypts in the tonsils, especially in children.

I recently had occasion to make about 2,100 cultures from children in one of the asylums of New Orleans in looking for carriers, and we found something like fifty, and fifteen or twenty of these true carriers are still being isolated. It has been a good many weeks now, and the cultures are positive, although we have been treating them with the killed cultures of diphtheria. All these cases show enormous tonsils, with the crypts filled with an exudate, and when we press on the tonsils we can get some of the material easily, and can almost get a pure culture of the Klebs-Loeffler organism. I think it might be well to operate on these cases, since we have not been successful in getting rid of the bacilli by the method that is now being used so much—that is, the injection of killed cultures. We should clean out the naso-pharynx, take out the tonsils and adenoids, and clean house generally. I have been told an objection is that you may start the diphtheria infection again or

get a septic condition from streptococci, and such being permitted to get through. I doubt very much whether anything of that sort is to be feared from the operation. The treatment of carriers by killed cultures with the hope of producing specific substances has not panned out so well. Perhaps we are not using the proper culture. We have been using the stock cultures, and they may not be virulent enough. We should use a very virulent culture, perhaps the culture that Clark first isolated, and that is being used all over the world for the manufacture of antitoxin—perhaps the highest potential producer of antitoxin we know, considering the many hundreds of different strains that have been isolated. It remains to be seen whether the treatment by killed cultures is going to prove efficacious. Along with that, we might remove depressions in the enlarged tonsils and adenoids. The sinuses which were referred to by Dr. Dupuy, we cannot get at through surgical procedure.

DR. MENVILLE (closing): I shall have but a word or two to say in closing, because Dr. Bel has so many questions to answer.

As to the price of antitoxin, I would remind the gentleman that in every parish there is a police jury, and if there are any poor persons who need antitoxin and cannot afford it, the police jury will foot the bill. We have had this done repeatedly.

After the accidents and deaths we have been reading of recently from anaphylaxis, many of us are timid. I think every one of us should take the instructive lesson back home as to the necessity of using large doses, and when we consider the large number of cases immunized in New York, with only one death, we should come to the conclusion that anaphylaxis is not to be feared very much.

DR. BEL (closing): Dr. Edwards' case demonstrates the use of large doses of antitoxin. My colleague and friend, Dr. Tetreau, believes in the use of peroxid of hydrogen as a spray. My opinion is that peroxid of hydrogen is useless; it does not kill the germ, and you can cleanse the parts just as well with a teaspoonful of salt and a pint of hot water, and not have the bubbling and disagreeable sensation and danger of excoriating some tender spots in the mucous membrane. Spraying is disagreeable to children.

Dr. Herold asked about the administration of antitoxin by the mouth. I never used it in that way. I have read of its having been administered, but it strikes me that it is not a good way. Antitoxin has been used intravenously successfully. I have always used my antitoxin under the skin or muscle.

The fact that Dr. Fitcher and Dr. Seemann have coincided with my views in regard to large doses of antitoxin makes me feel happy. It ought to be given in large doses at once. Large doses of serum do not sensitize any one to anaphylaxis. The work of Theobald Smith and Rosenau in sensitizing guinea-pigs and transmitting a hypersensitiveness to the offspring has been proven, but whether that will apply to the child in utero we do not know, but it is possible.

In regard to cleanliness, Dr. Seemann uses washes, and it is in accord with modern sanitary science.

Dr. McVea asks in regard to the treatment of anaphylaxis. If you are going to have anaphylaxis you will have it so quick that you will not know what to do for it. I must confess I do not know what to do if these patients die in fifteen or twenty minutes. I would like to ask Dr. McVea how many cases of anaphylaxis he has seen?

DR. McVEA: I have seen one, and still I am not scared enough not to give antitoxin in large doses.

DR. BEL: How long after giving the antitoxin was it before anaphylaxis occurred?

DR. McVEA: It was the sixth or seventh day.

DR. BEL: Did the patient really have anaphylaxis?

DR. McVEA: He came so near dying that I am scared yet.

DR. BEL: Did the individual have serum before?

DR. McVEA: He did; four years before.

DR. BEL: The cases of anaphylaxis that are going to happen result from foreign substances, and they are not going to take seven doses. I would not know how to treat it myself. I wish to thank the Society for the kind manner in which they have treated the subject.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

OFFICES OF MEDICAL MEN IN THE SANITARY CODE.

The attention of physicians is called to one of the latest amendments to the Sanitary Code, which became effective on the first of June.

The offices of physicians, dentists and others are made subject to inspection by the State Board of Health like dairies and other things. They are to be scored as a result of such inspection, and when the score falls below fifty points, charges of infraction of the code are to be made.

No doubt there will be a scramble to scrub the floor and polish the handle of the big front door, but we advise the doctors to familiarize themselves with what is expected of them as indicated by the score card. They will note that fans will be looked for, and a library (presumably for the use of the patients), but that an orchestra or a piano is not mentioned, nor even a phonograph.

Fortunately, "freedom from bad odor" is to gain only one point, as a good deal would depend upon the moment of the inspection, what has just been done in the office and what the inspector calls "bad odor." Iodoform is not absolutely out of fashion, and we have our own opinion of the perfume furnished by *some* of the Key West cigars *some* of the patients burn up.

Naturally, the personal preference or taste of the inspector would count in other specifications also. For instance, the "personal appearance of attendant." What would Mr. Inspector have? Blonde or brunette, slim or stout? White or the decidedly olive and good-looking that some of the younger men affect?—not to mention the sex.

The question of constitutional rights is bound to creep in, for we see that the highest single mark refers to the *personal appearance* and BREATH of the boss of the ranch himself. Now, we would like to know what right any inspector has to decide for us whether we should use a clove or a parched coffee bean after, or what business

it is of the Board of Health whether we put onions in our salad or garlic in our spaghetti. As far as our looks are concerned, as long as they suit our best girl we care not a fig for the opinion of all the health inspectors that ever lived!

Oscar'll git you ef you don't watch out!

THE A. M. A. MEETING AT MINNEAPOLIS.

Old Sol selected the dates of meeting of the A. M. A. for one of his torrid visits, and everything sizzled for the three days of June 17, 18, 19, at Minneapolis. No other complaints were heard, except that some of the hotels followed the usual convention methods of raising instead of lowering rates.

The plans of the meeting were well carried out, and the spacious buildings of the University of Minnesota afforded ample accommodations for all sections, and, so far as could be ascertained, every section was well attended, and the business of each section not only well conducted, but full of interest.

Peculiar interest attaches to the Scientific Exhibit, so far as New Orleans is concerned, for Dr. C. C. Bass obtained the highest award given by the A. M. A.—the gold medal—for his exhibit of the work of growing the malarial organism. We have more than once passed encomium on this work of Bass, and it is a matter of supreme congratulation to all his friends, those of Tulane, the profession of the city and State, that he has had the recognition of the National body. It may be remembered that already the Southern Medical Association in November, and the Mississippi Medical Association in April, past, awarded Bass, each of them, a gold medal for his research. The JOURNAL likewise glories in his success.

Many social functions were arranged during the meeting, of which the President's reception and the banquets of the individual sections may be especially noted.

The attendance reached a high mark, something like 3,500 having registered—though many more than this seemed in evidence. With cooler weather the meeting would have been ideal, but the heat prevented much of the pleasure which would naturally attend a visit to a section of this country so full of poetic romance and of such tremendous commercial possibilities. Minneapolis itself was attractive in its striking evidence of wealth and prosperity, shown in its wonderful shops, paved streets and handsome buildings.

The scientific work will be chronicled in time, but there seemed a general sprit of interest in the welfare of the Association, expressed perhaps in no better fashion than in the selection of Dr. Victor C. Vaughan, of Michigan, as President-elect. Dr. Vaughan has deesrved such a recognition by his long-continued service in medical education, public health, and in the councils which have advanced the organization of the Association of which he is to be the head.

There were a number of cities to bid for the next meeting, but Atlantic City was decided upon as the best place for next year.

Medical News Items.

BOARDS OF COMMISSIONED MEDICAL OFFICERS will be convened to meet at the Bureau of Public Health Service, 3 B Street, S. E., Washington, D. C., and at the Marine Hospitals at Boston, Chicago, New Orleans and San Francisco, on July 7, 1913, and August 4, 1913, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are re-received in the Bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons. Service as internes in hospital for the insane or experience in the detection of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experinece or two years' professional work, and must not be less than 5 feet 4 inches, nor more than 6 feet 2 inches in height.

For further information, or for invitation to appear before the Board of Examiners, address "Surgeon General, Public Health Service, Washington, D. C.

THE COMMITTEE ON FRACTURES of the American Surgical Association desires to have two reprints of any paper dealing with the non-operative or operative treatment of *open or compound fractures* which have been published within the last five years.

The committee also desires papers on the *medico-legal relations of radiography* to the diagnosis and treatment of fractures.

If authors on these subjects have no reprints, the committee would be pleased to receive memoranda of the places of publication of such papers. Address, John B. Roberts, Chairman Committee on Fractures, 313 South Seventeenth Street, Philadelphia, Pa.

PRESBYTERIAN HOSPITAL.—The Board of Managers of the Presbyterian Hospital met June 12. Reports of the workings of the hospital were submitted by the superintendent, showing the success of this institution. Dr. A. O. Browne was elected a member of the board of managers. It was decided at the meeting that in future officers would be elected biennially instead of annually. Under this change it was ordered that the present officers should serve until February, 1915.

NEW MATERNITY WARD.—The removal of the maternity ward in the Charity Hospital from Ward No. 48 to more convenient and private quarters was recently accomplished, and the inmates were transferred to the upper floor of the Milliken Hospital for Children, a portion of the building formerly not in use. Arrangements for private rooms have been made and the roof of the Milliken Annex will afford the patients an opportunity of getting fresh air.

NATION-WIDE WAR ON CANCER.—Permanent organization of American physicians and laymen engaged in a nation-wide fight against cancer has been recently effected in New York. A campaign of education against the disease will be undertaken through written and spoken word, in magazines, training schools, women's clubs and in other ways. Special attention will be given to teaching women the early symptoms of cancer. One of the executive committee is Dr. C. J. Miller, of New Orleans.

TULANE CONFERS DEGREES.—Tulane University held its general graduation exercises at the French Opera House the latter part of May. President Sharp of the university summarized the work of the year, showing advance made all along the line, with a proud record of achievement. The medical department graduated seventy-nine men in medicine this year, as follows: David Adiger, G. Glenmore Ash, James Monroe Barr, Thomas Henry Bates, Robert Briggs Beard, William Henry Bennett, Robert Bernhard, James Albertus Bethea, Luke Martial Boudreaux, John W. Brandon, Emmett D. Butler, A. Benson Cannon, Thomas Grover Cleveland,

Amable A. Comeaux, Charles M. Conkling, Evan Shelby Connell, Joseph Rigney D'Aunoy, Toxey Lee Davidson, Carl Travis Dufner, Silas Lucius Durham, Emilio E. Escalante, Julius Raymond Fernandez, Thomas J. Fleming, Amos H. Fortner, James Edward Furr, Broox Cleveland Garrett, Harold J. Gondolf, Edward Putney Guerrant, Charles E. Hamilton, Everard Blackshear Hamilton, Lucius L. Handly, Ferdinand Hirsh Herrman, Budd H. Higdon, William Robert Hunt, W. A. DeWitt James, Jr., Will O'Daniel Jones, Archibald Charles Kappel, William Samuel Kerlin, Grover C. Kirby, Theodore Frank Kirn, James Hugh Kyzar, Paul George Lacroix, Walter Prescott Lambeth, Paul T. Landry, H. W. A. Lee, Lewis H. Levy, J. Frank Lieberman, A. G. McHenry, Gaylord Floyd McLeod, Henry E. McMurray, Charles A. McWilliams, Thomas Andrew Maxwell, Waldemar R. Metz, Maxwell Moody, Joseph Shakespeare Moulton, Marc M. Mouton, S. Fulton Neal, H. N. T. Nichols, Ramon Adrian Oriol, Ernest J. Petitjean, Lawrence Lloyd Purifoy, Paul King Rand, Joseph Raphiel, John Gillis Sanders, L. Bennett Sartin, Thomas Benton Sellers, Edwin Caldwell Simonton, William K. Smith, Stephen John Songy, George Herschel Spurlock, Ignatius Tedesco, Wilbourne Frank Trimble, John William Turner, Harold Dean Van Schaick, James Charles Walker, John Milton Walker, George Arthur Westfall, J. Kieffer Wicker and Wesley Ivy Wimberly.

The following are the graduates to pharmacy: Lem W. Boone, Delfin A. Hernandez Gonzales, William Henry Rose and Salvador Torralbas Lora.

IN A LECTURE at the Beaujon Hospital in Paris, Dr. Alexis Carrel, the Nobel prize winner and a member of the Rockefeller Institute for Medical Research, declared that surgical research has proved that operation in the thoracic cavity can be performed as easily as in the abdomen. Also that experiments on animals had demonstrated the heart to be an organ of great resistance, and that it does not suffer if the circulation is interrupted for five or ten minutes. The brain, however, is more delicate and may not be interrupted for more than three or four minutes, which, nevertheless, gives time for the accomplishment of much surgical work.

IN CONSEQUENCE OF AN EXTENSIVE FIRE which has destroyed manuscript, plates and other property, the *Bulletin of the Manila Medical Society* is suspended indefinitely.

DR. FENTON B. TURCK has removed his office and residence from Chicago to 14 East Fifty-third Street, New York City, there devoting his morning hours to office practice and the afternoons to the Research Laboratory in Lafayette Street, near Astor Place. The work is continued on the various problems connected with the alimentary tract.

SURGEON J. H. WHITE, U. S. Public Health Service, stationed at New Orleans, was last month directed to proceed to Progreso, Merida, Campeche, Frontera, Puerto Mexico (Coatzacoalcos), Vera Cruz and Tampico, Mexico, for the purpose of ascertaining the local sanitary conditions at these ports and places.

PERSONALS.—Dr. and Mrs. John B. Elliott, Jr., left recently for Europe, and will spend the greater part of the Summer in Germany.

Dr. C. Jeff Miller will leave about the middle of July for London, to attend the International Medical Congress, to be held in that city in August. Dr. Miller will afterwards visit the principal surgical clinics of England, Ireland and Scotland.

Dr. Isadore Dyer left recently with his family for Canada, where he will spend the Summer at Port Colborne, Ont.

Dr. J. Sauter Muller, of New Orleans, has been appointed house physician to the Cosmopolitan Hotel, of this city.

Dr. Oscar Dowling was named as a trustee of the A. M. A.—a distinct recognition of his excellent service in his State work in public medicine. Among the Louisiana delegation at Minneapolis may be named: Chas. McVea and Chas. F. Duchain, Baton Rouge; H. C. Cole, Bogalusa; N. S. Craig, Jennings; A. H. Gladden, Monroe; V. A. Miller, Lake Arthur; A. B. Nelson, Shreveport; C. W. Allen, H. E. Menage, S. D. Porter, S. K. Simon, V. C. Smith, C. C. Bass, O. Dowling, L. R. DeBuys and I. Dyer, of New Orleans.

REMOVALS.—Dr. G. B. Broadway, from Whitford, La., to Glenmore, La.

Dr. W. L. Lions, from Pecan Island, La., to Garyville, La.

Dr. V. G. Yeager, from Lake Charles, La., to Hayward Training School, Hayward, Wis.

Dr. C. L. Brewster, from Woodworth, La., to McNary, La.

Dr. Solon G. Wilson, from 1225 to 1232 Maison Blanche Bldg.

Dr. P. J. Kahle, from 701 to 602 Perrin Bldg.

Dr. J. T. Halsey, from 724 Baronne Street, to 1232 Maison Blanche Bldg.

Drs. O. W. Bethea and George K. Pratt, Jr., have taken offices at 1232 Maison Blanche Bldg.

Dr. G. L. Todd, from Florence, Miss., to O'Leary Bldg., Jackson, Miss.

Drs. A. S. Yenni and P. F. Points, from 710 to 913 Maison Blanche Building.

Dr. J. A. King, from Lorena, Miss., to Hickory, Miss.

Dr. J. J. Bennett, from Junction City, Ark., to Ruston, La.

Dr. H. G. Wertz, from 3734 Locust Street, Philadelphia, Pa., to 5948 Baum Street, East Liberty, Pittsburg, Pa.

Dr. A. J. Strange, from Melville, La., to Independence, La.

Dr. E. D. Friedrichs, from 1712 Valmont, to 414 Pine St., New Orleans.

Dr. R. A. Kooker, from 201 West National Bank, Fort Worth, Tex., to 912½ Main Street, Fort Worth, Tex.

DIED.—On June 4, 1913, Mr. L. P. Delahoussaye, secretary-treasurer of the Charity Hospital of this city, aged 67 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of respective publications. The acceptance of a book implies no obligation to review.

The Taylor Pocket Case Record, by J. J. TAYLOR, M. D. The Medical Council Co., Philadelphia, Pa.

The desirability of keeping case records is recognized by all conscientious physicians. While these records are not extensive, they will be found to be of decided value to the busy general practitioner. The size of the book containing the record blanks will permit of its being carried in one's pocket. A commencement once made in keeping records is likely to be continued, once its advantages become manifest. We would, therefore, recommend that these or similar records be used by our confreres. STORCK.

Blair's Pocket Therapeutics, by THOS. S. BLAIR, M. D. The Medical Council Co., Philadelphia, Pa.

Pocket manuals of therapeutics have never appealed to us; therefore, we cannot recommend them. This one by Dr. Blair is about on a par with others of its kind. STORCK.

Psychoanalysis. Its Theories and Practical Application, by A. A. BRILL, Ph. B., M. D. W. B. Saunders Company, Philadelphia and London. 1913.

Articles on Neurology, Psychiatry, the neuroses and psychoneuroses are so conspicuous in current literature that the presentation of this work of Dr. Brill on Psychoanalysis, based upon the theories of Freud, could not have been at a more appropriate time.

The author aims at presenting in a single volume the practical application of Freud's theories, and that he accomplishes his purpose cannot be doubted. The author lays stress upon the important fact that Psychoanalysis can be utilized in a limited field and in selected cases only. Throughout the work the author gives examples of cases and presents the practical method of interpreting dreams, which renders the work most fascinating and valuable. A brief but comprehensive illustration is also given of Jung's Association Method and reaction time, giving the practical side of the work as it is used in the clinics at Zurich.

The chapter on "Psychopathology of Everyday Life" will be found most interesting because it brings out in a clear manner those incorrect psychic activities which the individual daily performs, but of which he is not conscious at the time, such as lapses of memory, of writing, etc.

The thoroughness with which the author enters into the many intricate details of psychoanalysis in the psychoses and psychoneuroses impresses the reader with the necessity of mastering the several recent contributions of Freud on "Hysteria," "The Interpretations of Dreams," "The Three Contributions to the Sexual Theory," "The Psychopathology of Every-day Life" and "The Theory of Wit," before attempting to use same in any case.

This work should be in the hands of every doctor who wishes to keep abreast of the most recent views and theories on this most interesting subject.

CAZENAVETTE.

Safeguarding the Special Senses, by HENRY O. REIK, M. D. F. A. Davis Co., Philadelphia.

A small hand book of practical suggestions on common conditions of the eye, ear, nose and throat, which contains much information for lay readers. The object of the book will be attained if the sensible advice is followed for the prevention of abuse of the special senses and for the early recognition and care of graver conditions.

DYER.

Prisms, Their Use and Equivalents, by JAMES THORINGTON, A. M., M. D. P. Blakiston's Son & Co., Philadelphia.

A study in the physics of prisms, first from the point of view of their effect on light and then from the applied knowledge of optics related to disorders of vision. An admirable exposition by a distinguished student of ophthalmology.

Men, Matters and Medicine, by MEDICUS PERIGRINUS. W. M. Leonard, Boston.

Under this interesting pen name, the writer presents reprints of a miscellany of essays which have from time to time appeared in the *Boston Medical and Surgical Journal*. These deal with historic, physiological, philosophical, reminiscent and excursive topics. Altogether worth while for the leisure reading of the busy doctor.

DYER.

Medical Men and the Law, by HUGH EMMETT CULBERTSON. Lea & Febiger, Philadelphia and New York. 1913.

The author of this book has taken a great deal of trouble to compile a mass of information derived mostly from legal opinions relating to medical cases. Almost every phase of the physician as he meets the law is covered, from the obligation of the physician in the case of a patient to the status of the physician or infant. Valuable, above all, for its references, this book fills an entirely new demand for a field in which medical men need to be educated.

DYER.

Text Book on General and Special Pathology for Students and Practitioners, by HENRY T. BROOKS, M. D. F. A. Davis Company, Philadelphia.

The instant success met with in the production of this work is easily understood when one carefully peruses the volume. No space is given to technical matters, and in this the book is unique. Especially noteworthy are the chapters on Immunity and on the Eye. Most works on pathology for some reason or another give little reference to the special branches. This fault is overcome in some measure in Brook's volume.

Altogether, as a ready and reliable work of reference, well illustrated and very well printed, this new book is a desirable addition to the number of compends of Pathology.

SEEMANN.

Obstetric and Gynecologic Nursing, by EDWARD P. DAVIS, A. M., M. D. W. B. Saunders Co., Philadelphia and London. 1913.

This excellent book has already passed through four editions and is now presented after revision and the addition of many illustrations. It

can be highly recommended as a standard text-book in training schools for nurses and contains much of value for the practitioner who finds it necessary to personally superintend the details of preparing patients for operation in obstetric and gynecologic practice. MILLER.

Golden Rules of Gynecology, by GEORGE B. NORBERG, M. D. C. V. Mosby Co., St. Louis. 1913.

This volume of aphorisms, observations and precepts on the diagnosis and treatment of diseases of women is the result of the efforts of the author to condense into a small book short, emphatic statements that may prove of practical value in gynecological practice. MILLER.

Publications Received.

P. BLAKISTON'S SON & CO., Philadelphia, 1913.

The Difficulties and Emergencies of Obstetrical Practice, by Comyns Berkeley, M. A., M. D., and Victor Bonney, M. D., M. S.

C. V. MOSBY COMPANY, St. Louis, 1913.

Golden Rules of Diagnosis and Treatment of Diseases, by Henry A. Cables, B. S., M. D. Second edition, revised and rewritten.

Vaccine and Serum Therapy, by Edwin Henry Schorer, B. S., M. D., Dr. P. H.

LEA & FEBIGER, New York and Philadelphia, 1913.

Surgery of the Eye, by Ervin Torok, M. D., and Grout, M. D.

F. A. DAVIS COMPANY, Philadelphia, 1912.

The Narcotic Drug Diseases and Allied Ailments, by George E. Pettey, M. D.

DODD, MEAD & CO., New York, 1913.

What Heart Patients Should Know and Do, by James Henry Honan, M. D.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1913.

Muller's Sero-Diagnostic Methods, by Ross C. Whitman, B. A., M. D.

Diseases of the Ear, by Philip D. Kerrison, M. D.

Text-Book of Diseases of the Nose, Throat and Ear, by Francis R. Packard, M. D. Second edition.

Massage, by Douglas Graham, M. D. Fourth edition, revised and enlarged.

MISCELLANEOUS.

Electricity in Diseases of the Eye, Ear, Nose and Throat, by C. S. Coleman, M. D. (Courier-Journal Press, 1913).

Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of March, 1913.

Public Health Reports, Volume XXVIII, Nos. 19, 20, 21 and 22. (Washington: Government Printing Office, 1913).

Quarterly Bulletin of the Louisiana State Board of Health.

Summaries of Laws Relating to the Commitment and Care of the Insane in the United States, by John Koren. (National Committee of Mental Hygiene, N. Y., 1913).

Mortality Statistics, 1911. (Washington: Government Printing Office, 1913).

Reprints.

Fulguration and Thermo-Radiotherapy, by Wm. Seaman Bainbridge, M. D.

Contagious Diseases, by James P. Leake, M. D.

Country Schools and Rural Sanitation, by Chas. W. Stiles.

Pellagra, by R. M. Grimm.

Rat Proofing, by Frierch Simpson.

The Activating Motives of Professional Conduct, by Henry S. Munro, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR MAY, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....			
Intermittent Fever (Malarial Cachexia).....			
Smallpox.....			
Measles.....	5	3	8
Scarlet Fever.....			
Whooping Cough.....	3		3
Diphtheria and Croup.....	1		1
Influenza.....	1	2	3
Cholera Nostras.....			
Pyemia and Septicemia.....	3		3
Tuberculosis.....	31	40	71
Cancer.....	14	7	21
Rheumatism and Gout.....			
Diabetes.....	3	1	4
Alcoholism.....	1		1
Encephalitis and Meningitis.....	1		1
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	23	6	29
Paralysis.....	4	1	5
Convulsions of Infancy.....	3	3	6
Other Diseases of Infancy.....	12	8	20
Tetanus.....		2	2
Other Nervous Diseases.....	4	1	5
Heart Diseases.....	43	48	91
Bronchitis.....	2	2	4
Pneumonia and Broncho Pneumonia.....	16	28	44
Other Respiratory Diseases.....			
Ulcer of Stomach.....		1	1
Other Diseases of the Stomach.....	7	5	12
Diarrhea, Dysentery and Enteritis.....	36	37	73
Hernia, Intestinal Obstruction.....	2		2
Cirrhosis of Liver.....	6	3	9
Other Diseases of the Liver.....	2	3	5
Simple Peritonitis.....		2	2
Appendicitis.....	2	1	3
Bright's Disease.....	36	27	63
Other Genito-Urinary Diseases.....	6	7	13
Puerperal Diseases.....	2	4	6
Senile Debility.....	4		4
Suicide.....	1	1	2
Injuries.....	21	16	37
All Other Causes.....	20	11	31
TOTAL.....	316	270	586

Still-born Children—White, 20; colored, 25; Total, 45.

Population of City (estimated)—White, 272,000; colored, 101,000.

Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 13.64; colored, 32.08; Total, 18.85.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....30.02
 Mean temperature.....74.8
 Total precipitation.....7.94 inches
 Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

VOL. LXVI.

AUGUST, 1913.

No. 2

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

CLINICAL STUDIES IN PITUITARY IRRITATION, WITH REPORT OF A CASE.*

By L. J. GENELLA, M. D., New Orleans.

Mr. W. K. T., white male, native of New Orleans, died January, 1913.

Family History.—Ancestors of pure German type and markedly healthy, living, usually to an advanced age. Descendants, none; married ten years. Collaterals show a mixed history: Females, healthy; one half-sister, who looks slightly masculine. Males: A large per cent of near collaterals show a marked tendency to degeneracy, three of them being classed as dangerous criminals of the train-robbing and safe-blowing class.

Personal History.—Age, 45; height, 6 feet 1¼ inches; weight two years ago, 167 pounds. Up to the year 1910, was a hard-working mechanic; never had been ill in bed. Gives positive history of lues in 1903, and other venereal infections at numerous times since then. Has never had headaches, never vomited or suffered from

* Read before the Orleans Parish Medical Society, June 9, 1913.

nausea. His eyes, memory, gait or speech had never troubled him up to 1909. During the year 1909 he was within a few feet of a dynamite explosion, which seemed to him to "disorganize his head." Note that up to this time he had passed a number of life insurance examinations successfully.

I first saw him professionally two years after this, in January, 1911, two years before he died. His only complaint at this time was an ill-defined sensation in his throat, which he aptly described as "wooden-like." He remarked also that when he drank anything he did not have to swallow—it just seemed to flow down. I could not account for these symptoms, after examining the heart, aorta, chest and thymus, except slight dullness over that region. I could not get a good look at the throat, although I pulled the tongue well forward and forced the mirror well back. Incomplete as the view was, yet, from it, I did not think his trouble local. I again saw him on February 6, 1911, and at that time first suspected organic nervous disease. After observing him for the next 120 days I finally concluded he had paresis, on the following group of symptoms:

Clinical Data.—Note that data is incomplete, as is usually the case in patients of the class. The following is fairly accurate: Remembers some doctor told him he had syphilis, after taking blood from his arm. Patient thought himself odd; fellow-workmen looked on him as "bugs." Memory poor; walking was difficult at times.

Other Clinical Data.—Suggestion of disease of organic nervous type in the patient's peculiar expression. Insanity of manner notable in movement of fingers drumming on his heels. Tendency to repeat words. Hallucinations of sight, seeing lightning often. His spoken repetition of the alphabet and exercises in numerals afforded little data, except the fact that he seemed to slur over the letters "q" and "r." In pronouncing the words "National Intelligencer," "Mitchel," and "Round the rugged rock the ragged rascal ran," were all navigated pretty well. In numerals he made many blunders, even when allowance was made for his lack of schooling. His writing was the usual scrawl of his class, but had no systematic dropping of letters or notable deformity of physical or word structure. His pupils were unequal, Argyle Robertson phenomena marked. I could not get a good look at the fundus, the media was

fairly clear, sight fair, limited range of vision. His knee-jerks were impaired. Peculiar stink usually attached to the insane. Analgesia ulnaris marked on right side, but not as marked on the left. Babinski reflex was unsatisfactory, but the left toe always had some extensor irritation before final dropping. The sphincter reflexes were either impaired or the patient's idea of the decencies of life were, as he paid no attention to the repeated soiling of himself and room.

Brain-storms were frequent at this time, but patient never had convulsions. He often had attacks or spells of cyanosis. His memory began to fail, also his general mental and physical being. If I may coin a phrase, "his skin seemed too loose for his physical being, and his mental bounds too tight."

A trained neurologist could have made a further and more accurate classification, but I think the general practitioner does well to diagnose such cases paresis, and not attempt a sharper classification.

Having presented, in a general way, the analysis of the soil upon which was planted an interesting metabolic phenomenon, I will give the clinical peculiarities of the case which are worthy of note.

The clinical picture of paresis remained uncomplicated until September, 1912. At that time a series of very hot and oppressive days, which seemed to greatly exhaust the patient, changed the analysis of this patient's urine from S. G. 1020, no sugar, 1 per cent albumen, no sediment, reaction acid, few casts to one of S. G. 1052, sugar 3 per cent, 5 per cent albumen, blood, and heavy red sediment. A red ring had always been present at the acid urine junction. This, by some writers, is supposed to have a definite clinical signification in organic nervous disease.

The patient now began to complain of persistent neuralgia in the right hand and foot. These pains continued severe until the end of September. At that time I first noticed that the right hand and foot seemed larger than the left. The patient's measurements, from an old life insurance policy, were: Height, 6 feet 1 inch; No. 7 hat, and No. 9 shoe. The question of gloves had never worried him.

Under observation during the next three months this enlargement of the right hand and foot continued, with the left hand and foot seen following in this growth.

Measurements on December 1, 1912, were: Length of right foot, 13 inches, by $4\frac{3}{4}$ at base of toes, and $3\frac{3}{4}$ inches at heel; left hand, $5\frac{1}{2}$ inches at base of thumb across the palm. The skin over all the extremities was drawn tight.

We made many attempts to get the patient to surroundings where Roentgenological data could be obtained, but his violent nature always made this impossible.

During the early part of January the patient died, after a long spell of semi-coma, due, I believe, more to an acidosis from starvation than from any possible intracranial pressure.

An autopsy was refused, but permission was granted to trephine the skull. This was done, and a small piece of bone was taken from the skull just posterior to the external auditory meatus. This awkward spot was chosen at the direction of the family.

The bony ridge across the base of the skull interfered with a perfect view, but, after raising up the temporal lobe and dragging away the tentorium, the gland as a whole could be seen bulging up out of the cavity of the Sella turcica.

The most common conditions which may be confused with, and should be differentiated from, in cases of this type, are: Paget's disease, Charcot's disease, syphilis of the bones, scurvy, rachitis, osteo-myelitis, rheumatoid arthritis, gigantism, myxedema, leontiassiss ossea, osteitis deformans, pulmonary hypertrophic osteo-arthritis, and teratomatous growth of bones. The main points of differentiation are as follows:

Differential Diagnosis.—Paget's disease—rare affection; affects long bones, bending of long bones. Charcot's disease—affects joints. Syphilis—lacked many hall marks as cause of acral growths. Scurvy—gums not involved, although Rigg's disease was present. Rachitis—more of a deformity; enlargement of spleen. Osteo-myelitis—little local pain, except in early stages. Rheumatoid arthritis—essentially a joint trouble; rheumatism a rare disease. (See Cabot, *J. A. M. A.*) Gigantism—great strength and symmetry. Myxedema—no boggy look, or slowing of pulse; no lessened oxidation. Leontiassiss ossea—more of a square head. Osteitis deformans—never a symmetrical deformity. Pulmonary hypertrophic osteo-arthritis—long-standing T. B., joints. Teratomatous growth—rarely bilateral.

Data That Would Tend to Negative This Diagnosis.—The bony

structure in the insane and in all organic diseases shows a marked tendency to alteration in many features. A periostitis of the bony thorax is common in the insane, giving them the abdominal type of respiration. The breaking strain of bones is less in the insane, showing a priori that one should look for many changes in the body structure, without attaching any great significance to it.

As the usual type of pituitary irritation in an adult is acromegaly, and as this patient did not have any enlargement at all about the jaws, this in itself should bear weight.

No evidence of enlargement in the bony sella. X-ray views not taken. In psychic disturbances the internal secretions are usually prone to seasonal irritation as part of the disease, without this irritation being distinct enough to be classed as a clinical entity.

What are some of the attributes of the pituitary gland that are reasonably provable? It is essential to life (anterior lobe and infundibular portion). It is connected with the adrenalins by a paraneural path. If extract of the gland is injected it will cause, usually, the following: Post lobe often increases blood pressure by peripheral constriction. Acts as an irritant on the bundle of His. By some unknown process it lessens the time of coagulation of the blood. Has an irritant action on the pancreas (Islands of Langerhans). Inhibits the action of secretion in the pancreas. Infundibular and post lobe extract increases labor pains. Will not, *per se*, inaugurate labor pains. Occasionally increases output of urine and feces. Increases tendency to necrosis of skin if long continued. If given to animals during early life it has an irregular action, often causing gigantism, fatty growth, with anemia; sudden death, and cyanosis. Its action on the cardio-vascular system is an irregular one, causing, in an irregular manner, increased blood pressure, with slowing of the pulse-rate, and at other times it causes a lowering of blood pressure with increase in pulse-rate.

Independently of its blood-pressure increasing effect it seems to have a specific effect on the kidneys, causing an increased flow of urine. Although their actions are opposite in many ways, the removal of either the pituitary or parathyroids is followed by a sympathetic degeneration. The removal of either gland causes an increased loss of calcium and an accumulation of toxins. Like the thymus, it is subject to enlargement or to hyperplasia.

As the time limit of fifteen minutes is so short, I will not attempt to further describe the various points upon which I made a differential diagnosis in this case from the near types which at once are called to mind. For the same reason I have not touched on the etiology, pathology or treatment of gigantism, as either alone, and assuredly all three together, would take us further afield than time allows.

I will now advance from the restrictive diagnosis of paresis, and add, under the heading of "With Evolutional Changes," a monstrosity due probably to pituitrism.

THE OCULAR COMPLICATIONS OF MEASLES.*

By C. A. BAHN, M. D., New Orleans.

In view of the present widespread epidemic of measles, and because more or less pronounced ocular symptoms are noted in 75 per cent. of those affected, I trust that these elementary remarks on the subject will be of passing interest.

As you all know, the incubation period of the highly contagious exanthem is from seven to eighteen days, followed by slight chill, coryza, injection of eyes and lids, and catarrhal inflammation of the respiratory tract, which is really the underlying and essential feature of the disease. Following the ascending temperature, which rises gradually to 103-104 degrees, on the fourth day, as a rule, the red papular eruption is noted, especially marked on the face and chest, with the pathognomonic buccal spots on the lower milk molar teeth. In typical and uncomplicated cases these symptoms gradually subside on or about the eighth day.

The most common ocular symptom, and the first symptom noted in 12 per cent. of cases, is the catarrhal conjunctivitis, which ranges from a simple conjunctival hyperemia, slight injection of conjunctival vessels, with slight or no mucoid discharge, to pseudo-membranous conjunctivitis, great swelling of lids, intense injection, white croupous membrane lining the palpebral conjunctiva, profuse mucopurulent secretion.

The condition is but an extension of the catarrhal inflammation seen in the respiratory tract, with or without a secondary infection

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by pus-producing bacteria. On this secondary infection really depends the severity of the disease. Among the organisms isolated from the conjunctiva are the staphylococcus, pyogenes, streptococcus, pneumococcus, Koch-Weeks bacillus, Morax-Axenfeld diplobacillus, bacillus pyocyaneus, etc. In uncomplicated cases, the conjunctival catarrh subsides without treatment on or about the tenth day of the disease. With secondary infection, the course is dependent on the character and virulence of that infection, as well as that indefinable quality known as the resistance of the affected person. Typical eruption on conjunctiva has been noted similar to that of the skin. The conjunctival secretion, as repeatedly proven, is contagious.

The local treatment resolves itself into the protection of the eyes from bright light, cold applications to such extent as will not endanger the vitality of the cornea, and the use of detergent washes, such as: Chloretone, gr. $\frac{1}{2}$; Sod. borate, gr. 10; Ac. borac, gr. 10; camphor water and aq., a. a., q. s., oz. 1. B. chloretone, gr. $\frac{1}{2}$; Aq. Lauro cerasi and Aq. a.a., q. s., oz. 1, used in the eyes every three hours, or the application of vaselin to the lids to prevent excoriation from the irritating discharge, or calomel dusted. Where the disease persists, a smear should be made, with an effort to locate the causative organism, and the use of $\frac{1}{5}$ per cent. sol. zinc sulphate, or chloride, 1 per cent. silver nitrate solution topically applied to the palpebral conjunctiva, etc., made as the case demands.

Apropos of measles, a few words might not be amiss concerning the promiscuous use of collyria, so frequently used in the eye in the milder conjunctival affections, empirically used, and irrespective of kind or cause of infection or disease. By these I mean the mild, unirritating, such as the collyria given, so often used because of their psychic effect and because they are cooling, un-irritating, and perhaps cleansing. On the other hand, it has been argued that these non-bactericidal collyria, which are not sterile when introduced into the conjunctival sac, tend to cause a double infection rather than the pre-existing single one, to say nothing of the fact that the conjunctiva produces antibodies which tend to exterminate the offending organism and which are washed out by the frequent irrigation.

Perhaps the next in frequency among the ocular complications of measles is phlyctenular disease, conjunctivitis or keratitis. In

its typical form the phlyctenule or efflorescence is a small (1 to 2 m. m.) elevation at or near the conjunctival limbus, and surrounded by a localized injection (a leash of conjunctival vessels). The phlyctenule may be single or multiple, usually the latter, and a new crop may supervene at any stage, sometimes crop after crop appearing over a period of months. The liability to recurrence is strong, especially during the spring months, and in the colored race especial susceptibility and severity are noted. Whether or not the predisposing cause of the phlyctenule is a tubercular toxemia or a gastro-intestinal disturbance, further investigation must decide. It has been compared to the aphthous ulcer of the mouth. Granting an underlying predisposing cause, the phlyctenular disease in measles would, in a large proportion of cases, assert itself, irrespective of the measles, at the first secondary infection, devitalizing disease, or excessive close use, etc.

Pathologically speaking, the phlyctenule is a localized round cell infiltration lying between Bowman's membrane and the epithelium proper, which mechanically undergoes erosion, forming a crater-shaped ulcer, which in turn either does or does not undergo secondary infection by staphylococcus pyogenes, which has been identified in a large proportion of cases by Weeks and others. This simple efflorescence, after becoming eroded, undergoes rapid healing in the course of seven to fourteen days, and heals without any opacity. Successive phlyctenules, however, may involve deeper layers, varying in size, location and number until the corneal stroma is affected, or even perforation of the cornea occurs. Here, of course, a cicatrix or opacity is inevitably produced.

The accepted local treatment is one of the mild preparations of mercury applied to the eye once or twice daily. Of these, calomel dusted into the eye, which is supposed by some to be slowly changed to the bichloride by the action of the tears, is the mildest. Next in stimulation is the ointment of the yellow oxide of mercury 1 to 2 per cent., or the ammoniated mercury 1 per cent., applied and massaged gently in the conjunctival sac twice daily. The use of protective glasses, cool applications in the conjunctival form and hot in the corneal form, the silver stick in fissure of the external canthus, are measures which materially add to the comfort of those afflicted. The use of mercurial preparations in the eyes of those taking the iodides produces a severe reaction.

The ointments used in ophthalmic practice are now prepared thoroughly mixed, which is no small advantage, in small sealed tubes, which are both more cleanly, easily applied and economical than the jar of ointment used in the past. The general treatment may be summed up into fresh air, vegetable diet, regular bowels, and in selected cases the use of tonics, such as iron, hypophosphites, etc.

Closely associated with phlyctenular disease is blepharitis marginalis, because of their close relation to eczema. The form so commonly noted following measles may be either of the squamous or ulcerative type, and especially noted in those fair-skinned and haired anemic children, predisposed to eczema of one form or another. In the milder cases the lid margins present only thin scales under the reddened lid margins, while in the more severe cases yellowing crusts which surround the lashes cover a minute focus of pus, and diseased hair follicle. Here also the severity depends largely on the secondary infection. Long continued, the disease results in absence of the lashes and cicatricial changes in the lids, with a resulting turning out or in, and their sequela.

The local treatment resolves itself into the removal of the crusts, preferably with some slightly alkalin solution, such as 2 per cent sodium bicarbonate, and Castile soap, and the subsequent use of either dusting powders, such as aristol, zinc oxide, or the application of ointments, such as yellow oxide of mercury, 2 per cent., zinc oxide, 10 per cent. In the ulcerative form it is often necessary to follow the removal of the crusts with a 2 per cent. silver nitrate solution applied to the lid margin.

Hordeolum internum is quite often noted in the wake of the exanthemata, especially measles. Here a secondary infection of the meibomian glands ensues with subsequent absorption or the formation of a localized abscess which subsequently discharges its contents into the conjunctival sac or into the lid margin through the gland infected. Hot applications hasten the discharge of the offending pus, and the condition usually soon relieves itself. Otherwise operative procedure, incision from the skin surface in the upper lid, because of the liability of leaving a cicatrix against the cornea in the incision through the conjunctiva.

Trantas, of Constantinople, in the study of forty-one cases of measles, reported that thirty-one presented a superficial punc-

tate keratitis, which he suggests as a symptom of the disease, and which he claims corresponds closely to the eruption on the skin. He describes the condition as viewed by oblique illumination as a great number of small greyish points in the superficial layers near the center of the cornea. In some cases the sensibility was slightly diminished, and vision reduced. In six days all disappeared. The importance lies in the diagnostic point that the corneal condition exists only in the first five days of the disease, while the conjunctival persists in this and other exanthemata to a later date. Other observers have noted a similar condition in other exanthematous conditions.

Among the rarer ocular complications of measles the following are reported: Albuminuric neuroretinitis, Parsons; edema of the lids without or with exanthematous spots, von Michel; gangrene of the lids, Hirschberg; ulcer of cornea and loss of eye, Schmidt-Rimpler; phlyctenular ophthalmia, Herchel; corneal ulcers, Bezold, Fischer, Beyer, Trantas; iritis, metastatic ophthalmia, pseudo glioma, Sturm, Treacher. Collins; myopia, due to posterior scleritis, Jacobson, Muller; albuminuric retinitis and a retinitis similar, but without albuminuria, Satow; optic neuritis, usually bilateral and occurring on or after the third week of the disease; optic atrophy and restoration of vision; amaurosis, without ophthalmic microscopical anomalies, probably uremic in origin, Negel; acute dacryo-adenitis, Lindner; periostitis, Struber; bilateral orbital cellulitis, Gallemarts; clearing of trachomatous pannus or macrosis of leucoma daherens, Hirschberg.

Symptoms of eye strain, as well as cross eyes, are often dated from measles. Eliminating cicatricial changes in the orbit and paralysis, the underlying cause had been present practically since birth and the measles acted only as an exciting factor as would any exanthem, trauma, or severe close use.

THE FLY AND ITS EXTERMINATION.*

By G. C. CHANDLER, M. D., Shreveport, La.

It is not necessary to tell this intelligent body of doctors of the dangers of the fly. I believe that the day is not far distant when it will be proven that practically all diseases are transmitted to the human race by insects, water or food, with the two

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latter causes often primarily due to the first. While we are willing to concede that germs may be taken in through air and dust, it has been shown by investigation that the chances of contamination from those sources are so slight in comparison as to be of small importance. I think the day is not far distant when it will be proven that our so-called contagious diseases are diseases in which the germs are more virulent or the means of transmission are more active, or both of these combined. Filth is the breeding place for germs and, consequently, is a source of danger to the human race, but outside of the human body, it is only dangerous from the facility with which the germs from it gain admission to the human body; if the filth and its germs are only kept out of the body they are absolutely free from danger. So wherein does the known danger from filth arise? It arises from the fact that living germs flourish in it and are carried to mankind, either through the respiratory digestive tract, or through some abrasion of the skin or mucous surfaces. If this theory is correct, from whence comes most of our diseases; what is most intimate in its relation with filth and the human race? Is it necessary for me to answer this question? There is not a man within the hearing of my voice who will hesitate one moment in answering the fly. What has scientific investigation already shown, though the work is still in its infancy? The fly, first known as the typhoid fly, has had so many ills traced to him that the name, grave as it is, gives only a faint idea of its activities. He is a chief carrier of cholera, dysentery, and all intestinal diseases and the list of what he is known or suspected of carrying would be so large as to be entirely without the scope of a paper for this meeting. The diseases which he is known to carry stamps him as the arch enemy of mankind, and he is doomed, but how shall we destroy this insect that has such an antipathy to race suicide? If we are too heedful of our scientific authorities when they tell us of the fly's prolific nature, we will be discouraged by the apparent impossibility of destroying him, but I wish to assure you that this tremendous increase does not occur in fly circles, for it has so many enemies to reduce the number.

You can trap and destroy them so as to reduce their number to a minimum where they are comparatively harmless.

You see discussed in the papers whether a fly swatting or clean-up campaign is the proper method to destroy them. In my

opinion the swatting campaign, where it is properly conducted, is pre-eminently the best plan. The first requisite of a campaign is to give publicity to the dangers of the fly, which brings before the people his breeding and feeding places, and what is the result? The people, once informed and aroused, begin not only to swat the fly, but go to cleaning up. An abstract question makes very little impression on the average mind, and I found in a fly campaign, waged by me, that the newspaper publicity and personal talks, while necessary and very valuable, had a comparatively limited effect on the people until a large fly trap was placed on the main thoroughfare, where it was soon filled with thousands of flies, then the people awoke, this was something tangible, the flies were being destroyed, they saw it with their own eyes and immediately fly traps sprung up all over the town and the war was on.

I believe the fly is the great distributor of cerebro-spinal meningitis and acted on this theory during the last season; the isolation of cases and their protection from flies were the principal precautions taken in Shreveport, and in spite of the fact that all of the country around us was freely infected with the disease and our numerous railroads brought into the city ten cases even with our strenuous efforts to prevent it, we were able to control it, we only had fourteen cases during the year, five of these cases occurred within two blocks of the case of a negro child who had the disease before our meningitis hospital was equipped, and so it was exposed to flies, though every effort was made to prevent it. No one in direct contact with the patient contracted the disease, but at intervals so far apart as to exclude contact as to the source of infection, four other cases consecutively developed. On my first visit to one of the cases I found the flies literally within the mouth and nose of the patient, for, on brushing away those in sight others crawled out with bodies and wings wet with secretions. The only reasonable explanation for these cases, in my opinion, was infected flies. People, no doubt, are carriers, but the fly, in my opinion, is the culprit who takes the germs from human spittle and nasal secretions to the victim. I had this neighborhood cleaned as thoroughly as possible, and set fly traps in hopes of catching the disease carriers, since then there have been no more cases, but whether the infected flies were killed or have failed to infect another victim, it is impossible to say.

The fly is not an extensive traveller, which makes it more encouraging for individuals to attempt its extermination at their homes; every one should know that their efforts in cleaning up and destroying flies are a direct benefit and protection to themselves. Of course, the best results are obtained by general clean-ups and destruction of the flies, but individual efforts at home give great benefit in increased comforts and protection from diseases. If the neighbors fail to clean up more attractive spots are presented for the flies, and the short distance that a fly will travel will be in the direction of filth, and you will probably lose the few you fail to kill rather than gain those of your neighbors. Now, the question is how to effectively destroy these dangerous pests. In a fly-swatting campaign publicity is of the first importance, and you should interest your newspapers in the fight which you will have no trouble in doing, for a newspaper is always ready to push anything that will give them interesting copy for the paper. You can begin by telling the public where the fly breeds, where he feeds, and where he goes; let them know that he breeds in filth, feeds in filth and from thence goes to the kitchen and dining room to contaminate the food for the family, or to the baby's nose and mouth, or to the nursing bottle. Tell them of the known diseases that he carries and that he is probably a carrier of almost all diseases. Your article in the papers should be short and to the point, for busy people skip long articles; put them in often for it takes constant hammering to educate an entire people. You should have some of the sinews of war for cash prizes and necessary expenses which you will have no trouble in raising if your educational campaign has been what it should have been. It is best to have a cash prize large enough to influence people to go in for the cash, for the most methodical and persistent workers are the ones who make a business of it. There should be special prizes, the merchants will be glad to give them for the advertisement. After the people have been partially educated and have become interested, set a large fly trap, one that will attract everybody's attention, put it on the main street where the flies are plentiful and the people will wake up and there will be no longer a lack of interest. When the people see this large trap with its thousands of flies which it will soon have, it will look like business to them; it is no longer newspaper talk or theory, but hard facts; the flies are being caught and de-

stroyed; they see it with their own eyes; it is something tangible that all can appreciate and you will no longer complain of a lack of interest. During our contest last year we had from two to four special prizes every day furnished by the merchants, in addition to cash prizes for the winner of the contest of \$75.00, \$50.00 and \$25.00. We also paid 20 cents a quart for all flies brought in during the contest; we measured during the three weeks' contest nearly 8,000,000 flies. A boy sixteen years old won the first prize, destroying 2,389,600 flies. The second prize was won by a man who brought in 1,658,880. I am sure that the flies brought to us were not one-third of those killed. The benefit was so marked that a few weeks ago the Board of Health passed a law requiring all grocery stores, fruit stands, livery and private stables, drug stores, and all businesses that breed or attract flies to have installed fly traps, properly baited, and it has met with the hearty approval of the people, not one word of objection has reached the Board of Health, while expressions of approval have been too numerous to mention.

A CASE OF PELLAGRA TREATED WITH SALVARSAN.*

By D. W. KELLY, M. D., Winnfield, La.

Pauline Rayburn, age 26; sex, female; color, white; residence, Mill, La., farmer's daughter, not married; disease, pellagra.

Had been sick since fall of 1910, sick stomach and vomiting. Family history good. Previous health good, had had some malaria. Her health began to fail in the fall of 1910, and gradually grew worse. In the fall of 1911 she began to lose her mind, and when I saw her in June, 1912, she was ravingly insane, weighed about seventy-five pounds.

She never developed any skin lesions of pellagra until about April, 1912, and was diagnosed pellagra in Charity Hospital of New Orleans, about this time. After being in the hospital only a short time her brother was advised by her physician there to carry her home as she was now ravingly insane and that was no place for her.

On June 11, 1912, she applied to me for treatment, a pitiful

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

sight, indeed, for she was ravingly insane and nothing but skin and bones, weighing about seventy-five pounds. She had the characteristic skin lesions of pellagra on the hands.

Treatment: I gave her three grains of salvarsan intravenously on June 11, 1912. I gradually increased the dose and gave it every ten or fifteen days until I had given her five doses and reached the maximum dose of nine grains on August 1, 1912. I got a positive reaction from every dose and she began to gain weight and show a general improvement from the very first dose. She was not at herself when I left off the salvarsan, but I thought I had given her about all she could stand for a while. She continued to improve and by fall had completely recovered from her trouble, now weighing about one hundred and seventy-five pounds, and her mind perfectly restored.

I gave this patient all the milk and soft-boiled eggs I could get her to take and did not restrict any article of diet except the products of corn. I attribute my patient's recovery to the administration of salvarsan. I am sure she would have died had she not received it.

I wish to thank Dr. E. H. Martin, of Hot Springs, for advising me to give the fourth and fifth dose in this case.

THE NEW HEALTH COMMANDMENT.*

By OSCAR DOWLING, M. D., Shreveport, La.

If to-day a physician of the early nineteenth century should awaken from a hundred years of sleep he would find his methods of former times as rust-eaten as Rip Van Winkle found his gun.

In no other line of human activity has there been greater progress or achievements more vital in human welfare. Even within two decades, in principle and method, changes most radical have been wrought. A few fundamental truths unknown before have revolutionized thought and practice. The physician of the present, like the Great Commoner of the eighteenth century, can not omit to read the morning paper lest he fail to know the latest discovery. Recent developments in medicine result from unprecedented advance in the natural sciences and in instrumental in-

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

ventions. But there is involved another important element. The physician shares in the modern impulse to discover. He is freer to take the initiative than men in the other professions. He may make readier response than the lawyer to the untried; he may attempt on his own responsibility some promising uncertainty. Medicine has lost the finality of tone which characterized it in the past. To-day, it is alert and without the inner deadening satisfaction which is destructive of all progress in every social institution so cursed. This freedom and impulse has found expression in the campaigns for public health captained by doctors who have the support of both the profession and the public.

In attitude toward health and in method, the science of medicine has become modernized, and because of this, the profession as an element of the social order is now in the limelight.

Since the physician was both priest and healer no change relating to his work and status was ever thought of so radical as that proposed in England within a few months. This effort to make the doctor a part of the governmental machinery for the public good is a departure from traditional custom and methods, shocking to the conservative.

Preventive medicine, in its application, is the root of this movement which is but a beginning. Some phases of the opposition to the English plan will reveal the conservative tone which, in spite of the age-long spirit of progress, yet prevails among the doctors. It might be thought at first that the opposition was based primarily on the possible financial loss. With some—a few—this had weight, but from the many, the objections set forth arose from a clinging to the former habit of thought and a fear for the prestige of the profession.

Conservatism, even antagonism to reform, is not peculiar to men of medical science, nor to any state, time, or nation. The illiterate are bound by commonplace conventionalities, the educated by ideas handed down as a part of the social creed. The professional man, more than any other, is inspired to loyalty to the past because of training and the traditions of his school. He thinks it wise to make haste slowly; to be cautious in setting the seal of the order upon the empirical.

In the main, the members of the profession have a sane point of view; a majority certainly, are neither rash nor ultra-conservative. The vices in medicine arise not from these types, but are due

to those who in any other occupation, or profession, would be failures, or worse. The tendency to sects is evident, but it is the least of the drawbacks. It arises from the fluidity of knowledge; it may be the result partially, at least, of a spirit of self-aggrandizement, but so long as men differ in opinions there will be division in the ranks. Sects in medicine are detrimental to steady advancement, but they furnish opportunity for comparison. They call forth at times energetic struggle; they prevent a self-satisfied egotism. Their worst effect is that they destroy public confidence in the altruism of our ultimate aim, the good of humanity.

In an age like this, commercialized and individualistic, it is to be expected that some men in all fields of endeavor will succumb to the temptations which are manifold. In almost every State in the Union there are men once thought unimpeachable who justly wear prison stripes. In medical practice there are temptations greater than those which may arise in commercial enterprises or political activities. The successful physician may be tempted to barter his skill for social prestige; to sell his independence for political honors. The doctor, burdened with financial care, or the one struggling for a foothold, can find opportunity to stoop to quackery debasing, if not criminal. The man with a low sense of honor may with safety become accessory to prevailing forms of evil. He can treble his income almost without effort. These are some of the temptations. To those too weak to resist may be attributed the vices with which we are charged.

An intelligent interest in health affairs has made the people more critical. There is still love and respect for the family doctor, but a case of infection, seemingly from carelessness, is now a matter of comment. Formerly, the public did not know what to expect; now they do. They believe, in some instances clearly, it is the result of ignorance, gross carelessness, or the physician's unbelief in modern methods.

In the thousands of proprietary medicines handled by druggists, he who runs may read the lack of specific diagnosis of the individual patient and an unwillingness to take the trouble to substitute for drugs other measures of relief. Drugs used wisely, sparingly, and for a specific purpose are helpful; they are needed. Proprietary medicines, with few exceptions, do not meet the requirements.

Since the advent of the specialist, a system of fee-splitting has evolved which may or may not be a reflection. If the patient knows of the division; if all concerned are given explicit information; if the diagnostician is entirely honest in his selection of the surgeon or specialist, it may be considered legitimate. Doubtless, in many cases, it is so. But the temptation to aid a friend by getting for him a fee, or an increasing prestige, puts this practice in a questionable light. The people at present do not approve; it lessens their confidence. The physician who thinks the practice permissible should make plain his sincerity and give publicity to his part in the transaction. The imputation which is current, if secret, that there are doctors who break the letter and the spirit of the oath of the profession "with purity and holiness will I pass my life and practice my art," should be run down; it should be disproved. To tolerate even an under current of such suspicion against the members of the profession is, on our part, unpardonable. The whisper that these things are done; that sufficient money will buy immunity from consequences should be investigated by every man who holds in respect the good name of the profession. If the ethics of the calling demands anything, it demands that every man shall be, in this one thing above all others, the guardian of the honor of all.

The toleration of disgracefully inadequate medical schools is called one of our vices. Fortunately, the professional eye has been turned in this direction and reforms have been wrought and are now in progress.

The health officer to-day, whether local or State, in his daily mail, is the recipient of many suggestions. He is asked, why not sweep clean your own hearthstone before asking your lawyer neighbor to mop his floor? Do you not think it would be wise to sterilize your own instruments before going after the barbers and manicure shops? Why not arrest some of the members of your professional household who constantly violate the spitting ordinance? What is an officer to say? The critics suggest if you want to keep people well, make practical application of your scientific notions of prevention. Teach in your visits to the homes of patients the principles of hygiene and insist on adherence to your rules. These critics are not all unkindly. They mean to help us to understand the logical demands of an enlightened public.

Perhaps in the history of medicine there has been no more trying period to those concerned than present conditions. In the past, the changes pertained to the treatment of disease. To-day, it relates to the profession in its social and economic aspects. "The old order changeth giving place to new." Prevention, rather than remedy, shifts the status of the physician; it means a reverse in the public attitude toward medical service; a demand for the traditional assistance and much more. It implies a differentiation of service. The developments of this transitional stage require an adjustment of ideals, training, methods and attitude. These, in the physician's equipment, are fundamentals. therefore, harmonious adjustment on the part of all, necessarily, will be slow.

The ultra-progressive sees in preventive medicine a remedy for human suffering and social evils. He can not but wish to hasten the dawning of a health age. He sees in the men of the medical profession, ideal agents for the promotion of all necessary measures. But among the ranks even of his sympathizers there are some who honestly believe that preventive medicine, applied, will be the ruin of the physician. They hear the wolf at the door. They see the family income cut to a minimum. If the knowledge we now have could become concrete in personal habits and community methods, the work of the family physician would be greatly lessened. But even in those comparatively ideal conditions the doctor will be always an essential factor in the individual life and the community welfare. As his remedial service becomes less imperative, his advisory and sanitary utility will grow in magnitude and importance. Every activity, enlarged and readjusted, opens new fields for human endeavor. It is the correlative of progress.

The physician who, in the interest of health, educates the community in hygiene, will make for himself, in the doing, a place in the community mind. He may become a practical adviser in hygiene with a definite sum from his well patients—a much pleasanter way of earning a living than prescribing tablets or giving hypodermics. The response of the public to new methods foreshadows a quick adjustment to rational measures in which doctors will be engaged permanently and satisfactorily. The development of scientific surgery has not lessened the demand for the

skilled surgeon; the discovery of micro-organisms as the cause of many diseases has not cut out the doctor. On the contrary, he has been more than ever the friend, counselor, and adviser of the family and the State. To become a useful factor in the agencies already at work for social advancement will create a demand for the specific health service required by the new order.

The larger aspect of health work involves the social and economic factors that undermine bodily vigor and make disease possible. The solution of these problems demands the most intelligent use of the resources of medical science, and in addition, the co-operation of an enlightened socialized statesmanship for the remedy of social and economic conditions adverse to national vigor. Hence, the man who is willing to adapt himself need not fear. Though the transition stage may seem to bear a burden of ills for the general practitioner of medicine, there is equally apparent correlative gain for all that may be lost. A differentiation of activities; a demand for skilled men in all the health lines now familiar; the opening of other fields of endeavor; the application of prevention of disease and promotion of health through social and governmental agencies, will broaden the influence and strengthen the leadership of every trained and intelligent man in the profession. But there must be no divorce between creed and conduct.

The new health commandment implies a course which meets the modern attitude of the laity. It embodies the spirit of the oath which has set the standard since the days of Hippocrates. "Into whatever house I enter, I will go for the advantage of the sick and will abstain from every voluntary act of mischief and corruption." But this is not all. It means the practical application of every principle of modern medicine which has been proved. No other course is logical or permissible. To live up professionally to the light of science in every detail of daily work; to meet the changing social demand with open-mindedness; to be neither ultra-radical nor ultra-conservative, but sane and safe; to think and act unselfishly and honestly; to be zealous in the promotion of everything pertaining to public health—these are the principles of the new health law.

LEGISLATION—STATE AND LOCAL. WHAT IT MAY ACCOMPLISH FOR SANITATION.*

By S. D. PORTER, M. D., New Orleans.

The prosperity and happiness of a nation, state, community and individual depend upon its healthfulness, and National, State and local laws are necessary to preserve and protect the health of the people.

The practical application of those means and measures known to sanitary science has made healthy countries more healthful and transformed many veritable hot beds of disease into a land that could be classed as health resorts and has made worthless lands produce full and plenty.

We are all familiar with the wonderful result that was accomplished in Cuba, particularly Havana, and this magnificent result could not have been possible, especially among the type of people the Cubans are, without the proper sanitary laws and competent, active and honest officials to enforce them.

We are approaching the completion of the Panama Canal, which will ever stand as a monument to sanitary science and would the results there have been possible without the United States Government to support the strong arm of its sanitary officers in the enforcement of the sanitary laws?

We also know that sanitary laws have precedent over all other regulations in camp life. The decreased morbidity and mortality rates among our troops in camp life have been due to better and more rigidly enforced sanitary regulations. This was beautifully demonstrated at San Antonio, Texas, in 1911.

History tells us of at least one war in which victory was attributed to sanitary laws and their enforcement.

From what has already been accomplished through the passage of National, State and local legislation for sanitation, we must estimate what may be accomplished through additional and improved laws.

As yellow fever was banished from Cuba by eliminating the *stegomyia*, and plague from California, so may many of the diseases that are now causing thousands of deaths be eliminated by the passage of the proper state and local laws.

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

Malaria, which is a scourge to the people of the South, can be eliminated by laws governing drainage, the State reclaiming its swamp lands, State and local laws abolishing or protecting the waters held in tanks by screens. Laws requiring the oiling of all stagnant bodies of water where drainage is impracticable.

Hookworm disease, typhoid fever, dysentery, and other diseases due to soil pollution, all of which there is an organized effort throughout the South to ameliorate and eradicate, can never be accomplished until we have adequate laws to protect the soil from pollution and the human excrements from the housefly, and the proper and sanitary disposal of night soil.

Typhoid fever, smallpox, tuberculosis, etc., in fact all the communicable diseases can be controlled by the proper sanitary laws. We might go on indefinitely enumerating what may be accomplished until we reach the ideal. What we are mostly interested in, however, is the enactment of State and local legislation which will fortify our efforts, especially among the class of people referred to by Prior, who said, "from ignorance our comfort flows."

No public health student to-day can question the necessity for more adequate State and local legislation for the advancement of sanitation; the subject is being constantly brought before the reading public, our whole social life and even the stability of our Government, in a measure, depends upon sanitation. The enormous waste due to insufficient sanitary laws must be stopped.

How can we best and more quickly accomplish this end? I think we all are agreed that education must come before legislation, or, in other words, we will be able to secure and enforce sanitary laws in proportion to our ability to educate the masses. This was very forcibly demonstrated in Louisiana during the yellow fever epidemic of 1905. In the beginning of the campaign there was an element of doubt among the people, lack of confidence in the health officers, each little community had its shotgun quarantine brigade. All these conditions were due to lack of knowledge as to the cause of the disease and its means of transmission. When the medical and sanitary army was organized the first battle was with the people to educate; lectures were delivered in every school, the churches and commercial bodies, mass meetings were held—the united medical profession was enlisted in the educational campaign, and soon the people were demanding legislation to stamp

out the disease. The Government placed the necessary funds at the command of the health officers, local and State laws were passed to prevent the spread of the disease. A forceful demonstration was made, and a condition of panic converted into one of confidence and courage. This won the greatest victory of sanitation in eradicating a disease which had caused the loss of thousands of lives and millions of dollars, and has been greatly instrumental and helpful in securing additional sanitary legislation.

The educational campaign inaugurated in Louisiana three years ago was influential in causing the Legislature the following year to augment the yearly appropriation for public health work \$10,000. The strenuous educational campaign carried on by Dr. Oscar Dowling, President of the Louisiana State Board of Health, during his tenure of office, was productive of such strong sentiment for better sanitation among the masses that the Legislature still further increased the appropriation in 1912 to \$15,000, and passed such legislation as the Board requested.

Louisiana is only one of the many States that has succeeded in securing sanitary legislation through a systematic, energetic and persistent health-educational propaganda. The annual appropriations have been increased. Arkansas, which is the most recent to pass public health legislation, created a State Board of Health, prescribed its powers, and gave \$17,000, for its maintenance. The point is, the people are willing to "give as they receive."

The State Legislature should repose confidence in its health department and clothe its officials with the necessary authority to enforce the laws.

We have a Sanitary Code which should have the same force of law as the Civil and Criminal Codes. Each Parish and municipality should endorse the State Code and supplement such local sanitary ordinances as are necessary to control conditions.

The legislative act creating the Louisiana State Board of Health gave it the power to prepare a Sanitary Code, which shall contain and provide rules, regulations and ordinances of a general nature, for the improvement and amelioration of the hygienic and sanitary conditions of the State. (The Supreme Court recently decided that all regulations contained in the Sanitary Code was law.)

A penalty is fixed for violations of any regulations contained therein. When public sentiment is behind a law its enforcement becomes less difficult.

A few suggestions for State and local legislation which may accomplish much for sanitation are:

1. More liberal appropriations for public health work.
2. The establishment of laboratories for the study of the causes of transmission of diseases.
3. A law similar to our medical practice and parish superintendents of education laws, prescribing the qualifications of health officers.
4. Law establishing medical inspection of school children with more definite instructions of school children in personal hygiene and general sanitation.
5. A law establishing the chair of hygiene and sanitation in our colleges and universities, and more systematic teaching of it in all our institutions of learning.

In conclusion, adequate and conservative laws, with full time, active, energetic and efficient, well paid health officials, State and local, will accomplish much for sanitation.

MALARIA IN LOUISIANA.

By J. H. WHITE, Surgeon, U. S. P. H. S., New Orleans.

I do not present this as a scientific paper but as a plea for help to your State to which you, as patriotic men, owe all, and to your State Board of Health, which is earnestly striving for the betterment of human life and happiness in that State. Dr. Dowling is heartily in accord with the ideas herein set forth, and my hope in presenting this to you is that the active interest of every physician in the State may be equally enlisted and such interest will certainly assure the success of our efforts.

Malaria, which has been for ages the bugaboo of medicine and the scapegoat to bear the burden of undetermined diagnosis on the part of the unlearned physician, largely because there was then no diagnostic precision, presents to-day, from a different angle, as many difficulties to us and dangers to the public, as when we ignorantly named it bad air instead of bad insect.

There is hardly a Southern community that is not supposed to be malarious, and while it is true that many are so afflicted, there are also many whose cases exist, largely or even solely as a shield for the lack of knowledge of the doctor, or to cover up syphilis, tuberculosis, etc., in death certificates, and thereby obtain payment

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

of industrial life insurance policies or for the less dishonest purpose of saving the face of the family of the deceased.

In cities like Memphis and Savannah the malarial mortality is undoubtedly enormously overstated, and continues to be so despite the health officers' protests.

There is, fortunately, less of this sort of thing in New Orleans than in any other large Southern center of population, and although the present stated mortality may be slightly at variance with the facts, it is probably very nearly a true index of existing mortality rates, but does not give even the faintest clue as to what may be our own morbidity.

Now, the morbidity in malaria, at least in this country, is the point of greatest possible interest, because knowing that the cause of mortality in malaria is low, we know that even the New Orleans death rate of eleven per 100,000 of population, means a large number of people ill of the disease, and a very large economic loss to the community—directly through loss of time and indirectly by giving an undeservedly bad name to the community and thus preventing influx of new settlers, which new settlers are the very factors most needed to eventually wipe out all malaria, by putting every foot of land in cultivation.

What then is to be done? The answer is this: Let all the profession earnestly collaborate with the State Health Officer, who has entered into an arrangement with the United States Public Service, in carrying out which we shall ask information of each doctor in the State regarding the incidence of malaria in his practice and vicinity, and the breeding grounds for the anopheles mosquito existing around him. With this information the State Board of Health can be in position to do the greatest possible good at the least possible expense.

All the physicians in private practice can furnish the general information, and those using microscopes can furnish specific data valuable beyond computation. The health authorities can and will make the necessary investigations in the case of all public institutions, and examine smears in such localities as have no microscopist.

When all the accumulated data has been verified, corrected and tabulated, we shall know what sections have any notable infection

and why, and your health officer can proceed intelligently to correct the trouble with no wasted energy, and we shall also know if any section is unjustly accredited with malaria, and can give that a clean bill of health. The able and forceful President of the Louisiana State Board of Health has with the full consent of the Board accepted my offer to join in this great work, and we are agreed that inquiries shall be sent out by me on Government post cards, which will avoid a very large expense. Every dollar is needed in such a vast undertaking as the State-wide eradication of malaria, and it is to nothing less than this, that such an investigation must ultimately lead.

Fortunately the good results accruing from such work will not stop with this one disease, but will inevitably tend to assist in many other directions, such as the discovery, perhaps, of a typhoid focus masquerading as malaria, and which, once unmasked, is easily obliterated, but remaining unknown, is a constant pit-fall for the innocent and unwary citizen.

We shall ascertain not only the existence, but the type of malaria in any given locality. We shall identify the gamete carriers—they who more than any others are the factors in perpetuating infection.

We shall be able to locate the pools that breed anopheles, and when one of these pools is easily susceptible to filling or draining it should need only a suggestion from the local health officers to obliterate that pool, give quinin to the gamete carriers present, and so end one trouble, and if this can be done all over the State, it is no iridescent dream to say that we shall make a vast improvement in health conditions within a few months, and an ultimate complete success within a few years.

There is no one thing in which the profession can so enormously promote the general welfare as this one, and it is to be earnestly hoped that all, without exception, will lend their hearty co-operation, to the end that Louisiana may be relieved of the long borne odium of being malarious. Nothing is more conducive to wealth than health, and nothing more surely can lead to health than wisdom. Let us, therefore, be wise and set our house in order, that we may attain health and wealth.

ANOMALIES OF THE SACRO-LUMBAR ARTICULATION.*

By EDWARD S. HATCH, M. D., New Orleans.

During the last ten years there have been a large number of papers presented dealing with the sacro-iliac joints. The diagnosis and treatment of the strains, dislocations and diseases of these joints have, therefore, become familiar to all of us; and the doctor in general practice has come to recognize and treat these conditions and not to treat the symptoms arising therefrom as was formerly done.

It is only a few years ago that all these strains and dislocations were called neuralgia, lumbago or sciatica, and no attempt was made to find the exact cause in each case. Now that these conditions have been treated and cured in the majority of cases, and we come to feel that they are simple, I am sure that those of us who are devoting our time to this class of work find a case now and then which does not respond to the usual treatment. and the paper by Dr. Goldthwaite on, "The Lumbo-Sacral Articulation," which was published in March, 1911, was read with great interest. This paper explained why some of our cases did not react to treatment, and also explained the anatomical cause of some of the very puzzling symptoms.

This was followed in January, 1913, by another paper by the same author, giving his later researches. Since his first paper was published, I have studied my cases of back strain very carefully, both from an anatomical and an X-ray standpoint, and find that anomalies of the sacro-lumbar articulation are not at all uncommon. The same strain that will in one patient cause a mild sacro-iliac relaxation which gets well promptly, will in a patient who is suffering from an anomaly of the sacro-lumbar articulation cause possibly the same symptoms, but the treatment to be effective, must be different.

It is extremely interesting to note the great and varied deviation from the normal found in the transverse processes of the fifth lumbar-vertebra, and to a lesser degree, in the articular processes. In some instances the transverse processes of the lumbar vertebrae are simply larger, that is, broader and less often longer than normal. This condition may not cause trouble unless in side bending the process strikes the ilium of the sacrum.

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

If one or the other process is so long that it is actually articulating with the sacrum or the ilium all the time, there is marked predisposition to sacro-iliac strain. More frequently one of the transverse processes is very much enlarged and articulates with the sacrum, and sometimes both processes articulate with the sacrum. This condition was called by the late Dr. Thomas Dwight lumbo-sacral transverse articulation. Occasionally the fifth lumbar vertebra is fused with the sacrum, which, of course, gives much added leverage for strain.

The X-ray photographs of these cases, which are shown here, illustrate all the various anomalies, and one cannot fail to appreciate even by a few cases, how important this condition is in the treatment of spinal strains and dislocations.

The writer had the privilege of seeing Dr. Goldthwaite's anatomical specimens, which showed these conditions beautifully, and also showed the two types of the articular process, the flat type and the crescentic type. Either of these types may exist on both sides of a vertebra, or there may be a flat process on one side and a crescentic process on the other. These differences will, of necessity, have a great bearing on the stability of the spine and on the prognosis and treatment of these conditions. The patients have, of course, been unaware of these anomalies until some strain or wrench of the parts caused symptoms, and the abnormal anatomical conditions were revealed by X-ray. Therefore, we can only relieve the symptoms, and there is always a possibility of a strain recurring.

The following cases will illustrate the different types:

CASE 1. Mrs. S. L. C., age 29. First seen October 31, 1912. *Family History:* Negative. *Past History:* Negative. *Present Illness:* In the winter of 1906, while exercising, fell from a swing and sat down suddenly. At that time taken with a pain over the upper part of left hip with a numb sensation in both legs. This pain comes and goes. There are months at a time when she is perfectly well. Has gained some weight. For the past year condition has grown worse. When she is in bed has practically no pain.

Physical Examination: Well nourished woman, stands with her right hip slightly more prominent than her left. All motions of the spine free. Marked tenderness over the lumbar spine, especially at the lumbo-sacral junction. Very tender over sacro-iliac articula-

tions, especially the left. Slight tenderness over sacro-sciatic foramen.

X-Ray made, which shows that the left transverse process of the fifth lumbar vertebra is much enlarged, and articulates with the sacrum and ilium.

Treatment: Sacro-iliac strapping. November 1 has felt somewhat better, but on account of her stoutness the straps hurt her a great deal. Measured for apparatus. December 1 has been much relieved.

CASE II. Dr. M. R. T., age 45. First seen February 23, 1912.

Family History: Father died of tuberculosis, mother alive and well.

Past History: Double pleurisy ten years ago. No venereal. *Present*

Illness: Three years ago, while lifting, wrenched his back low down on the right side. This cleared up in ten days, and he remained perfectly well up to one year ago, when, after a slight twist of the back, was sore for a day or two. Ten days ago caught with the same right-sided pain. Suffers a great deal from any jar.

Physical Examination: Very well developed and nourished man. Stands with a slight list to the right. Tenderness over the right sacro-iliac joint. Raising either extended leg causes pain over the right sacro-iliac joint.

Treatment: Back strapped. *X-Ray made*, which shows the fifth lumbar vertebra and sacrum set deep between the iliac bones and the right transverse process of the fifth lumbar touching the ilium on that side. February 26, no special relief from the strapping. Patient advised to have manipulation under ether. March 4, 1912, patient came into the office walking perfectly normal, with no list. He said about three days ago, while lying on a hard surface, felt something slip in his back. Since then has felt much better; no tenderness over right sacro-iliac joint. Canvas corset designed and fitted several days later. March 25, has been perfectly comfortable.

CASE III. Mrs. W. F. C., age 38. This patient was seen first

November 28, 1912. *Family History:* Negative. *Past History:* Operated for cervix and perineum. Patient had pain on the right side for fifteen years. Two years ago operated for appendix with marked relief, but has had occasional pains since. Has suffered with bladder trouble for about seven years.

Present Illness: For several years the lower part of her spine has been tender to pressure and she has also suffered from neuritis. Now for the past seven or eight months has had so-called sciatica.

Worse on the right side, but occasionally pain runs down both legs. On close questioning, patient feels that her present trouble really dates from confinement several years previous.

Physical Examination: Well developed and nourished woman. All spinal motions free. Tenderness over both sacro-iliac joints, most marked over left one. Raising extended legs painful. X-Ray made, which shows both transverse processes of the fifth lumbar vertebra enlarged, and the whole vertebra, including the processes, fused with the sacrum and articulating with the ilium.

Treatment: Brace adjusted to correct poise of the body, as well as take care of the pendulous abdomen. Patient has had marked relief.

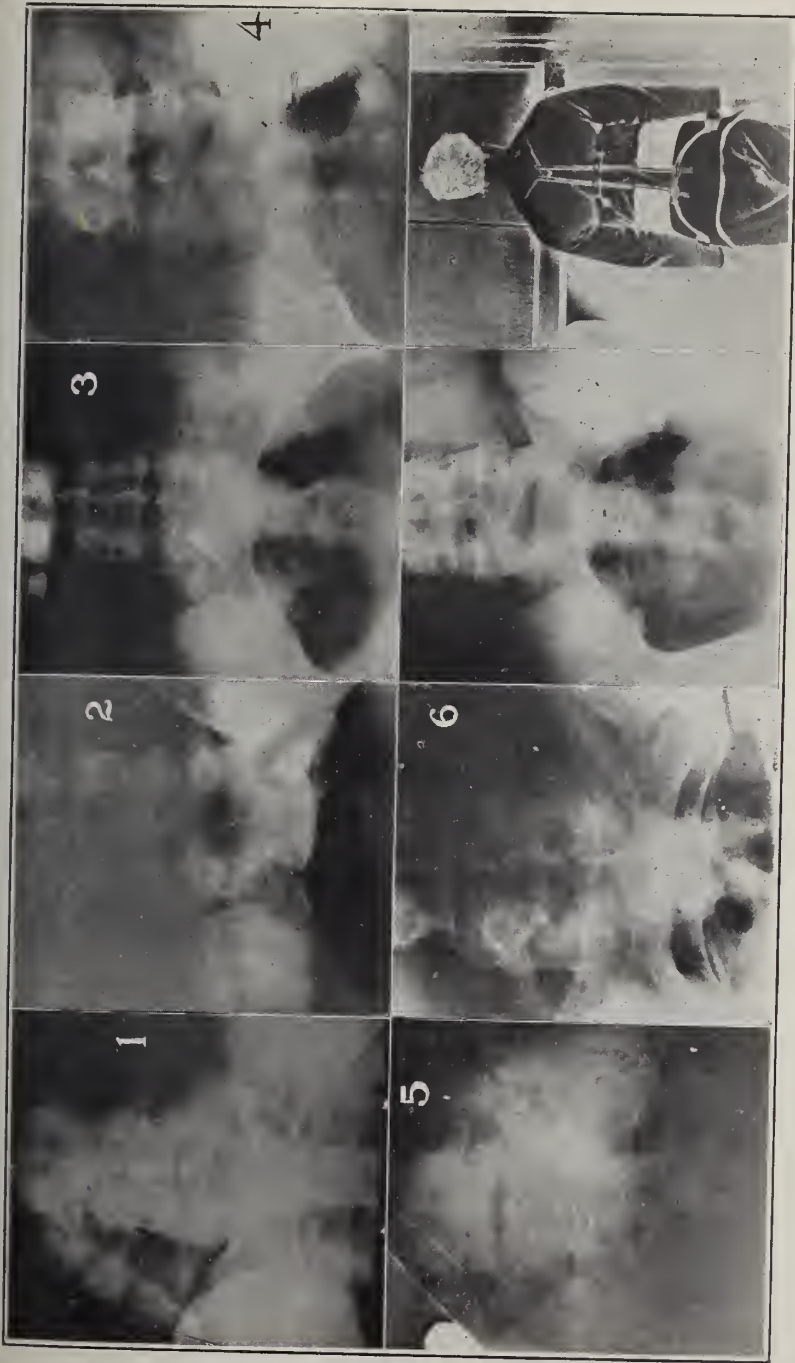
CASE IV. Mr. E. D. M., age 33. First seen February 13, 1913. *Family History:* Negative. *Past History:* Negative. *Present Illness:* Five months ago wrenched his back while raising heavy boxes, pain greatest upon stooping.

Physical Examination: Small man, who presents marked tenderness over the left sacro-iliac joint and lumbo-sacral junction. This man has had many diagnoses, but it was apparent that his pain was due to sacro-iliac strain. X-Ray made, which shows both transverse processes of the fifth lumbar very much enlarged and articulating with the sacrum and ilium on each side. Wide sacro-iliac interspaces, especially on the left side.

Treatment: Back strapped. February 18, has felt some better. February 22, feels much better. Back restrapped, while brace was being made. March 4, brace fitted. Has been more comfortable since.

CASE V. Mrs. W. B., age 37. First seen August 8, 1912. *Family History:* Good. *Past History:* Negative. *Present Illness:* Since the birth of her first child, nine years ago, has tired very easily. Suffered a great deal during a second pregnancy one year later, bad laceration at the time. Third child, two years later, after which perineum was repaired. For the last six years she has been getting worse. This patient has been treated by many different physicians, and has received almost all diagnosis but the right one. She is intensely neurotic and has practically been confined to her room for several years. She feels that there is no help for her.

Physical Examination: Very flabby woman, with pendulous abdomen. Tenderness over the lumbo-sacral and sacro-iliac joints. All motions of spine free, but painful. Measured for brace. X-Ray



CASE 1. Shows left transverse process of fifth lumbar vertebra much enlarged and articulating with sacrum and ilium.
 CASE 2. Fifth lumbar vertebra and the sacrum set deep between iliac bones; right transverse process of same touching ilium on that side.
 CASE 3. Both transverse processes of fifth lumbar vertebra enlarged and whole vertebra, including processes, fused with sacrum and articulating with ilium.
 CASE 4. Both transverse processes of fifth lumbar vertebra much enlarged and articulating with top of sacrum.—Next is normal fifth lumbar vertebra, shows sacro-iliac relaxation; note wide interspace shown on right side of picture.—Brace for Case 4.
 CASE 5. Right transverse processes of fifth lumbar vertebra is elongated and articulating with ilium and sacrum.
 CASE 6. Right transverse processes of fifth lumbar vertebra is elongated and articulating with top of sacrum; next is normal fifth lumbar vertebra, shows sacro-iliac relaxation; note wide interspace shown on right side of picture.—Brace for Case 4.

NOTE.—Right and left in above are transposed in some cases, as some pictures were taken with screen and some were not.
 ILLUSTRATING DR. HATCH'S ARTICLE.

examinations shows the left transverse process of the fifth lumbar vertebra very much enlarged, and articulating with the ilium and sacrum. March 1, 1913, patient has been wearing the brace with marked relief and has been receiving about twice a week deep vibratory massage over the painful area. She has been able to get about more, but still suffers a great deal. March 15, 1913, has recently had a severe nervous shock, but otherwise is improving slowly. April 15, 1913, in a letter the patient states that she is much better and gaining steadily.

CASE VI. Miss S. B., age 24. First seen March 12, 1913. *Family History:* Mother living, but has suffered for years from multiple rheumatoid arthritis. Father alive and well. *Past History:* Always well. *Present Illness:* Two years ago when she went to stoop over had a sudden pain in the back. This gradually got worse and there was an ache in the back all the time. One year ago an attack, which gradually subsided without treatment. For the last few months severe attacks. On any irritation great pain on left side of back low down.

Physical Examination: Well developed and nourished girl. Marked tenderness over left sacro-iliac joint. Right lateral bending painful, all other bending normal. *X-Ray made*, which shows the right transverse process of the fifth lumbar elongated and articulating with the top of the sacrum. Slightly tilting sacrum with the left side lower than the right side, separation between the sacrum and ilium on the left side.

Treatment: Sacro-iliac strapping and brace made, which corrects the poise of the body and relieves strain from the sacro-iliac joints. April 10, 1913, patient has been comfortable since wearing the brace.

In the treatment of these cases, we must support the sacro-iliac joint, but if we stop there the symptoms are not relieved. The body should be held erect, and if lordosis is present, it should be corrected. A brace, which holds the body in the erect position and at the same time relieves pressure on the lumbo-sacral joint, will make these patients comfortable. If the pain is very severe, rest in bed or recumbency in a properly moulded plaster jacket may be necessary. These patients are sometimes relieved by simply lying down, whereas in a pure sacro-iliac case, this position does not relieve the symptoms.

1. Dr. Joel E. Goldthwaite, *Boston Medical and Surgical Journal*, March 16, 1911.
 2. Dr. Joel E. Goldthwaite, *Boston Medical and Surgical Journal*, January 23, 1913.

FURTHER OBSERVATIONS OF THE NEUTROPHILE LEUKOCYTIC PICTURE AS A GUIDE FOR "TUBERCULINS."*

By WALLACE J. DUREL, M. D., New Orleans.

To the one who believes that in the use of the "tuberculins" we possess a means of acquiring some immunization against the tubercle bacillus, and its poisons, the method of administration of these "tuberculins" becomes of paramount importance. Through faulty methods of administration, the "tuberculins" have been discredited, so much so that they would be discarded to-day had it not been for the persevering and methodic works of such men as Trudeau, Brown, Sahli, Calmette, Wolff-Fisher, and many others.

If to this day the long debated question: "The value of the 'tuberculins' in the treatment of tuberculosis" is not settled, we can attribute the cause to the fact that many of the opinions given in favor or against "tuberculins" are often biased and prejudiced. So much is expected of the "tuberculins" that we look for effects which could not be expected of the most effective specifics.

When we consider the latest views of the action of the "tuberculins" the original theory of Koch becomes a secondary effect to the true and primary action of the "tuberculins."

The latest and most accepted views are those of Wolff-Fisher, who believes that "the injection of not too large doses of tuberculin stimulates (in the tuberculous) the formation of bacteriolysin substances—which, acting upon the tubercle bacilli, thus liberate active toxins of the tubercle bacillus." (This occurs when artificial "tuberculins" are injected in the "allergic" tissues of the tuberculous, in doses not sufficient to bring on the unfavorable form of the hyper-sensibility reaction.)

When we connect this theory with what we consider to be the body's chief means of displaying its protective properties against any infecting foe, or toxic poison of that foe, we cannot but fail to look for changes in those most resistant and delicate body cells, i e., the polynuclear neutrophile leukocytes.

At the last meeting of the National Association for the Study and Prevention of Tuberculosis, Washington, D. C., Drs. Solis-Cohen, Strickler, Ringer and Durel showed that the neutrophile

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913.

leukocytes underwent not only quantitative changes, but qualitative changes (as observed in the structure of their nucleus) during the course of different phases of tuberculosis. This was done by counting cells with single and multiple nuclei and tabulating their percentage—giving what is called the neutrophile leucocytic blood picture.

Briefly considering the *modus operandi* by which the neutrophiles are replenished, after being taken up in the blood circuit, and used for the proper protection of the body's resistance, we are told that the bone marrow is the generating factory—forming the myelocyte—the mother cell of the polynuclear neutrophile leukocyte.

We are also told that the newly-born cells (neutrophiles) are mononuclear, becoming polynuclear only after maturity in the blood circuit.

We are further told that the polynuclear neutrophile leukocytes are endowed with strong anti-body action—carrying more anti-body substances than the mononuclear neutrophiles.

We are further told that most toxic bacterial products irritate the bone-marrow cells, so causing an increase of mononuclear neutrophiles in the blood circuit, this latter phenomenon being observed in most severe infectious diseases.

Concluding from the above, I thought it would be well-spent time to look for changes in the leucocytic neutrophile picture during the administration of the tuberculin "toxic" products.

For the results of my research I refer you to the 1912 Transactions of the National Association for the Study and Prevention of Tuberculosis

In the essay I here present you with (taking for granted that my observations of last year were correct), I wish to compare clinical findings in "tuberculin" treated cases by the neutrophile picture with the clinical findings in "tuberculin" treated cases without the neutrophile picture, i. e., by the clinical method.

For the past twelve years I have used some form of "tuberculin" in my practice, and up to three years ago I administered "tuberculin" solely by the clinical method. This was not entirely satisfactory, as we will see further on.

True, we had the Opsonic Index method, but it is so complex that it could not be applied for practical purposes and general use.

Therefore the clinical method was my only guide for the dosage

of "tuberculin" up to three years ago, when I began using the neutrophile leukocytic picture as a guide for my dosage of "tuberculin." I soon noticed, thereafter, that reactions were easily avoided, and that even with the potent bacilli emulsion I could administer "tuberculin" without the constant fear of exposing my patients to the dangerous effects of toxic and reacting doses—the later causing the two-edged, and to be feared condition of hypersensibility.

If the action of the "tuberculins" is to irritate the bone-marrow cells, and thus favor the replenishment of destroyed cells by new mononuclear cells (the latter becoming polynuclears only after maturity), and if the poly are the chief cells carrying the antibodies necessary to neutralize the toxins of the tubercle bacilli, it strikes us that the effects of toxic doses of "tuberculin" may become very unfavorable to the welfare of the body's cell resistance, for by toxic doses an excess of mononuclear cells (immature and low resistant cells) is formed and overcrowds the blood circuit, thereby diminishing the body's resistance.

By the above we can see how and why results of "tuberculin" treated cases are at variance, and why we have the biased and prejudiced opinions alluded to in the early part of this essay.

Practically speaking—if the "tuberculins" are too often repeated and increased too rapidly—their toxicity becomes injurious. If the doses are increased gradually, and at long intervals, and are given in small and ineffective quantities, the results will be free of accompanying reactions, but also free of good effects.

For those not familiar with the matter under discussion, I will state that Arneth was the first to call attention to changes occurring in the structure of the nucleus of the neutrophile leukocytes.

By a neutrophile picture we mean the tabulated percentage of neutrophile leukocytes with one, two, three, four and five nuclei. This is done by counting 50 to 100 cells (neutrophile leukocytes) figuring the relative percentage of cells with one, two, three, four and five nuclei. The picture as described by Arneth, and found in the healthy individual, is as follows:

One, 7 per cent; two, 30 per cent; three, 36 per cent; 4, 16 per cent; five, 2 per cent.

Here I will say that the above picture, in my opinion, is not a correct one of the neutrophile leukocytes in the blood.

Due to the faulty and not penetrating stains used by Arneth in his work, the connecting bands uniting the body of the nuclear fragments are not visibly stained, thus permitting cells that are one, two and three nuclears to appear as cells with three, four and five nuclei.

This I will further discuss in an essay at the 1913 meeting of the National Association for the Study and Prevention of Tuberculosis.

By shifting of the picture to the left or right, we mean the increase or decrease of neutrophile cells with one nucleus; with a proportional relative increase or decrease of neutrophile cells with two, three, four and five nuclei.

Example.—If we counted the following picture to-day, one, 84 per cent; two, 4 per cent; three, 2 per cent; four, 0 per cent, five, 0 per cent, and the following picture the next day, one, 94 per cent; two, 6 per cent; three, 0 per cent; four, 0 per cent, five, 0 per cent, we would say that the picture had shifted to the left, and vice versa.

By giving our dosage by the clinical method, it is impossible (as my past experience of the last twelve years has convinced me), to know when we are reaching a toxic dose of the "tuberculins," or when we are still attached to the smaller non-reacting, but ineffective dose.

If the dose is toxic, reactions appear, which if associated with a rise of temperature, certainly will impair the patient's general condition.

If these unavoidable reactions (when "tuberculins" are given by the clinical method) are too often repeated, the patient soon develops a state of hypersensibility, a dangerous condition, that any tuberculous wants to avoid.

With the aid of the neutrophile picture we can avoid the above state of affairs, and can predict and foretell when a toxic dose of the "tuberculins" is to be given. This is easily done by taking a neutrophile picture of the patient's blood the same morning that the dose is administered, and according to the shifting of the neutrophile picture to the right or left, the dosage is increased, diminished, or not given at all. With the aid of this picture I have been able to administer the "tuberculins" (especially the more active bacilli emulsion, Koch) in patients fairly advanced and febrile,

where up to three years ago I had to satisfy myself with the basic method of treatment, i. e., diet, rest and open-air.

To-day I feel that the resistance of the febrile and sensitive patients can be materially increased by giving them one of the "tuberculins" (the bacilli emulsion in preference). This opinion I base upon the study and observation of fifty or more cases of tuberculosis in all stages—treated with bacilli emulsion given according to the neutrophile picture, and compared with cases treated without the neutrophile picture.

(For detail description of this method I refer you to the 1913 transactions of the National Association for the Study and Prevention of Tuberculosis.)

I will, however, allude to the precautionary facts, that smears should be made with the cigarette paper, and that no smear should be stained before it has thoroughly dried.

In counting the neutrophile cells, I have included as polynuclear, all neutrophile cells without any connecting isthmus band, and in the final count I interpret my readings by taking the average count and guiding my dosage by this, as the picture shifts to the left or right.

Usually I wait for a drop or rise of five or ten per cent before I consider that the picture has sufficiently shifted, in order to change my dosage of bacilli emulsion.

In hemorrhagic or hypersensitive cases a lower drop than that given above is advisable before "tuberculin" is given or increased. (The clinical picture of the patient must not be entirely discarded, as it is of value in interpreting the reading of the neutrophile counts.)

After studying the record charts of those cases treated with bacilli emulsion by the neutrophile picture, it is evident that the improvement in the lungs of the cases treated by the blood picture is most gratifying and encouraging, when compared to the records of the cases treated without bacilli emulsion, (without the neutrophile picture).

Another important fact disclosed is that the apparent improvement of a patient, even after enormous gain in weight and disappearance of bacilli in the sputum, does not mean well for the future welfare of the patient, if the neutrophile count is continuously high, and not fluctuating to the right. Such cases I have seen die in a few months, after believing that the disease had been conquered.

This will happen in many individuals who are too confident of the "cure," and who become careless in their mode of living—by not living up to the restricted life of the active tuberculous as well as that of the latent or arrested tuberculous.

By the blood picture one can tell when the patient is resting and when he commits any infractions of that most important measure, i. e., rest in the open-air.

Here I will say that rest is essential for good results with any of the "tuberculins."

Another long debatable question that I feel I have satisfactorily cleared—is to know when to start a patient with a "tuberculin."

Some patients will get well without any "tuberculin," and it is not necessary to give the "tuberculins" to such cases (in fact it may do some harm if improperly administered). But the case treated by the hygienic-dietetic method for a few months, and who shows no signs of improvement or clearing in the lung, certainly should be given one of the "tuberculins" after a lapse of time.

I guide myself in such cases in the following way: "As long as the patient improves, as indicated by a gain in weight, diminished temperature, etc., and that he shows a low neutrophile picture, fluctuating 10 to 20 per cent (the picture shifting to the right oftener than to the left), I do not give such a case any "tuberculin."

When the improvement, etc., has ceased, and especially when the lung is not clearing, and the neutrophile picture ceases to fluctuate, as stated above, I start the use of the bacilli emulsion and carefully guide my dosage by the neutrophile picture.

When the improvement is slow and the accompanying neutrophile picture is continuously high and non-fluctuating, the dosage must be cautiously given, and if a reaction does occur after the administration of "tuberculin" with the high blood picture, it is wise to discontinue the "tuberculin," as generally such cases are on the brink of a breakdown, and soon develop a form of disseminated tuberculosis, which soon carries them into the unmerciful grip of a premature death.

In those showing a fluctuating, but rather high percentage of one nucleus (high neutrophile picture), it is also wise to increase the bacilli emulsion in smaller, gradually increased or repeated doses at intervals as indicated by the neutrophile picture.

If the picture fluctuates at a great latitude (percentage) then increase the dosage in greater quantities and proportions.

In conclusion I will say that in the polynuclear neutrophile picture we have a means of determining when the toxic and harmful dose of "tuberculin" is about to be given or repeated; or when we are giving the supposedly safe and smaller doses, which are often useless and ineffective, i. e., when the bone-marrow cells become prone to exaggerated function, or to a dormant state or function.

It is in the latter condition that the "tuberculins" are especially needed and indicated, and can be used as a "whip in hand" in order to stimulate the bone-marrow cells into greater activity; so favoring the supply of new cells, which soon become matured into more resistant cells and thus carrying in the blood circuit and to the diseased tissues the greatest amount of antibody substances, raising the body's resistance to its efficient limit.

EHRMANN'S PALMIN TESTS.*

By J. A. STORCK, M. Ph., M. D., New Orleans.

In presenting this paper on Ehrmann's¹ palmin test, I am fully cognizant of the fact that the question of its true value will arise. So far as I am personally concerned, I can only say at present that its value is relative.

This test advanced by Dr. Rud Ehrmann² is brought forward for its simplicity of application, and for its reliability. The originator of the test makes use of the fact that when an oleagenous substance, like palmin, is introduced into the stomach, the pylorus opens and remains so for a time, thereby allowing the pancreatic juice an opportunity to enter the stomach and act upon the substance. Further, he makes use of a well-known chemical fact that fatty acid is split from a neutral fat in the presence of the pancreatic ferment. It is here that an apparent vulnerable point in the test presents itself; for it is now well known that a fat-splitting ferment is elaborated in the stomach. However, according to Pavlov, this ferment is very feeble in action. In the opinion of Ehrmann, it is probably held to be of no consequence one way or

* Read at the Thirty-fourth Annual meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1918.

the other as a determining factor in this test, since he makes no mention of it whatever. Again, it is found that when the pancreatic function is at fault, even though the stomach function is apparently normal, still the fat-splitting ferment of the stomach has not the power to split fatty acid in contact with palmin.

As to the efficacy of the test, we have the assurance of its originator and the splendid supplemental work of Wertheimer³ extolling its perfect reliability. Wertheimer states that when the pancreas is working properly the result will be positive. If it persists negative, this can be explained only by functional incapacity of the pancreas or obstruction of its outlet. He further states that no other ferment occurring in the gastro-intestinal tract can disturb the findings, and that they can be utilized also for qualitative determinations of pancreas secretion. From my limited experience, I can say that I find the test satisfactory and that it has proven to have a decided relative value in diagnosis.

The taste and other properties of the test are not objectionable. The test is conducted as follows:

I begin by giving an Ewald-Boas test breakfast. One hour afterward I withdraw it and determine free hydrochloric acid, combined hydrochloric acid and total acidity. If there is hyperacidity, I follow the suggestion of Ehrmann and introduce sodium bicarbonate in the palmin test breakfast to be given the following morning. This consists of 30 grammes of ordinary ricestarch dissolved and warmed in a glass of water; a trace of chlorid of sodium is added and then 75 grammes of commercial palmin, liquified by heat, is stirred into it, and the whole drunk from a glass. After two or two and a half hours, the contents of the stomach are siphoned out and a small quantity is mixed in a test tube with equal parts of a mixture composed of nine parts of petroleum ether to one part of benzol, the whole well shaken; 4 or 5 c.c. of this mixture is then introduced into a second test-tube, there mixed with an equal part of a three (3) per cent solution of copper acetate in distilled water and shaken gently. In the presence of fatty acids, the ethereal layer assumes a bright green tint, the intensity being in proportion to the amount of fatty acid present. If none has been split from the palmin, owing to the absence of pancreas ferment, there is no color change.

Of eight instances in which I applied the test, six proved posi-

tive, and in each event the patient showed no evidence of any pancreatic disturbance. In the two instances in which no reaction occurred, there were evidence of pancreatic disease, i. e., fat droplets, undigested meat fibres, meat nuclei in the feces, and sugar in the urine.

Recently I have been using palm oil free of fatty acids for testing pancreas function, and can report it to give satisfaction.

In conclusion I desire to thank Dr. Gustav Mann for valuable information.

(1) *Berliner Klinische Wochenschrift*, July 15, 1912, pp. 1363-64.

(2) *Loc. cit.*

(3) *Zeitschrift für Klinische Medizin*, Berlin, lxxvi.

THE VICISSITUDES OF SCROFULA.

By A. J. DELCOURT, SR., M. D., Houma, La.

We occasionally hear the opinion expressed that medicine is inventing and discovering new diseases every day. This is undoubtedly an appreciable and welcome progress on the carping insinuations not unfrequently aimed at the medical profession on the score of its assumed shortcomings, its lack of receptivity or progressiveness. Verily we ought to feel complimented.

The truth of the matter is that through the whole path of medical researches and noble endeavors, every discovery, every fresh conquest in the scientific domain has found medicine alert and always ready to improve its opportunities, to seize on new points of vantage, to reach forth to new attainments, and to grapple with any obstacle that stood in its way, be it ignorance, prejudice, even disease and death.

The revelations of bacteriology and the notions gained thereby as to the causative factors of diseases, the precision and the practical value of the diagnostic tests, have naturally compelled medicine to submit anew to a searching inquiry the problems of life in health and disease. Many an error has been corrected, many doubts have been dispelled and new truths discovered as a result of the insight gained in the biologic and the pathologic domain. And yet, a better appreciation of the facts of science would not fail to point out that every great discovery in medicine opens up new fields for culture, and that withal there is yet much territory to explore and to conquer.

At the same time, it might be proper to observe that not satisfied

with discovering new diseases, so-called, science has all along striven for and succeeded in stamping out not a few of the old and loathsome ones, namely, smallpox, septicemia, gangrene, yellow fever. Moreover, it has found the cure for many affections hitherto unamenable to treatment, and mitigated the course of many others to such an extent as to rob them of their heretofore wonted terror and gravity, while waiting until they have been in turn entirely conquered. With some other diseases, their name only has disappeared from the nomenclature. So, what the old medicine used to call "dropsy," has taken up a new meaning; since new methods of observation, pathologic anatomy, auscultation, urine analysis, have enabled us to dissociate that syndrome, and to substitute for the purely clinical conception the anatomical interpretation, thereby resolving it into well-defined diseases of the heart and kidneys.

Sometimes, as for "plethora," the transition between the old clinical denomination and the new anatomical nomenclature took place almost unconsciously. When Bright described interstitial nephritis; when Lancereaux, and later on Gull and Sutton, corroborating Bright's discovery, gave out their admirable and so fecund theory of arterio-capillary sclerosis, they doubtless little realized that they were picturing the pathologic anatomy of the old plethora. This last and so comprehensive denomination of "plethora," with all that it formerly implied, had to recede and to disappear from the clinical terminology the day it had become meaningless, as it were, all the symptoms and the characteristic features which used to embody that pathologic entity having been gradually annexed to arterio-sclerosis.

Jaundice has in its turn and for other reasons lost its ill-defined and misleading meaning as a pathologic entity, to become a common and well-deserving symptom of many and varied affections.

The same fate seemed to attend the old "scrofula," in so far as its dominion over a large area of pathology has suffered a considerable reduction. Even its very existence and individuality as a morbid entity have been seriously assailed. As so frequently happens in human contingencies, this decline (we might say, this disgrace), was the result of a past and excessive grandeur. Those who have not been familiar with the history of scrofula, and with the role it played in medicine of even half a century ago, especially

from Lugol to Devergie and to Bazin, who brought that syndrome to its apogee, can hardly gain an adequate idea of the importance that this dyscrasia obtained in those days and long after.

In the estimation of a certain school of modern pathology, to speak to-day of scrofula amounts almost to the conjuring up of a ghost; and he who so much as inadvertently evokes that name, runs the gauntlet of being suspected of mediaevalism. Even the notion of a diathesis, so clear and comprehensive in its meaning, so pregnant with pathologic realities and objectivities that without it a considerable portion of morbid manifestations would hardly be understood and identified, still less properly treated; that notion has for a long while been discarded and kept under a cloud, as unworthy of the modern anatomopathologic school, at least that portion of it that draws its inspirations from the laboratory alone, and ostentatiously turns its back on clinical observation. And yet, when we admit and affirm the existence of constitutional or dyscrasic troubles, we do not conceive them as abstract entities, even though we should be at a loss to indicate to what morbid reality they correspond. We simply and plainly affirm that between their morbid manifestations, which occur singly or in more or less close or distant succession, under the influence of occasional causes, there exists a constitutional connection, a common ground underlying those constitutional anomalies.

Most always hereditary, appearing from childhood, they manifest their existence through life, imparting to accidental sickness which flesh is heir to, some special physiognomy, or even arousing by sympathy some other constitutional troubles. This peculiar and lasting modality of the living organism is what we call a diathesis; not an occult force, a mysterious principle repugnant to science, but a living and objective reality. To ignore voluntarily or to deny this great pathologic conception which dominates the whole history of medicine, is tantamount to deliberately shutting our eyes to the light.

The doctrine of scrofula, as it has occupied the pathologic scene for such a long time, the description and the differentiation of its multiple manifestation on the different tissues and organs of the body, represented a system admirable to contemplate, just as we admire the architectural beauty of a stately monument. And so it is that as a pathological conception it proved ingenious in the ex-

treme, if only somewhat romantic, fanciful and misleading, as appears generally a system erected on unsound and flimsy foundations.

The advent of bacteriology struck the doctrine a staggering blow that shook it to its very basis. But the old doctrine did not unconditionally surrender. The struggle between the clinical conception of scrofula, so elaborately worked out by Bazin, and its anatomo-pathologic and etiologic interpretation, was sharp, long and obstinate, as between two forces, two doctrines seemingly inimical, antagonistic one to the other, while in reality they were adjusting and adapting themselves to the new conditions originating in the progress of science. Anyhow, it may be said that in France during those days, the dermatologic school, in which the battle centered, was the "last ditch" in which scrofula fought for life. And it is precisely on this last ground that the doctrine, as we may see later on, deserves to retain its most undisputed claims to recognition.

As always happens in those ardent and impassioned strifes, the intensity and the heat of the controversy is apt to obscure the very conditions of the problem, and to cause the pendulum to swing too far in the opposite direction. In the name of bacteriology, the existence of scrofula as such was assailed and well nigh contested; at least its nature was sharply scrutinized and revised almost beyond recognition. Since, in the lesions formerly adjudged to scrofula, in the most important of them and at some period of their manifestations, the bacillus of tuberculosis was identified as the culprit, after many others had been arrested on suspicion, decidedly scrofula was nothing but a stage of tuberculosis; the scrofulous patient was at best merely a pretuberculous, a candidate for tuberculosis as it were, to be closely shadowed as such, and marked for the fatal dyscrasia.

Is that really so? and has it become an undisputed point of pathology that under any conditions, scrofula and tuberculosis are equivalent terms, adequate dyscrasias, one originating fatally from the other, and to use mathematical language, scrofula being function of tuberculosis? We hardly believe that such a pretention, formulated in those terms, can be validly sustained; neither can it be substantiated by an impartial, thorough and scientific examination. We know beyond any question that Koch's bacillus is to be held responsible for the most important manifestations and acci-

dents of scrofula, since experimental pathology has so pronounced, and as so often, unfortunately, tuberculosis is the culmination of those accidents; but what we do know, too, is that Koch's bacillus cannot account for all the scrofulous accidents; that some of them cannot be legitimately associated with it, nor derived from it; and that the evolution of scrofula, at least in some of its modalities, reveals a course which betrays another origin, and calls for another interpretation. The opinion we so emphatically express here is voiced just as forcibly in many a recent publication. What is most astonishing, and well calculated to show once more the versatility of scientists, not to say their inconsistencies, and how scientific contentions may swiftly and widely get at variance on one and the same question, while a part of the French scientists, who apparently ought most strenuously to defend Bazin's work, turned their back to the old French clinic as unworthy of their former cult, it is in Germany now that the most vigorous opposition to the old German ostracism manifests itself. Cornet, of Berlin, the great expounder and the most strenuous advocate of the tuberculous origin by way of infection from without, devotes to scrofula a remarkable study in the last edition of his treatise on that dyscrasia. One may detect indeed some slight differences between the new conception and the old one, but these differences, bearing as they do on mere details, the main conclusions arrived at are the same. In reaching those conclusions, it is well to observe that the veteran German scientist can hardly be suspected of being hasty or inconsistent, or of not having given the matter the thoughtful and thorough consideration it deserves. The verdict of such a specialist of tuberculosis cannot fail to carry all the weight that legitimately attaches to matured authority and experience. Well, all the conclusions of the Berlin scientist point out very distinctly the impossibility of systematically associating the Koch's bacillus with all the lesions of scrofula. Alongside with this bacillus others are to be found which either combine their action with its own or pursue their work individually outside of it and away from it, namely, the bacilli of suppuration, amongst which staphylococci and streptococci are the most in evidence.

In attenuation of the reproach I have addressed to a part, at least, of the French pathologic school, it is but right to put in light the attitude of a host of French scientists with regard to this very

question. When I said above that in France the dermatologic school was the "last ditch" in which scrofula fought for life, I was alluding to the magnificent work of the modern French dermatologist who, long before the German pathologic reaction just alluded to, vindicated the rights of the sound clinic, in the face of a narrow and systematic pathogeny. Saboureau, Bourcy, Gastou, Griffon, Balzer and a host of others, all acknowledge in scrofula a trouble of nutrition, hereditary or acquired, little known in its essence, but very well known in its manifestations and determinations, which, under the most trifling circumstances and influences, makes the system vulnerable to the attack of various bacterial agents, whose pathologic action, owing to the specialty of the ground, manifests itself with a distressing tenacity, a liability to relapses and to chronicity.

In the light of those conclusions, we can at least identify two kinds of scrofulous affections, according to the presence and the predominating influences of the specific bacilli, viz: a tuberculous scrofula and a pyogenic one. But it is easy to understand and to realize that such schematic division of morbid manifestations, however satisfactory it may appear to the mind as far as the etiologic classification is concerned, leaves something to be desired in the viewpoint of the clinical description, if we would gain a general conception of scrofula, and to get a broad and panoramic picture of this affection.

Viewed in its broadest and most picturesque aspect, scrofula may be said to represent a clinical drama wherein three different personages make a successive appearance on the stage, each one playing a specific part, but one of which, the Koch's bacillus, in the end, fills up the chief and most important rôle. The drama itself is in three acts and many scenes, each one corresponding almost exactly to the chronologic subdivision as assigned by Bazin.

The first act represents the cutaneo-mucous lesions, such as impetigo, lupus, conjunctivitis, rhinitis, and especially adenoid vegetations. Among these lesions some are already tuberculous, but, be they tuberculous or not, they open the door to mixed infections.

The second act takes place in the lymphatic glands. This is fairly the lymphatic stage of the infection, which may be caused by pyogenic as well as by tuberculous bacilli. The infection itself, from whatever origin, may be sudden, massive, overwhelming, or

may result from slow infiltration and absorption, realizing in its gradual and chronic development what has been termed the "latent microbism."

In the third act the stage is entirely and alone occupied by the Koch's bacillus. In this stage, which marks the last degree of infection, are to be found cold abscesses, so-called; articular and bony lesions, such as periostitis, caries, fungous and white swelling of the joints, and finally deep and visceral lesions, affecting the testes, the genito-urinary system, the breast, the brain and the lungs.

Such is the summary description and the symptomatic gradation of the old scrofula as it manifests itself on the different tissues of the body, and, as says an old and picturesque expression, "glasses itself in a tempest."

We have pointed out the different bacilli which, singly or associated, we acknowledge as being duly responsible for the various expressions of the disease. Another question wants to be examined now; it is this: since, as we have shown above, bacteriologically speaking, scrofula seems to have a dual expression—the one purely tuberculous, the other one the result of a mixed infection, mostly pyogenic, both forms often combined or succeeding one to the other—what is the common ground that imparts to scrofula its unity of nature? what is the bond that connects those various, protean-like manifestations, and leads them into an unerring way towards an end fixed in advance, and so, to say, unavoidable? This common ground is what we call "lymphatism"—that is, an hereditary or acquired but inherent disposition a general dystrophy, the substratum of which seems to be common to rachitism. This dystrophy, according to Bouehard, who has so elaborately and so happily enlarged upon the troubles characterized by a slow and tardy nutrition, is what he calls "Bradytrophism," a condition of nutrition in which a slow intoxication takes place as a consequence of an incomplete oxidization. This low grade of nutrition is manifestly and distinctly the result of the modifications the lymphatic constitution imparts to the vegetative functions of the system.

Lymphatism, scrofula, struma, were formerly adequate and equivalent denominations of one and the same constitution, thus attesting the diathetic affinities of a permanent and inherent trouble of nutrition much better than the toxi-infection; and yet, the latter is nothing but the morbid reaction and the result of a special microbic infection on a well-specified ground.

The unity and the diathetic nature of scrofula is better attested by the quality of the soil than by the nature of the morbid germ, thus confirming our contention that in the production of a disease the individual factor dominates the germ and commands it. If this was not the expression of a vital law, our mouth, our nostrils, our throat, teeming at all times with the most deadly and the most nefarious microbes, would every day play havoc with us. But, happily, as Ovid says, "*Non omnis fert omnia tellus,*" and each ground has its special receptivity. Let us bear in mind that the soil, like the seed, are both essential factors, no doubt, but the soil more so than the seed, as the human ground does not at all times offer the same fertilizing aptitude nor the same foothold for the germs. However, this is still more true with the diathetic grounds, endowed, as they are, with an elective receptivity towards the morbid germs; hence, the old saying, "It is more important to know what kind of a patient has the disease, than what sort of a disease has the patient." Or, what perhaps would be more to the point in connection with this, as Maurice Letulle suggests in his classical work on inflammation, "we should speak of pyogenic individuals, rather than pyogenic cocci."

To be complete, and not to leave aside anything that may illuminate that intricate problem, we ought to add to the etiologic factors of scrofulous determinations the influence of hereditary syphilis, as manifested especially in the interstitial keratitis, so frequent and so grave with children, as well as its remarkable association with that vicious conformation of the teeth, to which, long ago, Hutchinson so aptly attached his name. Such an hereditary syphilitic taint, that stamps its mark on the system in more ways than one, has been recognized of old and has been supported all along by the best authorities in pediatrics.

The same may be said, with equal emphasis, of those syphilitic or tuberculous lesions of the nose, at times of such difficult differentiation, that Ricord, in his picturesque language, used to call them "*Scrofulates de vérole,*" marking thereby the intimate association, to say the least, of those dyscrasic manifestations.

Whether or not the foregoing may be considered as embodying the just and correct views on this pathologic problem, my purpose, needless to say, is by no means to uphold and to revive the humoral doctrine of our medical forefathers. This point has long been

adjudicated, and by no stretch of imagination could it be retrieved. Happily, we have gone beyond the stage when we could look upon those problems in a speculative and theoretical way. We are now in a period of exact anatomic and etiologic discussion—one which takes nothing for granted, but submits every question to the crucible of observation and experimentation. My object, in this study, is simply to uphold some notions which seem to me unjustly ignored and unduly discarded from the pathologic domain, and in so doing I disclaim the reproach of being a stickler for antiquated ideas. This being so, we can draw hope and comfort from the fact that the views I am expressing here, after suffering a temporary eclipse, by a just return of fortune have been gaining favor once more, and are being supported in more scientific quarters than one. This is as it should be.

Now, since lymphatism, this protean-like dystrophy, enjoys the unenviable privilege of harboring promiscuously the Koch's bacilli alongside with the pyogenic microbes, and since, too often indeed, the ultimate destiny of those lesions, when unhampered and unchecked, seems to be tuberculosis, are we decidedly to consider lymphatism as the first stage of tuberculosis? This is really a captious question, fertile in quibblings and controversies. But the answer to this question is indirectly involved in another, larger and by far more practical query, namely: can we cure a diathesis?

This problem of general pathology is too vast, too complex and too important to be thus treated off-hand, so to say, and disposed of in a summary way. At all events, leaving aside all theoretical and dogmatic controversy, and making an exception for the cancerous diathesis, whose definite solution is yet wanting, we are, I think, perfectly justified in answering this question affirmatively. The notion of the curability of a diathesis, and especially of lymphatism, which at the most could only be considered as the subsoil of those dystrophic conditions, that notion has, since a long time, passed beyond the stage of an hypothesis, to become a consummation devoutly and ardently wished for; it is a fact of daily occurrence, and one of the most encouraging realities of modern medicine. Truly, that notion forms the gospel, the foundation-ground and the keystone of any well-directed and systematic attempt, under all and any climates, towards the cure of lymphatism, of tuberculosis, of rachitism, by means of hygienic, climatic, mountain and seashore

treatment. To deny this fact is to gainsay the evidence of every-day practice. This truly modern plan of treatment, supplemented or combined with restorative or alterative medication, as the case may require, has given a sufficiently good account of itself as to carry a message all its own and to justify the most sanguine expectations at the hands of the physician and the hygienist as well.

The lymphatic constitution, while it represents, like any other constitutional dystrophy, a condition *minoris resistentiæ*, an inherent receptivity towards the microbial infections, most of all the Koch's bacilli, it does not, by any means, fatally and necessarily lead to their ultimate and dreaded consummation—tuberculosis. Fatality has long ago, and for good, ceased to obtain a foothold in medicine.

Which of us, if he has reached a certain age in practice, has not within his recollections the case of persons having suffered with scrofula in their youth, even to such an extent as to show evident and indelible stigmata of its passage? Those persons have grown up, maybe have they reached old age safely without having felt or presented any more scrofulous manifestations. Some of them have married and brought up fresh, good-looking and healthy offsprings, without any taint of a former disease. Lymphatism, then, can be cured; and not only its outside manifestations, but the diathesis itself, under proper care and treatment, can be entirely eradicated. This consoling conviction ought to warm up the physician's and the hygienist's hearts, and rouse them to a more hopeful and vigorous optimism. But, of course, and under ordinary conditions, the sooner the organism has been freed from all existing and possible infection, and restored to a higher plan of healthful activity and vital energy, the better can he cope with and withstand successfully any morbid influences, be they from within or from without.

The practical conclusion to draw from all this is that we should stop from the first scene and intercept the long and dreadful pathologic drama we have faithfully pictured above. *Principiis obsta.* All the cutaneous and mucous lesions, especially those on the face, on the scalp, in the throat; impetigo, conjunctivitis, rhinitis, adenoid vegetations, should be attacked from their first apparition. They represent perpetual foci of suppuration, leading to a chronic microbial infection, as a result of "latent microbism." Moreover, the microbes from the same regions reach the ganglions of the neck,

the most elective localization of scrofula, with all its dire and ugly consequences, causing thereby and keeping up there a chronic tox-infection, from Koch's or from pyogenic bacilli.

Thus, by a close attention to all these various manifestations, by the exercise of a constant, vigilant and preventive care, helped by a good hygiene, a restorative treatment, and, if need be, by a timely surgical intervention, we shall discharge all our duties towards those unfortunate, and otherwise doomed, patients, keeping them and ourselves evenly suspended between hope and fear—the fear of possible tuberculosis, and the hope of ultimately avoiding it.

Louisiana State Medical Society Proceedings.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

Discussion of papers, read at the thirty-fourth annual meeting, Baton Rouge, La. The papers are published in full in another part of this issue of the JOURNAL.

DISCUSSION ON PAPER OF DR. CHANDLER.

DR. LEON J. MENVILLE, Houma: The question of fly extermination is a very important one. I do not agree with Dr. Chandler in all of his remarks. Last year Terrebonne Parish was visited with an epidemic of charbon, and as health officer I went to the Police Jury and appealed for an appropriation to prevent its spread and explained the necessity of making a campaign for the extermination of flies which carried the anthrax bacilli along the roads and farms.

The method of extermination can be divided into two classes. First, the method of education; secondly, destroying breeding places. Education is of great importance, and the health officer himself should take the matter in hand and encourage the press to assist him. Every little town in the State of Louisiana has a newspaper. Let the health officer write articles from time to time on flies and explain to the public the necessity of exterminating them. I went to the Police Jury and received an appropriation of

\$100, \$75 of which I used in purchasing slides. I got a small stereopticon lantern, and used coal oil. As this was not a good light I used the headlight of my automobile, which gave a splendid light. I had our veterinary surgeon, Dr. Breaux, who had a splendid set, show the pictures of animals dying of charbon, and he showed flies feeding on them.

We have had dodgers printed and sent them broadcast throughout the parish. We think this is the best way as a preliminary to exterminate flies. This fly campaign killing is a failure. The thing to do is to eradicate the breeding places. If the fly has no place to breed, you will have no flies. If the health officers of the parishes in Louisiana follow the State Board of Health Code, there will not be any necessity of having prizes offered for the killing of flies. I do not wish to cast any reflections on the health officers of the State, because they are doing their duty, but I believe that the way to exterminate flies is to do away with the breeding places. The premises should be kept clean. All towns should have a health officer and health inspector, and it is their duty to see that there are no stables within certain limited distances of residences and offices, and these stables should be kept clean. Some disinfectant which is repugnant to the fly should be sprinkled at regular intervals.

DR. CHANDLER: It would seem that some of the gentlemen would put me in the position of opposing cleanliness. Every one knows that to destroy the breeding places of flies is the best way to get rid of them, but the question is as to the most effective method to accomplish this. If in cold blood you tell a man his place is filthy and will breed flies and spread disease, you are liable to have a fight on your hands, whereas if you convince him that flies breed in filth and carry disease to his family, he will immediately go to cleaning up without any request from you. A fly campaign, properly conducted, will greatly reduce the number of flies and does an immense amount of good. Some fly swatting campaigns may not do any good, but the kind we conduct in Shreveport does. The fly trap ordinance met with the unanimous approbation of the people because they were able to realize great benefit of last year's campaign. A leading grocer, who comes under the law requiring traps, specially visited us, asking that it be passed, for he was able to keep the screens of the store open without being troubled with flies when the traps were in use, an ex-

perience he had never before had in his life. When the people see these pests trapped and destroyed by the millions it is an object lesson that stirs them to action; they realize that the flies will not continue to replenish the supply and that their destruction does good.

DISCUSSION ON PAPER OF DR. KELLY.

DR. JOSEPH E. KNIGHTON, Shreveport: After reaching Baton Rouge my attention was called to the fact when I saw this paper on the program, that the patient had consulted me some six or eight months before she fell into the author's hands. At that time she was suffering from nausea and vomiting, as the paper has described. I made an examination, the result of which I do not recall any more than it disclosed the fact that she had hookworm infection. I gave her the thymol treatment, with result that many worms were expelled. She was with me only a few days. I did not know what the final outcome was. I think it is an exceedingly interesting case.

DR. CLARENCE PIERSON, Jackson: I have listened to Dr. Kelly's paper with interest, but I have not seen as successful results from the salvarsan treatment as he has been able to get. I do not believe anyone has found a medication that does pellagra any good. I want to say this as a first proposition: I read nearly every month of cases reported where this or that medication has restored the cases. I do not believe it. I do not say this with the idea that the individuals who have gotten results are not as conscientious as can be, but I do not think they have obtained these results from medication.

Possibly we have had more cases of pellagra to deal with than any other class in our institution. As far back as 1906, while on a visit to Alabama, and seeing the institution of the elder Searcy, it was my privilege to see the "new disease" called pellagra, and I must say in this connection that these cases were largely confined to the colored population, and especially to the female colored population. They were typical cases of pellagra and were diagnosed thereafter by other physicians. My second visit was to the State Institution in South Carolina, Dr. Babcock's Institution. Dr. Babcock had his diagnosis of pellagra confirmed while on a European trip in company with Senator Tillman. These cases were distributed throughout that institution. My next visit was to Mil-

ledgeville, Ga., where they had a large series of cases of pellagra, every one receiving treatment, every one was trying to ascertain the cause and develop a specific treatment. While every one was hopeful as to the successful treatment, at the same time our Southern country particularly, was having cases brought here by the Italian population, which began to open our eyes to these conditions, and the question arose, "What are we going to do in our large State institutions?" It was not only one of momentary consideration, one of remedial benefit, but one of contagion in handling this class of cases. The question was, "Who were willing to attend these classes of cases, when it was not known heretofore that they were not dangerous, not contagious, and so active at the time?"

Congress appropriated \$300,000 in one lump sum to make a pilgrimage through the South for the purpose of investigating, acquiring knowledge and promulgating information regarding pellagra.

You cannot run large institutions without attendants; with the fear of contagion, they left the ship which was so fast burning. Therefore, they had to be satisfied, had to be assured that pellagra was not contagious and was caused by mouldy corn. Once we started that we temporized things and had a basis for operation.

Much of our large population lived in uncleanly, poor hygienic surroundings, in company with cases of pellagra, necessarily making the dangers of infection or contagion very great. With little money we arranged for the segregation of our pellagra patients. We acted in accordance with the insect theory of Sambon. I did not, however, subscribe to the water borne theory of the disease. We isolated all of our cases of pellagra, but before doing that, to ensure a proper diagnosis of our cases, I went to the Marine Hospital Service in Washington, and had the greatest authority on this subject come to us and go over our cases. He diagnosed every case where there were skin lesions or enteric trouble, as pellagra. Dr. Lavender spent considerable time with us. Thereafter we organized an isolation department. Cases with a symptom of pellagra were screened. We did not allow outside employees to visit these wards, nor allow patients themselves to leave the wards without the greatest precaution. We had their meals carried to them, we eliminated corn products altogether and substituted other cereals; we gave these patients a better diet, and increased the protein content. We

gave them milk and eggs and fruits, and for patients otherwise than those isolated, we ground our meal and grits from corn raised, and in consequence of that, with as many as one hundred forty-five cases of pellagra at one time, we have only five cases of active lesions of the disease in the institution.

I find in other institutions, the colored population in pellagrins largely predominated. Of the one hundred forty-five cases in which the lesions of pellagra were active, there were one colored male and two colored females. Of the one hundred forty-five cases, fifty-three died with diseases other than pellagra; we regarded pellagra as secondary to the cause of death. Of the primary causes of death, there were twenty-six; their ages follow:

In patients twenty years of age, there were nine deaths; in those over thirty there were thirteen; in those over forty we had fourteen deaths, and those over fifty, nine; those over sixty and seventy, four deaths. One male and two females were discharged as restored, a total of three. In all, only one female has had a recurrence. The rest of the people are still under observation. We have removed some of them from the isolated wards, because they have no present manifestations of the diseases. We have to-day only one as a doubtful diagnosis.

DR. KELLY: I would like to ask Dr. Pierson whether he has used any drug treatment with great benefit in cases of pellagra.

DR. PIERSON (resuming): In answer to the question of Dr. Kelly, before we isolated our cases, we got no medicinal results. We gave these patients all forms of arsenic; we gave it hypodermically, by enema, by the alimentary canal, and every way we could give it. For the enteric trouble we administered thyroid extract recommended by Dr. Thayer, of Baltimore. We gave everything we could in connection with medication itself with no apparent results. We have to-day ninety-one convalescent cases under observation, with no active lesions. We are observing them and waiting for the spring and summer, when manifestations usually become active. Some have gone two springs and others three without symptoms. We have no theory to offer. Screening our wards and isolating our patients, we are working on the insect theory. Whether the improved results have been due to the screening against insect life, or to the discontinuation of corn and its by-products, we do not know, but we are carrying on further investigation.

DR. J. C. WILLIS, Shreveport: I have treated 11 cases of pellagra, and I may mention to start with that four of them are dead. Those four patients died before I ever used anything in the way of medicine that I considered worth anything, or that anybody had suggested. The corn product theory has been advanced as the cause of the disease, and in handling or treating these cases I went on that theory. I had taken them off of the corn bread dietary, but they all went along and died just the same.

Dr. Martin, of Hot Springs, Arkansas, had suggested the use of the arsenolates, and I have been using what is called soamin. I have treated seven cases of pellagra with soamin, and I am glad to say they are all well. There is not one of them who has had any appearance of the disease this spring, and none except two had any return of the disease last year after having been treated the year before. I have found almost invariably that these people ate cornbread, and all of them, with the exception of two, ate a good deal of it. I have had two patients who never ate any to amount to anything. One patient, a lady, had never eaten cornbread. I had one patient, a child, who had never eaten any. Whenever I have found that these patients have been eating corn or by products, I have always taken them off of it as I have taken a good deal of stock in that theory. I began to use soamin in something like grain doses, and increased it to 15 grains a day. Those patients who took large doses bore them much better than the literature would indicate. As soon as I could get them to a point of safety, I would leave off the medication. In some cases I have had to lessen the doses. I have left off medication temporarily, and then began again with smaller doses and increased until I would get them up to the point of tolerance. The results have been gratifying, whether due to the medicine I do not know. I cannot understand why they have yielded so nicely to the arsenolates.

DR. RANDOLPH LYONS, New Orleans: In considering the prognosis of pellagra with reference to the effects of treatment, we should first investigate the severity of the case. A great many patients with pellagra get well after the first attack. When the eruption and diarrhea are moderate and the reflexes normal, they get well on any medication. We see a great many of these cases in the hospital. On the other hand, take a case of pellagra who

has had two or three recurrences, who is emaciated, has mental symptoms, and whose knee-jerks are lost, the prognosis is extremely bad, whether you give salvarsan, soamin, cacodylate of soda, or Fowler's solution. The prognosis will depend very largely upon whether you are dealing with a mild or first attack or serious case of pellagra.

DR. C. C. BASS, New Orleans: About two years ago I saw a patient who was treated with salvarsan before he developed pellagra. The patient was a young man who had syphilis of four month's standing and consulted Dr. Hume. He gave the young man a dose of salvarsan intramuscularly, and two weeks from the day he gave him this dose of salvarsan he called me to see the patient as he suspected pellagra. I saw the patient and the diagnosis was quite clear. The patient at that time, however, had only had the eruption present three days. Ten days after the administration of salvarsan he developed pellagra and a well-marked case, but did not die from the disease.

It is interesting that Dr. Martin, of Hot Springs, has been able to report such favorable results in the treatment of this disease with salvarsan. He reports having given salvarsan intravenously, one dose after another, at intervals of about a week or ten days, until as many as nine doses have been given. It strikes me that a case of pellagra that can withstand nine doses of salvarsan intravenously and has a typical diagnostic reaction that follows, is hard to kill, and the treatment should not be given any credit at all.

A very interesting thing in connection with the prognosis and the recovery of patients occurred last summer. The Commission of New York appointed to study the disease consisted of several men, the Commission being divided up; party one working at Spartanburg, S. C., to study the disease in the fall. The other members of the Commission remained in New York to do the laboratory work and to make a hospital study of the disease whenever cases should be sent them from Spartanburg County. During the summer the party in the field sent them fifteen cases of pellagra. They selected the cases that were typical and cases that were severe in order to make clinical observations in the hospital, and if the patients died it would afford them an opportunity to get autopsy material for further study, because the pathology of the disease is so poorly understood. At any rate, the patients were put in

the hospital on a regular hospital diet; they were given no medicine except such special things as indicated for some special symptom, and before the first of January every one of the fifteen patients had been returned to Spartanburg County apparently well. It shows that there is something besides medicine that has an influence on the course of pellagra. One of these things we know very well is the coming of cold weather. A little more than two years ago I suggested, for the first time, the climatic treatment of pellagra and advised sending patients to northern and cold climates. After further observation I am quite doubtful now as to whether temperature has so much to do with it as the change of climate and change of surroundings, and perhaps more important than all is the change of cook and the change of food. As long as we have a disease, the nature of which we know very little about, particularly the specific cause, we cannot hope to accomplish much. We have never been able to isolate the specific cause of pellagra. As long as we have a disease with an etiology, which is so poorly understood, it would be one of the extremest accidents if any man should discover a drug that would cure such a disease. Out of the several thousand drugs we have, it would be practically beyond possibility for anybody to get a drug that would cure this disease.

DR. KELLY (closing the discussion): I have enjoyed the remarks made by Dr. Pierson very much. I think a death rate of 24 per cent. amongst the insane out of the number of cases of pellagra he has reported is very good.

I believe if Dr. Pierson had been out in private practice and used similar treatment his death rate would have been much lower.

I get results in the treatment of pellagra just as I do in malaria, syphilis and other diseases. If you give atoxyl, soamin, cacodylate of soda or any of the other hypodermic preparations of arsenic once a week, put them on full diet, lots of rich milk and eggs, carry out the principles outlined by Dr. Bass as to change of climate, you will get results in the treatment of pellagra. I believe the best treatment for the severe case is the intravenous administration of salvarsan once a week until the patient's system fails to react to it.

But most of these patients are poor and unable to take salvarsan or make a change of climate, so treat them at home. Give them $1\frac{1}{2}$ grains atoxyl hypodermically once a week, gradually increasing

until you get to 2 grains. Give salicylate bismuth for the intestinal tract and us dioxogen as a mouth wash and as a douche in females. Keep these patients quiet. My results in pellagra have been like those of Dr. Willis.

As in yellow fever and malaria we might divide the disease into three classes: 1st. Those cases which are very mild sometimes recover without treatment. 2nd. The middle type of the disease that is amenable to treatment. 3rd. The severest type of the disease, especially of the aged and the hospital insane. I believe if you put your patients on a good nutritious diet, a great many will recover without any treatment.

DISCUSSION OF PAPER OF DR. PORTER.

DR. OSCAR DOWLING, Shreveport: I have been very much interested in the paper presented by Dr. Porter. The law plainly says that every incorporated town or municipality shall have a Board of Health. There are a number of towns incorporated which have not met the requirements. We hope the time is not far distant when they will do so. If you are not familiar with the law, copies can be secured by writing the State Board of Health.

Another important thing is the necessity of vital statistics for the State. We have perfected plans to get the work started. Conferences with different men from different parts of the State have been held. The two most apparent difficulties in the present system are lack of funds to pay the doctors and, in some instances, objections on the part of the doctors to the practice of reporting to other physicians. It is unfortunate that these conditions exist.

We have recently secured a concession from the Post Master-General allowing post masters to act as registrars for the State Board of Health. We believe that these officers will know of every birth or death that occurs.

An appeal has been made to the police juries to pay for these reports, and in several parishes the necessary appropriation has been given. We hope others will do likewise. Where the work is done it is the plan of the board to pay twenty-five cents for each report.

The suggestions of Dr. Porter are good, Every health officer, municipal or otherwise, is worthy of his hire.

DR. L. J. GENELLA, New Orleans: I remember a concrete case which shows the ridiculousness of the present law in Louisiana.

I treated a lady in New Orleans and I sent a slide to Dr. Seemann for a Widal. Before I got to the house the next morning there was a health officer there to find out something about her case. She had in the meantime gone to her home in Jefferson Parish. Over there the lady could maintain herself with perfect freedom, but had she lived with her sister she would have been under quarantine. There was a typhoid carrier.

DISCUSSION OF PAPER OF DR. WHITE.

DR. OSCAR DOWLING, Shreveport, La.: I am sure every one here appreciates the importance of this method as much as myself. You are aware of the work that has been done in Alabama along this line by Dr. von Ezdorf, a member of the Public Health Service. Dr. White proposes to do the same for our State. Doubtless you are familiar with the fact that there was recently organized in St. Louis a Malaria Commission as a section of the National Drainage Congress. The secretary will be Dr. W. H. Deadrich, of Brooklyn, N. Y. Representing this State will be Dr. Bass if he will accept service as a member of the executive committee. Should he do so we feel that Louisiana will be ably represented. I do not want to anticipate Dr. Bass, but if he should decide to have, in conjunction with the work, a commission, or committee for this State, I hope the society will meet his wishes.

Governor Hall is considering the appointment of a Mosquito Commission for Louisiana, the members to be selected from among those who are interested in the extermination of this pest. There is no provision by which the Commission can be paid, but it is anticipated that an appropriation will be made.

Malaria costs this country a good deal of money; according to Dr. Evans, of Chicago, \$150,000,000 a year. If mosquitoes can be eliminated from Louisiana great benefit will result in the increased value of our lands and in the betterment of public health.

DISCUSSION ON PAPER OF DR. DUREL.

DR. WILLIAM H. SEEMANN, New Orleans: I know that Dr. Durel has done a large amount of work along this line, and I had a great deal of pleasure in having him show me some of his work on several occasions. From the literature of the subject, I believe the Arnett method of counting the neutrophiles is growing more in favor recently. That favor is the result of the persistent

and earnest work of certain investigators, among whom I include Dr. Durel, who, in spite of a storm of criticism and ridicule regarding the guiding dosage of tuberculin, have kept up their work. He has shown me cases in which the anticipated reaction was foretold by this method, and I believe that in these cases as in many others, the fault lies not with the method, but with the person who carries it out. I believe many of the failures in this method of guiding the dosage has been due to the faulty technic of those who are investigating. It is only by persistent examinations of the blood stream that any information can be gleaned, and I believe all successful research men are those who are willing (especially when opposition is greatest) to continue along the line of work when they feel it is right.

Dr. Durel is to be congratulated because he is one of the foremost men in the line of tuberculosis, as a specialist, who has advocated from the beginning the Arnett method, and many of the men who formerly decried the method are now coming back to his line of thinking.

DISCUSSION ON PAPER OF DR. STORCK.

DR. S. K. SIMON, New Orleans: With reference to testing the pancreatic function through its secretions, the test Dr. Storck has mentioned has proven satisfactory not only in his, but in other competent hands. The technique must be closely followed. However, in the future I think we will come to rely more on the securing of pancreatic juice for examination by means of the duodenal tube, about which I hope to have something more to say shortly.

In clinical routine, the test I have been using to determine the digestive capability of the pancreatic juice has been mostly along the lines of the Schmidt-Straussburger diet, which the patient usually has no difficulty in taking. I have found this a practical workable method not only in the diagnosis of pancreatic disturbance, but likewise as an aid in the differentiation of many other obscure digestive and intestinal conditions.

The important point is, that the pancreatic juice may now be obtained for direct chemical and physical analysis and I think the duodenal tube is destined to play an increasingly important role in this field in the near future.

DR. JOSEPH E. KNIGHTON, Shreveport: Anything that relates to the gastrointestinal functions is interesting to me. I have not had any personal experience with the test for determining the proteolytic power or pancreatic activity. Neither with the duodenal tube for securing pancreatic fluids referred to by Dr. Simon. So far as I have been accustomed to investigate the functions of the pancreas, it is usually through test meals, recovering the various parts of the test meal from the stool, testing for the undigested particles of the proteids and fats and starches, and so on.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

STANDARDIZATION OF HOSPITALS.

The field of preventive medicine in its relation to public health has grown greatly in importance in the last few years.

Beginning with the scientific pronouncements from a few laboratories of research, and dealing only with the causes of disease, the application of the knowledge so derived has reached out into the service for public healthfulness. One disease after another has yielded the secrets of its contagiousness and this victory has made way for the remedial agents in the cure; more than this, the discovery of preventive measures has in many cases followed.

So it is that the importance of public medicine has grown so as to be no longer the mere field of study and application for the physician, but the public itself is concerned—domestically, commercially and sociologically. State Boards of Health are organized now to meet and combat the evils of disease and as yet their labor has been directed at the control and extirpation of diseases, commonly contagious. Most of their service has been without reference to the hospital.

In the wider study of disease, however, the combined efforts of sanitarians everywhere must be directed at the systematic apprehension of all disease in a community, and the morbidity bears a direct relation to the incidence of disease, which is not always defined by the mortality records.

The hospital usually affords a concentrated population, amongst which disease and its types may be plotted with a view to the general study of morbid conditions in the community. The comparative study of hospitals makes for a better and wider knowledge of disease, but there must be some basis for study, and to that end hospitals should have some basis for standardization.

There has been a natural evolutionary trend to similarity of methods in hospital growth and administration, but, until now, the systems have developed from the outgrowth of individual hos-

pital pre-eminence, pointing the way to better ways of doing things. Hospital growth and medical education have consistently traveled together and there is every likelihood that this will continue. The best evidence of this may be exemplified in the proposed study and investigation of hospitals by the American Medical Association.

The work of the Council of the A. M. A. and of the Carnegie foundations in the study of medical colleges has resulted within five years in a reorganization of medical education, which has raised the standard over one hundred per cent. in the United States.

Hospitals, of course, may be only compared with medical colleges upon a basis of standards resting chiefly upon their efficiency in the purposes for which hospitals now stand. The efficiency of a hospital must rest upon its proper care of the sick, medically, humanely, and with that degree of economy which makes for public service. The variety of elements which enter the contemplation of any plan for the standards and classing of hospitals must be large, and many sided, but the proposed task should be welcomed by all hospitals organized for the public welfare and not simply existing for corporate or segregated interests.

THE CONGRESS OF SCHOOL HYGIENE.

The International Congress on School Hygiene meets in Buffalo, New York, August 25 to 30, and promises to be a great success. The last notice received states that over 1,000 delegates have been named from various countries and States. The program is varied and takes up all sorts of topics which could interest so diversified a gathering as is expected at Buffalo. The State of Louisiana has several delegates, but all interested are to be welcomed at the Congress.

THE AMERICAN JOURNAL OF TROPICAL DISEASES.

On July 15 was issued the first number of the *American Journal of Tropical Diseases and Preventive Medicine*, under the editorship of Prof. Creighton Wellman, M. D., Dean of the School of Tropical Medicine of the Tulane University. This journal is not a local publication, as the term is usually understood, but is at least national in its scope and is the official organ of the American Society of Tropical Medicine. It includes in its list of collaborators

men noted for their work and writings in tropical medicine from different parts of the United States.

The first number is very creditable, both in appearance and from the high character of its articles. The partial list of the articles to come, which is published in this number, is sufficient guarantee that successive issues will at least be of as high a grade as the initial one.

We welcome the entrance of this new publication in the field, just as we always welcome every progressive step or innovation which increases the prestige of New Orleans as a medical center.

While the aim and the scope of the new Journal will be far different from that of this publication, the old and the new can and will unite in the common purpose of diffusing medical information, each in its own way, and of stimulating the production of the right sort of literary medical work.

ERRATUM.

Through the perversity of the printer's devil, or the devil of a printer, a whole line was dropped from the bottom of page 16 in our July issue, thus mutilating a sentence in Dr. Harrell's interesting article.

The restored phrase should read, "there occurs an absorption of bacteria, or toxins, from the urethra which invade the entire system, and which *have a selective affinity for the serous fluids and surfaces of the body.*"

The mishap occurred after the final proof reading and we can only regret it and furnish the correct version to our readers.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

LOCAL ANESTHESIA IN MINOR SURGICAL GYNECOLOGY.—Haim, in *Prag. med. Wehnschr.*, 1913, xxxviii, 98 (*By Ventralbl. f. d. ges. Gynæk. u. Geburtsh. s. d. Grenzgeb.*). Local anesthesia should be

more extensively used in minor surgical cases, not only in the office of the practising physician, but also in his work at the home of the patients. For example, in cases of incomplete abortion of the first few weeks, when the os is insufficiently dilated, also when an abrasion is made in endometritis. In this way dilation can be accomplished in one operation. The technique is very simple: a fresh 1 per cent. solution of novocaine is made by dissolving 2 novocaine (0.125)—suprarenin (0.00016) tablets in sterile 0.9 per cent NaCl solution. The portio is brought into view by the aid of a self-retaining speculum, seized firmly with a forceps and 5 cc. solution is injected where the anterior vaginal wall passes over into the portio (use a 5 cc. Record syringe with a 6-8 cm. tip). The needle is then inserted first 2 cm. to the right (in the paracervical tissue), then to the left. In each instance the needle is plunged about 1½ cm. into the tissue. Finally, 5 cc. are injected into the posterior vaginal part and in 5 or 10 minutes a painless operation can be begun. Should the patient be very sensitive, a 2 per cent. solution of the non-poisonous novocaine acts very well. Hegar's dilators work more satisfactorily with such an anesthesia. In eclampsia it serves a useful purpose for it prevents the sensory stimulation of these parts, and the os dilates more freely. Such anesthesia is practical in cases of vaginismus, dilatation during dysmenorrhea and for the removal of hemorrhoids (the sphincter dilates easily). An injection into the perineum before the head passes, in obstetrical cases, not only brings about anesthesia but prevents spasmodic contraction of the muscles. A perineal tear can be sutured without pain. Old perineal tears, colpoperineorrhaphy, operations on the cervix, vagina and labia are painlessly performed by the use of the novocaine injections.

In Kraatz's Alexander-Adams operation 5 cc. of a 1 per cent. solution are injected 1 cm. below and median to the spinal ossis ilii ant. sup., directly under the fasciæ of the oblique muscle, 5 cc. into the tissue about the internal ring (1 cm. above the middle of Poupart's ligament), and a third syringe is injected into the inguinal canal (the needle is inserted below the fascia at the tub. pubis and emptied in the direction of the canal). In 5 to 8 minutes anesthesia of the parts is complete.—*International Abstract of Surgery*.—MILLER.

PITUITARY EXTRACT IN OBSTETRICS.—(*Med. Press & Circ.*, 1913, cxlvi, 149. By *Surg., Gynec. & Obst.*).—From an experience

in forty-eight labor cases, of which twenty-five are reported somewhat in detail, Gonsew makes the following observations: Pains begin in from two to ten minutes, accompanied by abundant micturition. Pituitary extract stimulates pains better during the second half of pregnancy, especially at its end; it gives good and reliable results in the first stage and acts still better in the stage of expulsion. Anesthesia, and especially morphin, inhibits the action of the extract. It is more reliable than hot douches and meture-sis for effecting artificial premature labor. It frequently is able to supplant forceps and Kristellar's expression. Pulmonary tuberculosis, diseases of the heart and kidneys, eclampsia, marginal placenta praevia, and premature detachment of the placenta he does not consider contraindications. He relates that edemata completely vanish in from eight to eighteen hours, while the albumin markedly decreases or disappears from the urine after its use. It hastens the expulsion of the placenta. He observed no injurious effects on mothers or children. In cases of atonic post-partum hemorrhage the extract gave reliable and permanent results, stimulating strong contractions of the uterus. He asserts that irregular pelves, not below the medium degree of contraction, are not contraindications to the administration of pituitary extract.—*International Abstract of Surgery.*—MILLER.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

PHARMACOLOGY OF ATOPHAN.—According to the pharmacological researches of Nicolaier and Dohrn, Weintraud and collaborators (Wiesbaden), Starkenstein (University of Prague), Deutsch (University of Munich), Georgiewski (University of Charkow) and many other investigators, therapeutic doses of atophan double and sometimes even treble the normal average uric acid excretion in twenty-four hours, both under purin-containing and purin-free diet. In its influence upon the uric acid excretion, atophan resembles sodium salicylate, but the action of the former is far more intensive and prompt. It does not cause noticeable

leukocytosis, diuresis or increase in the total nitrogen, purin bases and phosphoric acid excretion. The urine remains free from albumen and sugar, and there are no untoward effects upon the heart or the nervous system.

J. A. S.

EPIDURAL INJECTIONS IN THE TREATMENT OF SCIATICA.—Langbein (*Deutsch, med. Woch.*, 1913, xxxix, 20) reports twelve cases of sciatica treated in the last two years by epidural injections of novocain. Seven of these patients were permanently cured. Syphilis was a factor in one case that resisted the treatment. One patient improved temporarily, but Langbein thinks that the trouble in this case was muscular rheumatism. He attributes the lack of improvement in two other cases to a probable exaggeration of their symptoms. Langbein gives the technique of epidural injections as practiced by him in detail. One gram of novocain, one-quarter of a gram of sodium bicarbonate, and one-half gram of sodium chlorid are dissolved in 100 c. c. of cold distilled water. This mixture is injected into the sacral notch between the tubercles. In fifteen or twenty minutes after the injections all symptoms of the sciatica disappeared, but he left the patients in bed for a few days. He advises the use of these epidural injections for cases of sciatica that fail to benefit after two weeks' treatment by the usual antirheumatic remedies.

J. A. S.

POINTS IN THE DIAGNOSIS AND NON-SURGICAL TREATMENT OF DUODENAL ULCER.—Herschell, in the *Interstate Medical Journal* for March, 1912, in discussing this subject expresses the belief that the acidity of the gastric juice must be kept as low as possible. It was formerly supposed that an excess in hydrochloric-acid acidity in the gastric juice was an important factor in the production of gastric and duodenal ulcer. We now know that such is probably not the case, and that, granted a reduction in the resisting power of the gastric or duodenal mucosa, gastric juice of normal acidity is quite capable of determining an ulcerative process. That the reduction in the acidity of the gastric juice is an important factor in the cure of duodenal ulcer must be apparent from the experiments of Bolton, who found that the gastric ulcers, which are invariably caused by the injection of gastro-toxic substances into the peritoneums of guinea-pigs, were not formed if the acidity of the gastric juice was kept below normal by neutralization.

In practice, the writer attempts to diminish the acidity of the gastric juice by giving eight or ten ounces of hot Vichy water two hours after meals, or the following powder stirred up in hot water:

℞	Sodii bicarb.	gr. x.
	Calcii carb.	gr. x.
	Sac. lactis	gr. x.
	Ess. menth. pip.....	m. ij.

We must also secure the stomach against distention. One of the chief ways in which a gastroenterostomy conduces to the healing of a duodenal ulcer is by preventing distention of the stomach. We can secure much the same result (a) by preventing pyloric spasm by the administration of atropin and alkalies; (b) by giving food in small amounts at comparatively short intervals and in a finely divided condition; (c) by giving the drink, which should be hot water, not with the meals, but when the stomach is empty. It will then pass quickly out of the stomach, and incidentally wash and cleanse the surface of the ulcer in the duodenum.

The bowels must be kept freely open. The formula which the writer usually first prescribes for this purpose is the following, which, although not pleasant, is of extreme efficiency:

℞	Magnes. sulph.	3vj
	Ext. cascarae liquid (Parke, Davis & Co.)....	3iij
	Tinct. belladonnæ	m. xxx
	(This is omitted if the patient is already taking belladonna in the powders.)	
	Aquæ chloroform, q. s. ad.....	3vj

Sig.—One-sixth part is to be taken at bedtime, mixed with an equal quantity of water. This dose may be increased or diminished according to the effect produced.

Herschell also believes that in these cases preparations of aloes should be avoided, and also those of agar-agar.

Any anemia present must be treated. In order not to interfere with the medicaments which are being given by the mouth, the writer invariably administers the iron in this affection by intramuscular injection into either the deltoid or the glutei. His favorite preparation is the cacodylate of iron in doses of 0/01 gram made up to 1 c. c. with normal saline solution.

A suitable diet must be prescribed. This has to fulfil the following indications: (a) It must have a high combining power for the acid of the gastric juice; (b) it must excite the flow of gastric juice as little as possible; (c) it must not distend the stomach; (d) the products of its digestion must be as unirritating as possible to the ulcer; (e) it must provide a sufficient number of calories to preserve the nutrition equilibrium of the patient. All these indications are met, as far as is humanly possible, by pounded meat, chicken and bread.

J. A. S.

Department of Nervous and Mental Diseases.

In Charge of DR. R. M. VAN WART, New Orleans.

NERVOUS AFFECTIONS IN PREGNANCY.—A. Sanger (*Muench. med. Woch.*, October 8, 1912) discusses a few nervous affections which occur during pregnancy and which stand in direct relationship with the same. First, he tells of cases of polyneuritis. In one case all the extremities, as well as the muscles of deglutition and of the rectum, were paralyzed; in a second case there was also a general distribution of the paralysis. Both cases ended in complete recovery. Mobius has recorded a case of neuritis affecting the ulnar and median nerves following a severe parturition. Other cases are also mentioned. Saenger also records a case of retrobulbar optic neuritis in the puerperium. There was total blindness of both eyes. Partial recovery followed in a few months. In all these cases the author regards that the cause existed during pregnancy. Autointoxications occur during pregnancy, as is shown both by albuminuria and by the vomiting of pregnancy. The causes of hyperemesis gravidarum are supposed to be either hysteria or the marked passive movements in the uterus, affecting the intestines, or the disproportion between the uterus and the growing contents of the same or the direct reflex action on the part of the increasing uterine wall. Saenger recognizes that hysteria may play a part in some cases, but it certainly does not account for all the cases. His own opinion is that the most common origin of hyperemesis is of a toxic nature, and supports this view by calling attention to the frequency with

which it is associated with polyneuritis. Next, he turns his attention to epilepsy in pregnancy. He shows that at times the attacks can be controlled by the exhibition of cerebrin and bromides. In some cases, a previously existing epilepsy may be favorably influenced by pregnancy, while in others the reverse may be the case. He cites cases in which a latent epilepsy became active again during pregnancy and in which the patients lost their lives in status epilepticus. Some difficulty may be experienced when epilepsy is associated with eclampsia. As a rule, the differential diagnosis is not difficult. Lastly, he deals with puerperal insanity. He cites cases in support of the view that when a previous attack has been experienced and recovery has followed, the question of the induction of abortion should be considered, should a fresh pregnancy occur. His cases show that this procedure may lead to very satisfactory results. He is of opinion that many a woman can be saved from permanent insanity if an abortion is induced in good time.—VAN WART.

NERVOUS SYMPTOMS AFTER SALVARSAN.—Ravaut, (*Ann. de dermat. et syph.*, March, 1913), cites a case in which the patient, a man aged 31, contracted a chancre in January, 1911, for which he received nine mercurial injections and a course of mercury by the mouth. In July of the same year there were hypertrophic, oral, and palatal plaques, but no symptoms drawing attention to the nervous system. The Wassermann reaction was positive. Four intravenous injections of salvarsan—0.3, 0.4, 0.5, 0.6 gram at intervals of a few days—were given in the latter part of July and beginning of August, and in September fifteen intravenous injections of cyanide of mercury—0.01 gram—were administered. The mucous plaques healed after the first salvarsan injection, and none of these had any more serious sequel than persistent headache, of which the patient was still complaining in January, 1912, and for which mercury and iodide were freely prescribed. In May the patient again presented himself for further treatment of the same symptoms, which has continued in spite of all measures. In November he returned, complaining of very sharp pain in his left flank with nocturnal exacerbations. The physical examination pointed to a diagnosis of intercostal neuritis in the last dorsal nerve roots. The history of the case then suggested the possibility of a specific etiology—possibly meningeal—and lumbar puncture was proposed and accepted. The cerebro-spinal fluid was under considerable

pressure, and contained a large excess lymphocytes, some polynuclears, and a few cells resembling plasma cells. There was a good deal of albumen, and the Wassermann reaction of the cerebro-spinal fluid was positive. The withdrawal of the fluid had a marked therapeutic effect, for his pain subsided, and the headaches markedly diminished. Enesol was then injected intravenously every day (3 c. c. m.), and under its influence there was still further amelioration of symptoms. In January, 1913, the patient's symptoms had completely subsided; the Wassermann reaction of the blood was negative, but that of the cerebro-spinal fluid still positive. The patient wrote that at the end of that month the pain had returned, with weakness of the right leg, and a patch of anesthesia on the outer side of the left thigh. The chronic syphilitic meningitis had recurred, as is its wont, in spite of the most energetic and radical treatment. The author emphasizes the importance of an examination of the cerebro-spinal fluid in all cases of syphilitic neural manifestations, especially where there is any chance of the presence of a latent meningeal endarteritis syphilitica. He goes so far as to say that it is dangerous to base one's antisymphilitic treatment on the result of the Wassermann reaction of the blood alone, for it is always possible, as in this case, that active cerebro-spinal syphilis may be progressing, with a negative reaction to Wassermann's test in the peripheral circulation.—(*Brit. Med. Jour.*), VAN WART.

Medical News Items.

MALARIAL SOCIETY ASKS QUININ.—The Virginia Society for the Study and Prevention of Malaria has been granted a charter. The society will ask the next State Legislature to furnish free quinin for the treatment of persons suffering from malarial fever who are unable to supply themselves with the proper medical treatment. The society will work in close conjunction with the United States health authorities.

ANTI-TUBERCULOSIS LEAGUE HOSPITAL.—Plans for the establishment of a hospital for advanced cases of tuberculosis are being discussed by members of the Louisiana Anti-Tuberculosis League.

Difficulty in obtaining the proper site for the hospital in the present stumbling-block, as objections have already been made to the house the league now has in view. Residents of that neighborhood have petitioned against it, declaring that should the hospital be placed there it would depreciate the value of their property. The hospital in view is situated at Maple Street and the river, but the petition has unfavorably been reported upon by the City Council.

LEPROSY INCREASES.—In an address recently delivered in Minneapolis, Dr. Rupert Blue, surgeon-general of the United States Public Health Service, stated that leprosy is on the increase, and he strongly urged the advisability of Government supervision. Measures for the control of the disease and the care of those afflicted are absolutely necessary, declared the doctor. The State of Louisiana can boast of the excellent methods employed in the handling of this dread disease.

THE AMERICAN MEDICAL ASSOCIATION, at its recent meeting in Minneapolis in June, elected the following officers for the ensuing year: President, Dr. Victor C. Vaughn, Ann Arbor, Mich.; vice-presidents, Dr. Walter Conway, Atlantic City, N. J.; Dr. Frank C. Todd, Minneapolis; Dr. William South, Bowling Green, Ky.; Dr. S. G. Kahn, Salt Lake City, Utah; secretary, Dr. Alexander Craig; treasurer, Dr. William Allen Pusey. Atlantic City was chosen for the convention in 1914.

TULANE MEDICAL REORGANIZED.—The medical department of Tulane University has been reorganized upon broader lines, affording opportunity for greater research and development. Under the reorganization the department is to be known as the Tulane College of Medicine, and the college will be divided into four schools, each school with a separate dean and faculty. The four schools will be the School of Medicine and Pharmacy, with Dr. Isadore Dyer as dean; the Post-graduate School of Medicine, with Dr. Charles Chassaignac as dean; the School of Hygiene and Tropical Medicine, with Dr. Creighton Wellman as dean; and the School of Dentistry, with Dr. Andrew G. Friedrichs as dean. The college will have an executive council, composed of the president of the University and the deans of the four schools. The following are the elections, transfers and changes in the Post-graduate School:

Dr. Henry Dickson Bruns, transferred from the emeritus to the active list, as professor of **diseases of the eye.**

Dean Creighton Wellman, elected professor of tropical diseases and preventive medicine.

Dr. J. T. Halsey, elected professor of clinical therapeutics.

Dr. C. C. Bass, elected professor of clinical microscopy.

Dr. W. W. Butterworth, elected professor of diseases of children.

Dr. George S. Bel, elected professor of internal medicine.

Dr. L. R. DeBuys, elected assistant professor of diseases of children.

Dr. Allan Eustis, elected assistant professor in dietetics and nutrition.

Dr. L. L. Cazenavette, elected instructor in diseases of the nervous system.

Dr. Amedee Granger, elected demonstrator of radiology.

Dr. Wallace J. Durel, elected instructor in tuberculosis.

Dr. E. L. Leckert, elected assistant in clinical surgery.

Dr. J. D. Martin, transferred from assistant in general surgery to assistant in diseases of the ear, nose and throat.

Dr. P. J. Kahle, elected assistant in surgery of the genito-urinary organs and rectum.

HOO KWORM CHIEF APPOINTED.—Dr. John A. Ferrel, the State director for the eradication of hookworm diseases in North Carolina, will move from Raleigh to Washington, D. C., to become the general director for the same work for the United States. He has been appointed by the Rockefeller Commission to take up the work of Dr. Wickliffe Rose, who has been assigned to organizing and pushing forward the various undertakings of the Rockefeller Foundation for health promotion in foreign lands.

THE NATIONAL INSTITUTE OF HOMEOPATHY held its annual meeting in Denver recently and chose Atlantic City for the next meeting place in 1914; in 1915 at Portland, Oregon, and in 1916 at Dresden, Germany.

PERSONALS.—Dr. Clarence Pierson registered at the St. Charles Hotel during the month.

Dr. C. Jeff. Miller sailed on the Antilles on July 16, accompanied by his wife and daughter, and will spend a six weeks' vacation on the Massachusetts coast.

Dr. Charles Chassaignac will leave on the first of August for

Mississippi City to spend the month with his family, returning to the city only on Mondays and Thursdays until September first.

Dr. James H. Dillard, formerly a dean of Tulane University, has purchased a home in Charlottesville, Va., and will take up his residence there in the Fall.

Mr. Frank R. Eldred has been appointed director of the Scientific Division of Eli Lilly & Co. Mr. Eldred is a graduate of the Medico-Chirurgical College of Philadelphia and is well known in pharmaceutical and chemical circles.

Dr. and Mrs. G. F. Cocker left New Orleans by steamer Antilles for New York and will sail August 7 for Europe.

Dr. A. L. Walters, formerly an interne at the Johns Hopkins Hospital, will in the future be connected with the Department of Experimental Medicine of Eli Lilly & Co. Dr. Walters spent four years following his graduation from Purdue University in the Botanical Department of the Lilly Company.

REMOVALS.—The *Oklahoma Medical News Journal* from Oklahoma City to El Reno, Okla.

Dr. Thomas C. Minor, from 408 West Fourth Street, Cincinnati, to Hotel Auburn, Cincinnati.

Dr. J. K. Sheppard, from Belcher, La., to Ruston, La.

Dr. J. P. Durham, from Holloway, La., to Glenmore, La.

Dr. E. M. Causey, from Atherton, La., to Gloster, Miss.

Dr. George F. Cocker, from 1229 Maison Blanche building, to 5941 Magazine Street.

Dr. J. O. Weilbacher, from 612 St. Maurice Avenue, to 604 Macheca Building.

Dr. C. L. Brewster, from Woodworth, La., to McNary, La.

DIED.—On July 9, 1913, Dr. Horace Jayne, of Philadelphia, a well-known writer on scientific medical subjects.

THE AVOYELLES PARISH MEDICAL SOCIETY met at Bunkie on July 3, at night. The meeting was not well attended, but those present enjoyed themselves. They were Dr. E. T. Matthews, W. A. Quirk, Leonard Chatelain, E. A. Poret, L. C. Tarleton, Philip Jeansonne and P. E. Brahic. Dr. T. Y. Couvillon, of Moreauville, was elected president to fill the unexpired term of Dr. M. E. Saucier, who has moved to Lafayette. The next meeting will take place at Moreauville in October. Dr. G. R. Fox, of this place, has been on the sick list for the last fortnight, but is fast recovering.

NOTICE.—The Board of Administrators of the Charity Hospital has decided to appoint four resident medical officers, beginning October 1 next, when the new system goes into effect. These resident medical officers will be of equal rank, but will have well-defined functions—two to act as resident surgeon, one as resident gynecologist and obstetrician, and one as resident physician. They will be superior in rank to the present interne staff, but subordinate to the visiting staff. They will not be allowed to do practice outside of the hospital. The compensation will be \$50. per month with board and lodging. Applications may be sent to the undersigned committee, which has been requested by the Board to make recommendations to fill the positions. Applications must be in the hands of the committee by August 10. Further information will be given on request. F. W. Parham, 741 Carondelet street; Homer Dupuy, Medical Building; I. I. Lemann, Maison Blanche Building.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

Health and Longevity Through Rational Diet. By Dr. Arnold Lorand. F. A. Davis Co., Philadelphia.

This book is a regular thesaurus of information on food-stuffs and their indications and possibilities. The perusal of the book leaves the title buried in so great a mass of all kind of information that it is hard to pick out the elements of the rational diet recommended. Food values, theories of dietetics, studies in metabolism, the comparison of various diet habits, and specific advice in particular dietetic disorders all find place. Altogether a long and exhaustive study of diet from which the reader will get many kinds of profit, even if he does not learn how to grow old and keep young—from the contents of the book.

DYER.

Nervous and Mental Diseases. By Charles S. Potts, M. D., Third edition. Lea & Febiger, Philadelphia and New York, 1913.

This work is so well known that in commenting on this, the third edition, little need be said except that the manual has been markedly enlarged and brought thoroughly up to date. Many new illustrations have also been added. The articles, as in previous editions, though presented in a brief, terse and concise manner, contain the very essen-

tials of each subject treated. This can only increase the popularity of this work, which will continue to prove a most valuable guide to the student and practitioner.

CAZENAVETTE.

Organic and Functional Nervous Diseases. By M. Allen Starr, M. D., Ph.D., LL.D., ScD. Lea & Febizer, New York and Philadelphia, 1913.

It is rare indeed to find embodied in a single volume such valuable material as Dr. Starr presents in the fourth edition of his text book of Neurology. Within its 1,000 pages one finds the best and latest views not only of the foremost students of neurology, but also of the author, who has had more than thirty years' experience in the practice and teaching of this specialty under exceptional advantages for clinical and pathological research.

This immense material he uses freely and presents to the profession the fruit of his labors. This volume, much larger than its predecessor, incorporates the very latest views on the subjects treated. It is embellished with more than thirty plates in color and monochrome, and contains in the text over 320 engravings. Many of them are original. The first part of the work the author devotes to the structure of the nervous system and the diagnosis of nervous diseases. The second part to organic diseases of the nerves, spinal cord and brain, and the third and fourth to functional diseases and the sympathetic system and its diseases, respectively.

Among the numerous additions made we note particularly a chapter devoted to the subject of headache and migraine, where the characteristics of the different forms of headaches are thoroughly discussed. Psychasthenia is also presented, occupying many pages of the text. Here are found the definitions, causes and symptoms of morbid fears and ideas, instability of conduct, double consciousness, etc., so useful at present for the proper understanding of this subject. The chapter on Hysteria contains the various theories of the disease and the hypothesis of Babinski, Janet and Freud are contrasted. Pellagra, not mentioned in the previous edition, fills here a valuable chapter.

Where surgical intervention seems the proper course for the cure or relief of neurological conditions, the author discusses the various phases of the subject thoroughly, often describing the various operations in vogue and gives us the benefit of his valuable opinion and experience.

The thoroughness with which every subject in this text book is treated precludes the possibilities of finding in a few words only the information wanted, but this very thoroughness makes its real worth to the earnest and true student of neurology.

CAZENAVETTE.

The International Medical Journal. A year book of treatment and practitioner's index. A. B. Treat & Co., New York.

This annual has long since won a cherished and respected place among our regular medical publications, and the thirty-first year's publication shows that its publishers are maintaining the high standard they have set.

The illustrations this year are fine. The X-ray photographs especially deserve mention. There is a series of these, printed to demonstrate the value of X-rays in the diagnosis of oral sepsis, especially pyorrhea alveolaris, that is deserving of mention. The more recent reports on neo salvarsan and salvarsan are taken up with thoroughness.

Thyroid gland surgery is given an exhaustive review. Interesting in connection with thyroid conditions are the apparent cures in simple

goitre which Capt. McCarrison, I. M. S., reports after the use of a vaccine made from the feces of the patients.

Altogether the annual this year cannot well be missed by a practitioner who desires to have at his elbow a summary of all the advances made in medical and surgical therapeutics during the past year.

SEEMANN.

The Operating Room and the Patient. By Russell S. Fowler, M.D. W. B. Saunders & Co., Philadelphia.

This is the third edition of this work, which brings it up to date. Just at this time, when physicians are beginning to realize the importance of proper office equipment and small hospitals are springing up all over the country, a better knowledge of hospital requirements and the care of patients is essential. Dr. Fowler has pretty thoroughly covered the subject and the book will prove of value to any practitioner doing surgical work, but especially to those deprived of a hospital training.

MARTIN.

Reference Handbook of the Medical Sciences. Published by William Wood & Co., New York, 1913.

It is with great pleasure that we see the first volume of the third edition of this work, and we sincerely hope to see the whole work, complete in eight volumes, perfect in all respects. This third edition, under the editorship of Thomas Lathrop Stedman, A.M., M.D., will be an entirely new encyclopedia, the original splendid framework, plan and system having been retained, while new features and additions in abundance will place it abreast of the times.

DUPAQUIER.

Diseases of the Heart and Aorta. By Arthur Douglas Hirschfield, M.D. J. B. Lippincott Company, Philadelphia and London.

The second edition of this admirable work presents several new chapters embodying the advances in cardiology. There is an abundance of valuable illustrations, of which the electro-cardiograms are certainly the most instructive. The general practitioner who is seeking in the main practical treatment, will not be disappointed, as more exact methods in therapeutics have been elucidated by these scientific investigations.

DUPAQUIER.

Disease of the Ear. By Philip D. Kerrison, M.D. J. B. Lippincott, Philadelphia and London.

Dr. Kerrison's book can be considered one of the modern volumes of otology, for one misses here the usual illustrations, the old theories and therapeutic measures, none of which bear on the modern conception of otology. Instead, one sees three chapters devoted to the labyrinth question, which heretofore had been usually answered in part of one. The same proportionate consideration is given to suppurative lesions of the brain.

Chapter XXII considers carefully serum therapy, autogenous vaccines, bacterial sera and Hiss leucocyte extract.

The work is most modern, and can be thoroughly recommended to all interested in otology. The publishers must be complimented upon the character of their part of the work.

LYNCH.

A Text Book of Diseases of the Nose, Throat and Ear. By Francis R. Packard, M.D. J. P. Lippincott Company, Philadelphia and London.

To keep abreast with the rapid strides of rhinology, laryngology and otology, there appears the second edition of Dr. Packard's book on those

specialties. Intended primarily for under-graduates and student post-graduates, he has withheld from his work much of the theory that one usually wades through.

The bulk of the text has been re-written to conform to the many new ideas, and the practical benefit of the author's long experience as a clinic worker and teacher is brought forth prominently. While a statement here and there may be open to individual criticism, the work is commendable and can be recommended to those for whom it is intended.

LYNCH.

Appendicitis. Its History, Anatomy, Pathology, Symptomatology, Treatment, Etc. By John B. Deaver, M.D. P. Blakiston's Son & Co., Philadelphia.

The second edition of this book is just out and completely covers the subjects herein mentioned. There is probably no condition upon which more has been written and yet the general practitioner has much to learn about appendicitis. Whereas there is little that is new in the work, there could be no book written to-day of more value to the general practitioner. The author's thorough knowledge of the subject and his great experience are sufficient guarantee of its worth. I believe that a careful study of its contents would not only be interesting, but most instructive to all medical men, and especially to those who have not had any great experience with the disease, particularly in its chronic form, for it is here that the greatest errors are made. The book should be a part of every library.

MARTIN.

Publications Received.

REBMAN COMPANY, New York, 1913.

"Sterility in the Male and Female," by Max Huhner, M.D.

"Therapeutics of the Gastro-Intestinal Tract," by Carl Wegele, adapted and edited by Maurice H. Gross, M.D., and I. W. Held, M.D.

"Sex—Its Origin and Determination," by Thomas E. Reed, M.D.

"A Course in Normal Histology," by Rudolph Krause, translated from the German by Philipp J. R. Schmahl, M.D. In two volumes.

E. B. TREAT & COMPANY, New York, 1913.

"Diseases of the Rectum and Pelvic Colon," by Martin L. Bodkin, M.D.

C. V. MOSBY & COMPANY, St. Louis, 1913.

"Laboratory Methods," by B. G. R. Williams, M.D., assisted by E. G. C. Williams, with an introduction by Victor C. Vaughan, M.D., LL.D. Second edition.

J. B. LIPPINCOTT, Philadelphia and London, 1913.

"Blood Pressure in General Practice," by Percival Nicholson, M.D.

"International Clinics," Volume II, Twenty-third Series, 1913.

"The Psychoneuroses and Their Treatment," by Prof. J. Dejerine and Dr. E. Gauckler, authorized translation by Smith Ely Jelliffe, M.D., Ph.D.

LEA & FEBIGER, Philadelphia and New York, 1913.

“Hygiene and Sanitation,” by George M. Price, M. D.

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“Method for Determining the Toxicity of Coal Tar Disinfectants,” by Worth Hale. (Washington Government Printing Office, 1913.)

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“Dr. Ephraim McDowell, ‘Father of Ovariectomy’; His Life and Work,” by Augustus Schachner, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR JUNE, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....		5	5
Intermittent Fever (Malarial Cachexia).....	1		1
Smallpox.....			
Measles.....	3		3
Scarlet Fever.....			
Whooping Cough.....			
Diphtheria and Croup.....	9		9
Influenza.....			
Cholera Nostras.....	1		1
Pyemia and Septicemia.....	1		1
Tuberculosis.....	28	41	69
Cancer.....	24	15	39
Rheumatism and Gout.....	1		1
Diabetes.....	2		2
Alcoholism.....			
Encephalitis and Meningitis.....	2	2	4
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	12	8	20
Paralysis.....	2	2	4
Convulsions of Infancy.....	1	3	4
Other Diseases of Infancy.....	14	4	18
Tetanus.....	3	3	6
Other Nervous Diseases.....	2	1	3
Heart Diseases.....	41	39	80
Bronchitis.....	1	3	4
Pneumonia and Broncho Pneumonia.....	15	11	26
Other Respiratory Diseases.....	4	3	7
Ulcer of Stomach.....		4	4
Other Diseases of the Stomach.....	1	2	3
Diarrhea, Dysentery and Enteritis.....	44	15	59
Hernia, Intestinal Obstruction.....	4	1	5
Cirrhosis of Liver.....	4	8	12
Other Diseases of the Liver.....	2	1	3
Simple Peritonitis.....			
Appendicitis.....	5		5
Bright's Disease.....	38	26	64
Other Genito-Urinary Diseases.....	3	9	12
Puerperal Diseases.....	4	2	6
Senile Debility.....	7	1	8
Suicide.....	6		6
Injuries.....	26	15	41
All Other Causes.....	16	20	36
TOTAL.....	327	244	571

Still-born Children—White, 14; colored, 11; Total, 25.

Population of City (estimated)—White, 272,000; colored, 101,000.

Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 14.42; colored, 28.98; Total, 18.36.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....	30.02
Mean temperature.....	78.8
Total precipitation.....	5.58 inches
Prevailing direction of wind, northeast.	

New Orleans Medical and Surgical Journal.

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No. 3

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

SARCOMA OF THE SMALL INTESTINE.*

By ESPY M. WILLIAMS, M. D., Patterson, La.

I might wish, first, to express to this society my feelings of appreciation at what I conceive to be a great honor; that of having been invited to present a paper before your distinguished body. This, however, is no easy matter; and I shall have to content myself with the wish. I had, also, hoped to find a subject which might be of more interest than this, perhaps, will be; but since our work is entirely clinical, and we are doing but little in the way of experimental surgery and no research, I shall offer for your consideration the subject of Sarcoma of the Small Intestine; it being a form of intestinal neoplasm which is comparatively seldom met with and which affords some clinical phases, both interesting and difficult, of interpretation. I had hoped to bring the patient before the society, but she could not be persuaded.

We know that malignant disease involving any segment of the bowel,—with perhaps the exception of carcinoma of the lower sigmoid and rectum,—is conspicuously rare compared with the frequency with which the same disease is met with in other localities. Nothnagel¹ recites that of 2,153 carcinomas observed at autopsy,

*Read before the Orleans Parish Medical Society, July 14, 1913.

there were 243 of the intestine; or $11\frac{1}{4}$ per cent. Of sarcomata, 3 in 274 observations involved the bowel; one per cent. plus. Krueger (*Ibid.*) had 37 intestinal sarcomata; 16 of which involved the small bowel, 16 the rectum, with the ileo-cecal region next in frequency amongst the remaining five. In our work at Patterson, during the past five and one-half years, in 1,100 abdominal sections made for various conditions, there was one case of sarcoma of the small intestine, the history of which I will recite:

The Patient was a colored girl, aged 18 years, married for one year and never pregnant. She came complaining of abdominal pain and swelling, and fever, of ten days' duration. Her menses, due two weeks previously, had been missed. For three months she had been losing weight steadily, and for five weeks had noticed that the abdomen was slightly larger than ever before. The past history was otherwise negative, and the family history of no importance. As remarked above, the illness was of ten days' duration; the first symptom being pain, dull in character and distributed over the entire abdomen. On the second day of the illness the abdomen began to grow larger very rapidly, and by the sixth day the pain was localized over the umbilical region, the area of greatest prominence. Fever began on the second day, and was present daily thereafter; she did not know how high it was at any time, but felt it most in the afternoons and evenings. There were no chills nor septic sweats. The bowels, which previously had been perfectly regular, became loose with the onset of the pain; and had been moving from four to eight times daily; stools being loose and watery, without blood or mucus, and passed without pain or tenesmus. For the last three days she had been troubled with frequent urination, passing only small amounts at a time. There was no nausea, and she had not vomited.

Physical Examination: Patient is very thin, and the mucous membranes pale. Facial expression anxious and strained. Lungs normal, and heart normal, except for small hemic murmur over the base. Liver and spleen not palpable. The abdomen is symmetrically enlarged to the size of a seven and one-half months' pregnancy, this enlargement being caused by the presence of a tumor which occupies the middle of the abdomen; its greatest prominence being in the umbilical region. It is smooth, apparently semi-fluctuating and very sensitive to pressure. The lower pole of the mass is at the pubes; the upper pole extends for two inches

above the umbilicus, and laterally it goes well over into the flanks. Muscular rigidity is present over the entire abdomen, but more especially over the highest point of the tumor. Upon vaginal examination very little can be elicited, because of the pain occasioned thereby; but the cervix is not one of pregnancy, and the tumor does not seem to be attached directly to the uterus. Ovaries and tubes cannot be felt. The mass is not moveable, except with the abdominal parietes. Temperature is $101\frac{1}{2}$, pulse 98, and respirations 23. Blood examination shows: no plasmodia; red cells, 3,600,000; white cells, 10,000. No increase in polymorphonuclear cells. Hemoglobin 60 to 70 per cent. Urinalysis negative.

Operation: February 3, 1913. The neoplasm was removed by abdominal section; resection of bowel done and end to end approximation made with the button, reinforced with linen.

Items of interest pertaining to local conditions found at operation were: The presence of considerable amount of dark, straw-colored ascitic fluid. Dense adhesions of the tumor to the parietal peritoneum, which was greatly thickened, apparently with lymphocytic infiltration; and adhesions to the intestines behind the mass and to the omentum. Free loss of blood ensued from raw surfaces after the detachment of adhesions. When the tumor was delivered without the cavity a peculiar condition of the intestines remaining within the abdomen was seen, consisting in a thin membranous covering which invested them, so that there was no difficulty encountered from intestinal extrusion through the very long incision. A segment of bowel about a foot long on the proximal side of the tumor was normal as to its peritoneal coat; but the resection on the distal side had to be made through bowel, the serous coat of which was greatly thickened and covered with filamentous tabs. Further on there was none better than this to be had, without needlessly sacrificing a very long segment of gut, because of the membranous investment spoken of. The tumor grew from the jejunum about two and one-half feet from the flexure. There were no metastases. Several enlarged lymphatics were present in the mesentery tributary to the neoplasm, and this was also excised. Owing to the condition of the serous coat of the bowel at the line of anastomosis, a small cigarette drain was inserted down to, and tacked under, this area; not, however, touching the bowel itself.

After the operation the patient was in poor condition, owing to

prolonged shock and loss of blood from oozing surfaces; but she rallied after a few hours and made a good recovery. On the fifth day there was a discharge of fluid feces from the drainage tract, which was no more than had been expected and provided for; and which ceased after eight days. She reported one week ago, and had gained eighteen pounds in weight, and was apparently perfectly well. There were no signs of local recurrence and no metastasis had occurred.

Upon examining the tumor, it was seen to be slightly larger, perhaps, than a foetal head, and was reddish-grey in color, with its surface covered with tabs of adhesions. It was smooth, and irregularly globular in shape, and along its posterior surface was attached a segment of small intestine about eight inches in length. This, when opened, was free from constriction, and its mucous coat apparently normal. A section of the tumor showed large areas of reddish-grey, soft, sarcomatous tissue; presenting here and there areas of hemorrhagic infiltration, and also several rather large accumulations of a greenish, gelatinous substance. There was no evident necrosis. Microscopically it proved to be a small round-celled sarcoma. Dr. J. A. Lanford, of New Orleans, substantiated this finding.

The most complete list of cases of sarcomata of the small intestine which I was able to find in the not very extensive amount of literature to which I have easy access, is that given by Moynihan.² He cites forty cases, with brief individual histories, two of which were his own, and all of them having been submitted to operation. In these the ages of the patients ranged from 14 to 62 years, the majority being between ages of 30 and 50. There were twenty-one males and nineteen females; which is a little at variance with statements usually found in texts, to the effect that males predominate. There were twenty-five operative recoveries and fifteen deaths; an operative mortality of $37\frac{1}{2}$ per cent.

Pathology: Round celled sarcoma are found in about half of the cases. In Moynihan's list there were eighteen round celled; seven spindle celled; three lymphosarcoma; two alveolar sarcoma; one each of fibro and myxosarcoma; and the histologic characteristics were omitted in four cases. The round-celled are not divided into small and large. Adami and McCrae³ say "Sarcoma may occur as a round-celled growth originating generally from the submucosa, and this most frequently in the lower part of the ileum, though

the rectum, cecum and even the anus furnish cases. Spindle celled sarcoma is distinctly rare. Lymphosarcoma has the same regional distribution as the round celled sarcoma, and possibly they often fail to be distinguished, one from the other." There is, however, no absolute concurrence as to the histology of these tumors, as witness Delafield and Prudden,⁴ who say "The so-called lymphosarcoma are most common." Primary melanotic sarcoma of the intestine, except of the anus, is of the rarest occurrence; one only being reported by Treves.⁵

The neoplasm is invariably rapid in its growth, and is therefore prone to breaking down and necrosis. Hemorrhages within the tumor frequently occur, which may account for its extremely rapid development in some cases. Occasionally multiple growth occurs, but only seldom. The tributary mesenteric lymphatics are said to be early involved. Perforation of the bowel may occur. Constriction of the intestinal lumen is not a usual accompaniment of the disease; sarcoma in this respect being very unlike carcinoma. On the contrary, dilation frequently occurs, and is said to be almost constant, especially in lymphosarcoma. This feature has been so marked at times as to occasion the expression "aneurysmal dilatation" of the bowel. This dilatation is due to the fact that early in the course of the disease the muscularis is invaded and more or less destroyed, and, in consequence, pressure from within the bowel leads to an enlargement of its lumen. Carcinoma, developing from the mucous layer of the intestine, tends to grow inward; progressively diminishing the lumen of the gut.

Sarcoma, developing from the submucosa, has nothing to do with the epithelial coat, tends to grow excentrically and does not stricture. This difference in pathology is important, for it has a great deal of bearing upon symptomatology. Metastases from a primary sarcoma of the bowel are frequent; but metastatic sarcoma of the intestine occurs but seldom.

Symptoms and Diagnosis: There are no pathognomic symptoms of sarcoma of the small intestine. The clinical picture is often very irregularly drawn, is very unlike that of carcinoma, and the diagnosis is frequently not made until operation. The history and symptoms given in our case are, we might say, characteristically out of order; and might be duplicated in many case reports. One reason for this is that sarcoma rarely causes obstruction; and this syndrome therefore is frequently wanting. If constipation does

occur it is usually not of the progressive type seen in cancer, but is intermittent; and so many individuals go through life exhibiting these periods of constipation that the symptom is not likely to attract attention. When persistent constipation does occur it is most likely to be late in the disease, due to the size of the tumor or to kinks and adhesions; whereas, in carcinoma, stasis is usually the first sign and makes its appearance long before constitutional effects of the neoplasm present themselves, and even before a tumor is manifest. Occasionally symptoms of obstruction supervene due to ileus paralyticus¹ if the neoplasm has produced muscular destruction involving a considerable segment of the bowel, with consequent dilatation. Diarrhea may be present, as in our case, in which it was quite troublesome at times. It is not associated with the colicky pains present in cancer of the bowel, and as a rule the discharges are not of the dysenteric sort so frequently found in carcinoma; blood and mucus being present only occasionally, and then only when ulceration has taken place involving the mucous coat. Of course, in carcinoma diarrhea may be present, due to a catarrhal condition of the mucosa above the neoplasm; symptoms of progressive stricturing may have been present, subsiding later if necrosis reopens the lumen of the gut; or if fistulous communication becomes established between the intestine proximal to and distal from the growth; but such phenomena are not to be expected in giving clinical judgment, and we expect always that in cancer the stenosis is progressive from the first, until complete occlusion of the bowel supervenes.

The duration of symptoms in Moynihan's cases was from 24 hours in the shortest to 15 years in the longest. Since it is not likely that sarcoma could have existed for the latter time, we have omitted this case from the figures and find that the average duration was for seven months. The onset is frequently so acute and the past history so meager that several cases have been operated on under the diagnosis of acute appendicitis (Libman, mentioned in Nothnagel, ¹). It is difficult to see how such a grave error could have happened, but the fact is mentioned here to illustrate the acuteness of onset at times and also the frequent want of symptoms leading up to anything like a correct diagnosis.

A symptom of very great importance is that of anemia and rapidly developing cachexia. In cancer we usually have a tumor and symptoms pointing to a gradual intestinal occlusion before cachexia supervenes; while in sarcoma it is just the other way

around, the anemia and loss of weight appearing often first, and frequently long before there are any local signs directing attention to the true seat of and nature of the trouble. We might say that the early association of cachexia with abdominal tumor, the latter being of rapid growth, associated with fever and without constipation, is strongly indicative of sarcoma. Or even further; that the existence of a rapidly developing cachexia with anemia and wasting, without local symptoms, and when the more common primary and secondary anemias can be ruled out, should suggest to us the possibility of sarcoma of the intestine. Very early in sarcoma the general health becomes impaired, while the local symptoms may be inconsequential, and this peculiar disproportion between general and local symptoms is practically always seen.

Pain is generally present in all cases at some time, and after the development of a tumor is a prominent feature. It is not of the colicky sort associated with carcinoma, but is likely to be dull and not definitely located. When the tumor is rapidly growing there may be signs of a local peritonitis, as in our case; when pain, with tenderness, becomes a prominent feature. Ascites was present in our case, though it was not appreciable upon examination. We have not found it mentioned as an accompaniment in the reports of other cases which we have read, but it would seem logical to expect a serous effusion associated with a lesion inflicting such great disturbance as sarcoma.

Fever is often present; due to the adsorption of pyogenic substances from the tumor, produced by hemorrhages within its substance and by focal necrosis. The presence of fever, of course, may add very materially to the difficulties of diagnosis, especially when the history is incompletely given (or taken) and the symptoms are recent.

The presence of a tumor is to be expected, and, of course, the diagnosis is impossible without it. It is frequently of considerable size, usually occupies the near central portion of the abdomen, and grows rapidly. It may be hard or soft in consistency; in the latter case often attaining enormous size. It may be moveable or immovable, according to the presence, absence or extent of adhesions to other parts. Ordinarily, in its early stages, it moves freely within the radius of the mesentery of that part of the bowel to which it is attached. Dyspeptic symptoms may or may not be present in sarcoma of the small intestine, with or without vomiting. When found, it is only because in this, as in most other intra-abdominal

conditions, the stomach is acting as a mouthpiece for the organ involved; and not because of any special pathology. It is possible, of course, that with the extreme anemia there may be impairment of gastric function to varying extents.

In considering the diagnosis, we have already mentioned the principal differences existing between carcinoma of the small intestine and sarcoma. The confounding of sarcoma with appendicitis has also been mentioned; but the differences between these two conditions will suggest themselves and need not be discussed. Tuberculous peritonitis might very easily be mistaken for sarcoma. Tumor frequently forms in peritoneal tuberculosis, and we can recall a case occurring in a child of twelve years, in which a large, irregular and slightly movable epigastric tumor, associated with diarrhea, vomiting and ascites, turned out to be a tuberculosis of the omentum, which had rolled itself up into this mass. In tuberculosis, however, the term of illness is likely to be longer than in sarcoma; the anemia and cachexia do not develop so rapidly; there is likely to be some other tuberculous involvement elsewhere, and the several tuberculin tests may be of assistance. In a tuberculosis of the plastic form, in which a tumor is present, consisting of adherent and matted intestine, the bismuth meal with the X-ray should be of assistance in making the diagnosis. Sarcoma would show a shadow alongside the tumor, while we would expect the entire tumor to be shadowed in tuberculosis if the bismuth found its way throughout the gut. The condition of the bowels might be the same in tuberculosis and sarcoma, except that in the former we might expect stenosis somewhat more frequently, from cicatrization of ulcers. In tuberculosis there may be multiple tumors which occur but seldom in sarcoma. Lastly, tuberculosis of the intestine and sarcoma may be associated in the same patient.

It is easy to see how sarcoma might be confounded with other intra-abdominal tumors, especially if a very clear history cannot be obtained, and acute symptoms are present. In our case we did not make the diagnosis until the abdomen had been opened and it was found that the neoplasm was not ovarian in character. It seemed very likely that we were dealing with an ovarian cyst with twisted pedicle. The acute onset, the great pain, the fever, the locality and shape of the growth, together with what was apparently fluctuation, were very suggestive signs. On the other hand, there was the absence of vomiting, the very evident adherence of the tumor to the parietes, which could not have occurred in so short

a time in ovarian cyst; and the free peristalsis with diarrhea, which were against such a diagnosis. Benign tumors are not associated with the anemia and cachexia of sarcoma, nor is there the rapidity of growth found in the latter. Chronic intussusception might be mistaken for sarcoma, but in intussusception the tumor would not increase in size; colicky pains with the gaseous explosions of chronic stricture would be present; the stools would be small and would contain mucus and blood, and the anemia would be proportionate to the degree of malnutrition caused by the stasis and toxemia, and not the same as in the essential cachexia of sarcoma. Fever also would not be present in intussusception; whereas we would very likely find it at some time in sarcoma.

Prognosis and Treatment: It goes without saying that, if unrelieved by surgical measures, cases of sarcoma of the intestine, as of the same elsewhere, progress to a rapidly fatal termination, and usually within the period of nine months from the time the symptoms are first noticed. Resection must be made, leaving goodly margins of sound tissue on either side of the tumor. Operative indications must vary with the individual case; but after our single experience we would be inclined to give the possibilities of operation the benefit of the doubt very largely, and submit even grave cases to surgical intervention; this because of the fact that in this case the patient was in an exceedingly poor condition; and, in fact, had the diagnosis been made before we had gone so far that resection was forced upon us, we should probably have let the case alone. Then, too, since the diagnosis cannot be always positively made, in refusing operation we may deprive the patient of what would be the result of a happy mistake. The operative mortality of 37½ per cent. in Moynihan's list is very high; and probably much too high. The mere resection of bowel is not a very serious matter, and if the patient's general condition is good and local complications are not such as to demand a very prolonged operation the direct mortality should certainly not be more than ten per cent. at most. The presence of metastases are, of course, a contraindication to operation. What are we going to tell the patient concerning the possibility of recurrence? Only what we know about it; that it is likely to happen, but that there are some chances against it, which should easily turn the balance in favor of surgical intervention.

- REFERENCE.—1. Nothnagel, "Encyclopaedia of Practical Medicine, American Ed., 1905.
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4. Delafield and Prudden. "Text-Book of Pathology."
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A NEW SELF-RETAINING PERINEAL RETRACTOR.*

By MAURICE J. GELPI, A. B., M. D.,
Department of Gynecology, Tulane University.

Anyone who realizes the tremendous number of surgical instruments in existence to-day, can appreciate the fact that it takes considerable moral courage to increase that appalling number even by a single unit. However, we have often felt the need of such an instrument as the one we have devised and as it has proven thoroughly satisfactory to us, as well as to others who have been good enough to try it, we present it to you, in the hope that at least some of you may find it equally useful.

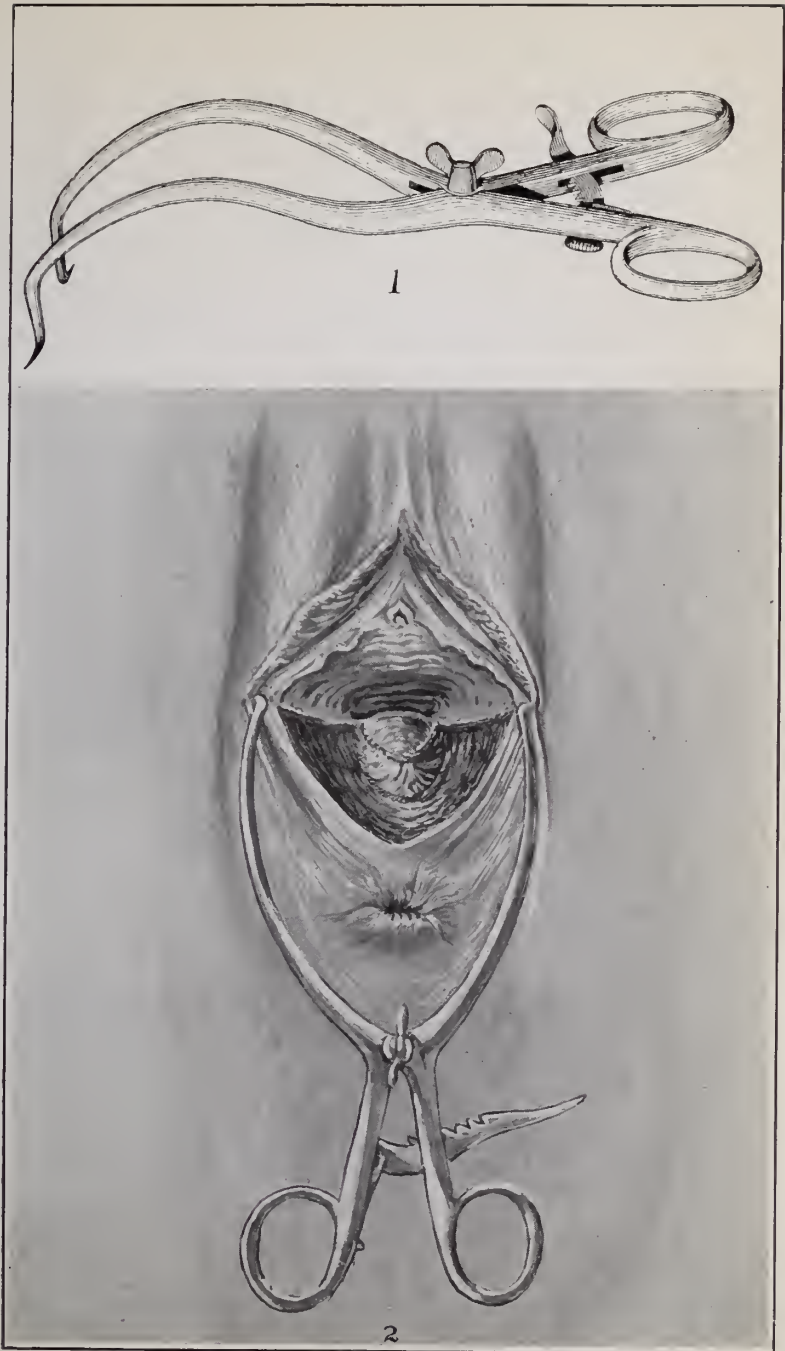
It is only fair to state here that of those who tried the instrument our own chief, Dr. Clark, was the one by whom the instrument was commented upon with the least enthusiasm. Yet, in spite of this, both Dr. Kostmayer and myself have managed at different times to slip in the retractor in Dr. Clark's instruments and have seen him use it apparently with perfect ease and success, on several occasions. Certainly the finished perineorrhaphy didn't seem to have suffered from the use of the retractor.

The instrument in question is such a simple affair from the mechanical standpoint, that we at first hesitated to mention it at all. Yet, on second thought, we concluded that its very simplicity was an argument in its favor. The new retractor is composed of two sharp tenacula, so constructed that, when applied to the perineum, they remain securely in place, retracting the tissues on either side of the vaginal outlet, without the necessity of assistants to hold the tenacula where they belong. The instrument is simply a self-retaining double tenaculum. It is intended to take the place of the tenacula or Smith-hooks that most of us are using in doing perineorrhaphies. The old instruments require more assistance because they must be held in place and are often unsatisfactory because they may be pulled out of the mucous membrane by a careless assistant.

The cuts give you a better idea of the retractor than we could give you by description. It is essentially the same instrument as the original model made for us by V. Mueller & Co., of Chicago, in October, 1911. We claim the following advantages for the self-retaining perineal retractor:

1. It is exceedingly simple in construction and therefore can be made cheaply; can be easily sterilized and is durable.

*Read before the Orleans Parish Medical Society, July 14, 1913.



1. Showing curve to fit over buttocks.
2. Showing the retractor in place.

ILLUSTRATING DR. M. J. GELPI'S ARTICLE.



2. It is efficient because it does exactly what the tenacula or Smith-hooks do, without the necessity for two assistants to hold the instrument in place. Furthermore, once the instrument is in place, there is no danger of its being torn away by a careless assistant.

3. While originally intended for perineal retraction especially, the instrument may be used in abdominal incisions and for many other wounds where we ordinarily use Parker retractors.

While the idea of this instrument was entirely original with Dr. Kostmayer and myself, who worked it out together, we are fully aware that in reality the instrument may not be new at all. As a matter of fact, it may be one of those good old useful things that has been, for some reason or other, forgotten many years ago, and that we are now unconsciously resuscitating. However, as far as we know, this is not the case, and the retractor is really new as we claim it to be. But our main object in bringing the instrument before you was not to establish the question of priority, but simply to present for your consideration a simple device which we hope might prove as useful to you as it has proven convenient to some of us.

THE TREATMENT OF TRIFACIAL NEURALGIA BY THE INTRA-GANGLIONIC INJECTION OF ALCOHOL (HARTEL'S METHOD).*

By URBAN MAES, M. D.

The evolution of the surgery of the trigeminus began with the efforts of surgeons to relieve tic douloureux and other painful affections of this nerve. The operation aimed to accomplish this purpose by division of the sensory branches from their peripheral distribution at their exit from the basal foramina, constitutes one of the most interesting chapters in neurologic surgery. These efforts finally culminated in the operation of gasserectomy, which was first performed by Rose in 1886. This procedure has gone through many modifications, including those of Krause and Hartley, Doyen, Cushing and Frazier. With all of these improvements brought about by a perfected technic, the operation of gasserectomy still remains a dangerous procedure, with a mortality of from 12 to 15 per cent. The dangers of this operation, with the frequency of

*Read before the Orleans Parish Medical Society, July 28, 1913.

relapse after the anatomical division of the sensory root, and even after the removal of the ganglion, have given way to the injection of alcohol in the treatment of tic douloureux and other painful affections of the trigeminus. In view of these facts, the alcohol injections into the nerve trunks at their exit from the skull is the most certain, simple and satisfactory procedure for the relief of one of the most painful affections known to medical men.

Schlosser, an ophthalmologist of Munich, was the pioneer in this method, and since his first demonstration in 1903 his example has been followed with increasing favor by the profession. The technic of Schlosser was rather uncertain, and required a large amount of practice and the use of one's sixth sense for the accomplishment of successful results. Levy and Baudoin gave more accurate guides for reaching the nerve trunks, and the early publication of a series of successfully-treated cases by Ostwalt gave a new impetus to the work. However, the intra-buccal route of Ostwalt has almost been discarded. Kiliani, Hecht and Patrick were among the first in America to apply Schlosser's principles. Wilfred Harris and Purves Stewart, in England, made some valuable suggestions by the addition of chloroform and cocain or eucain to the solution. The recent work of Offerhaus for locating the basal foramina by a series of measurements is rather complicated, and probably will not come into general use.

The final achievement in the treatment of tic douloureux is the alcoholization of the gasserian ganglion itself, a procedure which has been tried by Harris, of London; Taptas, of Athens, and others, but it has found its most systematic and ablest exponent in Fritz Härtel, of Berlin. (*Archive. f. Chirg.* Bd. 100, 1913.) This is a masterpiece of patient and thorough work.

The alcoholization of the ganglion is equivalent to a gasserectomy, as far as immediate physiological effects are concerned. The degenerative action of the alcohol on the ganglion is gradual, and in this way the trophic lesions of the cornea are not as pronounced as those which follow removal of the ganglion.

Long before the injection of the trigeminal branches for therapeutic purposes had been tried by Schlosser, practical surgeons had planned methods of reaching these branches, in order to obtain control of the field for surgical procedures. Probably the first recorded operation under regional anesthesia of the trigeminus by the intra-neural injection of the second division with cocain was

done in 1898 by Dr. Matas at the Charity Hospital in New Orleans. At this time (long before Schlosser) he used the intra-malar route to the foramen rotundum via the sphenopalatine fossa, but in this particular case he utilized for the first time the orbital route for injecting the second division at its exit from the foramen rotundum through the sphenomaxillary fissure. In this way he obtained anesthesia of Meckel's ganglion and its branches, which, when repeated on the opposite side, permitted the painless removal of both superior maxillæ and the palate.

Professor Braun and other German writers credit Dr. Matas with the first application of the lateral or infra-malar route, but through some error they attribute the orbital route to Payr, of Breslau, who operated by this route at a much later period.

This was the beginning of extensive work in this direction, and regional anesthesia by these methods with cocain, stovain, and finally novocain adrenalin solutions, have been steadily used by us with success in the surgery of the face, mouth and jaws. These neural injections were continued until last winter, when Dr. Matas' attention was attracted to the greater possibilities of Gasserian anesthesia by the publications of Harris and Taptas. When Härtel's paper appeared, the study of the routes of approach to the ganglion for surgical and therapeutic purposes was undertaken with enthusiasm on the cadaver in the Miles Laboratory of Operative Surgery of Tulane University. We were convinced finally that this (Härtel's route) was by far the most accessible and safe route to the ganglion. In the course of these observations, carried on at the suggestion of Dr. Matas, I have made over 200 ganglion injections, and have found this preliminary experience on skulls and recent cadavers of inestimable value in training me for the more difficult work on the living patient.

Fortunately, the third division is the branch most frequently involved, as this is the most accessible division. The second division is much more difficult to locate, by either the lateral route or through the sphenomaxillary fissure. Less than 5 per cent of cases occur in the ophthalmic division, which is the smallest and most inaccessible trunk, and its injection is certainly fraught with danger to the structures in the orbit and secondary trouble in the eye.

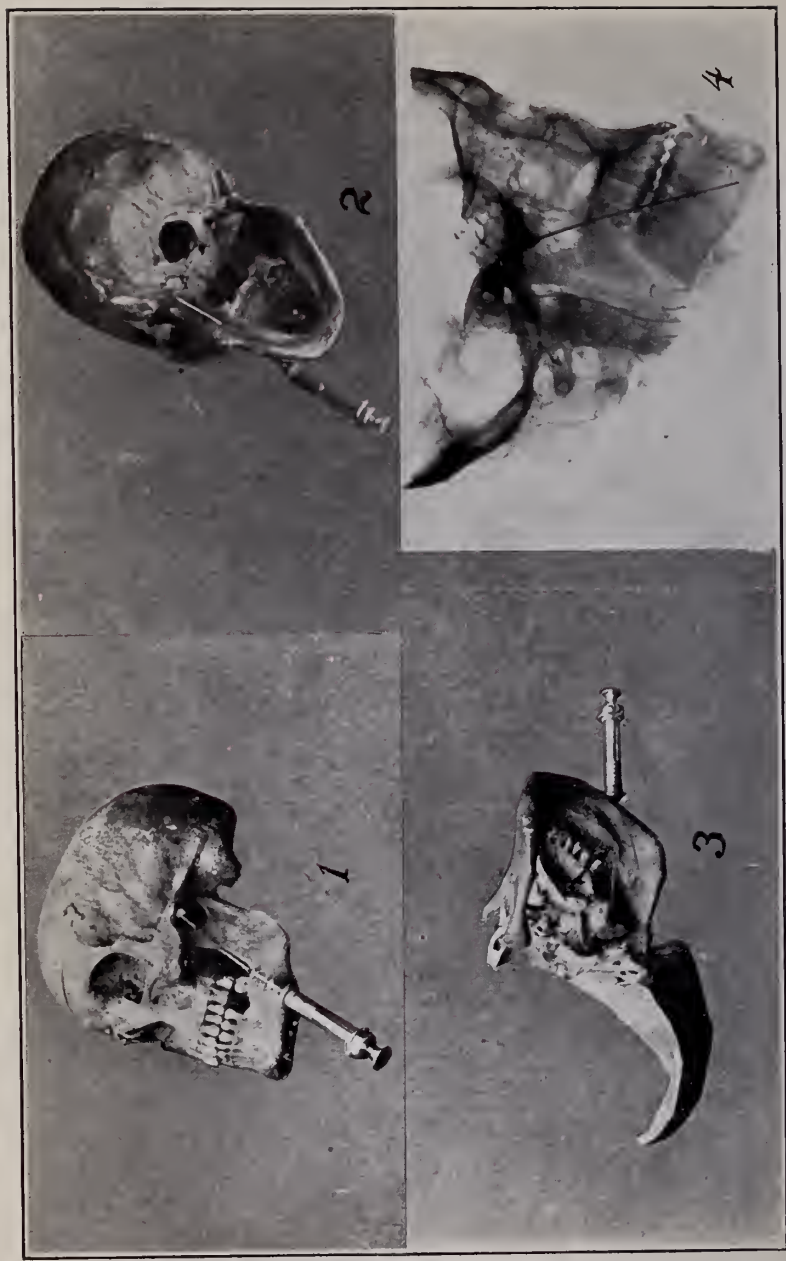
The experience of Härtel, who reports two cases of neuro-paralytic keratitis in ten patients treated, shows that destruction of the ganglion must be fairly complete. In Grinker's patient, which is

the only American report I have seen, the result seems to have been excellent. In several severe cases treated by Dr. Matas the results have been very gratifying. My own patient has been greatly benefited, but still complains of slight pain in the gum, which is not sufficient to warrant further treatment.

Mrs. K. W., age 66, has enjoyed excellent health all of her life, and, except for edentulous jaws due to an early recession of her gums, is still free from any organic disease. She is rather thin and emaciated, having lost weight recently from her inability to eat. For nine months Mrs. W. has been a terrible sufferer from trifacial neuralgia in the right side. The second and third divisions were involved. The pain was paroxysmal in character, accompanied by twitching and flushes; is worse during the afternoon, usually disappearing at night. Paroxysms are brought on by chewing, talking or by allowing the air to strike her face. She has been treated by the nasal anti-neuralgic remedies, morphin alone giving relief. One injection of alcohol into the inferior maxillary division gave partial relief for about two weeks. Six subsequent injections during October and November, 1912, failed to do any good.

On June 16, 1913, the Gasserian ganglion was injected with 1 c. c. of alcohol. The introduction of the alcohol was immediately followed by an intense burning pain on the left side of the head, with less pain on the right. This subsided in about ten minutes, and was followed by some analgesia of the right side of the face. The same night patient ate her supper comfortably for the first time in nine months. A letter on July 16 states that she is still comfortable and has gained in weight. Some twitching persists, and there is no loss of sensation. There was no keratitis in this patient.

In the original technique suggested by Härtel a patch of skin was anesthetized over the last three molar teeth of the upper jaw. With a finger in the mouth to guard against penetration of the buccal mucous membrane the needle (8 m. m. in diameter and 10 c. m. long, with a bevel point and a sliding cuff or runner) is pushed backward and inward in the direction of the foramen. The axis of the needle is obtained by using the center of the pupil and the eminentia articularis on the zygoma as guides. It is best to strike for the smooth under-surface of the sphenoid, and work the needle backward to the foramen ovale, which is usually found at a depth of 6 c. m. from the surface. On touching the nerve the patient complains of a severe pain in the lower branch. The ganglion is



1. Showing axis of needle entering foramen ovale from a point behind last molar tooth of lower jaw.
2. Same, from under surface of skull.
3. Axis of needle viewed from median section, and showing relation to pterygoid process.
4. Skiagraph (by Dr. E. C. Samuel) showing position of a lupatin impaling the foramen ovale.
ILLUSTRATING ARTICLE OF DR. MAERS.

impaled by pushing the needle 1.5 c. m. further, when pain is complained of over most of the entire nerve distribution. The previously loaded syringe is now attached to the needle, and .5 to 1 c. c. of 80 per cent. alcohol is slowly injected. The immediate burning pain is widespread and intense. In a few moments this is followed by analgesia, which is usually noticed first in the tongue.

The axis of the foramen is very variable, and may have to be entered from any point on the arc of a circle extending from the malar-zygomatic junction to the back of the last molar tooth of the lower jaw. We have been able to more consistently impale the ganglion in the cadaver, especially in subjects with edentulous jaws, from the latter point. This route offers a factor of safety, in that we strike the smooth under-surface of the sphenoid first.

The dangers of this treatment are obvious. So long as we have the point of the needle in front of the foramen we are in a safe place, except for the plexus of veins in the pterygoid fossa, and the emissary veins coming through the sphenoid. As noted by Patrick, one of these coming through the foramen of Vesalius is larger than the rest, and may be punctured. Behind the foramen, the needle may enter the foramen lacerum medium, the Eustachian tube or the carotid artery near its entrance to the skull. The foramen spinosum accommodating the middle meningeal artery is in close proximity. There is danger of pushing the needle beyond the ganglion, penetrating the dura, and diffusing alcohol in the cerebro-spinal fluid in the neighborhood of the pons and medulla. Finally, these patients must be kept under observation for several days, for fear of the development of a neuro-paralytic keratitis similar to that following complete gasserectomy.

The first discussion and demonstration of the various routes to the basal foramina for the relief of neuralgia by alcohol injection and for the purpose of regional anesthesia in the territory supplied by the trigeminus, including in this the Härtel route to the Gasserian ganglion, were shown by Dr. Matas in a lecture to the Society of Clinical Surgery at New Orleans on March 21, 1913. On this occasion, through the courtesy of Dr. Matas, I demonstrated for him the technic of Härtel's procedure and the ease with which the ganglion can be reached through the foramen ovale in the cadaver.

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THE SERO-DIAGNOSIS OF PREGNANCY.*

A STUDY BASED ON THE EXAMINATION OF FIFTY CASES.

By DRS. CHAILLE JAMISON and J. C. COLE, New Orleans

(From the Laboratories of Clinical Medicine, Tulane University.)

Theoretical Considerations: Abderhalden demonstrated some two years ago that there was an enzyme developed in the serum of pregnant women capable of digesting the contents of the gravid womb. This enzyme reduces the proteid molecule of the placenta to peptones and amino-acids. The reaction occurs in vitro when the serum of the gravid female is incubated with a preparation of placenta, obtained at term, from a female of the same species. It was then necessary to devise some test by which this reaction could be demonstrated. The first step was to separate the amino-acids and the peptones from the proteids present in the serum. The differences, which concern us here, between the former and the latter, are that proteids will not diffuse through animal membranes and are precipitated by heat and acid, while amino-acids and peptones will diffuse through animal membranes, but are not precipitated by heat and acids. Abderhalden separated his amino-acids from his proteids by diffusing them through an animal membrane, while Pearce and Williams were first to use the heat and acetic acid for this purpose. The necessity of separating the proteids and amino-acids is due to the fact that there is no practical reaction for differentiating the one from the other. However, the biuret reaction and the ninhydrin reaction only occur with proteids, peptones and amino-acids; therefore, when either of these reactions is positive with a solution containing no proteids it means the presence of peptones and amino-acids. As amino-acids and peptones probably occur in the blood of all animals at the height of digestion, it

* Read before the Orleans Parish Medical Society, July 28, 1913.

is necessary to obtain the blood to be tested several hours after a meal, and to test it for amino-acids prior to, or at the same time, the test proper is performed.

The Test: Abderhalden recommends that 1.5 c. c. of hemoglobin free serum be added to about 1 gm. of finely-cut-up placenta, which has carefully been freed of amino-acids and peptones, placed in a small dialyser with water on the outside, and incubated for from sixteen to twenty-four hours. At the end of this time the fluid on the outside is tested for the presence of amino-acids and peptones. If they are present the reaction is positive. Ninhydrin is used for testing purposes.

Pearce and Williams, in the April number of *S., G. and O.*, state that if measured amounts of serum and placenta are mixed in a test-tube and incubated for from sixteen to twenty-four hours, and then the contents of each tube added to 20 c. c. of distilled water, the whole boiled thoroughly and filtered, that the filtrate will contain only amino-acids and peptones. These are demonstrated in the regular way by means of the ninhydrin reaction. It is necessary to test the filtrate for albumen before the reaction is performed, and if any is present it must be removed by boiling and filtering.

In either method the serum alone and the placenta alone should be carefully tested for the presence of amino-acids and peptones, and if they are present in appreciable amounts neither is fit for use. For the details of preparing the placenta, the ninhydrin, the dialysers and the general technique, reference should be made to the literature.

Literature (American): In the April number of *S. G. and O.*, Drs. Pearce and Williams state that they have gotten positive reactions with twenty-eight sera from pregnant women, also in the sera of eight post-partum cases, including one abortion. They state that the test has never been negative in a case of known pregnancy. Their principal objection to the test seems to be due to the fact that they have gotten positive reactions with the sera of two cases of nephritis, one of tabes, and one of carbuncle, and occasionally of some individual apparently in perfect health. They feel that the test cannot be accepted as an accurate clinical method until further work has been done on it. The above applies to the dialysis method; using the boiling and filtration method, they have gotten 100 per cent results in the few cases published in their article.

Dr. C. P. McCord, of Detroit, writing in the same issue of *S. G. and O.*, reports that he has examined 240 sera and has made a correct diagnosis in 95 per cent of cases, and that the 5 per cent error was due to faults in technique. He concludes that the sero-diagnosis of pregnancy is both practicable and reliable.

Dr. Shwartz, of St. Louis, writing in the March and May issues of the *Interstate Medical Journal*, confirms the results of Abderhalden absolutely, and points out that Pearce and Williams must have made errors in technique to have obtained positive results in negative cases.

Drs. Jellinghaus and Lossee, after an experience with over 500 cases, conclude that the healthy pregnant can be distinguished from the healthy non-pregnant by means of this test. Their technique was admittedly faulty, and it is possible that, after using a perfect technique, they will be able to confirm Abderhalden in whole instead of in part.

Dr. Judd, of Baltimore, after performing the test on thirty or more of his own cases, believes that the test is strictly specific when putrefactive changes, fresh serum and proper dialysers have been properly controlled.

After performing the test 357 times on 202 cases at the Jewish Maternity Hospital in New York, Drs. Gutman and Druskin, in the *Medical Record* of July 19, conclude that the reaction is perfectly reliable and commendable. They state that various German authors, who at first reported unfavorably on their results, have, after perfecting their technique, reported perfect results.

Points of Interest: The reaction is always positive in normal pregnancy. It appears six weeks from the date of the last menstruation, and disappears fifteen days after delivery, though it may disappear earlier. It is nearly always present in ectopic gestation, after abortion, and remains as long as any secundines are retained in the uterus; the reaction is present in chorio-epithelioma.

The reaction is negative in large fibroids; in ammenorrhœa not due to pregnancy; also negative in suppurative conditions of the female genitals.

We have performed the test about sixty times on fifty cases. At the suggestion of Dr. Bass, we sought especially cases that were known not to be pregnant, but who were suffering with a variety of known pathological conditions. The fact that the test is always positive in known pregnancy seems to be too well established to

need any confirmation. This fact alone would make it a valuable addition to diagnostics, but if it is negative in all other conditions its value must be very great.

Three cases of known pregnancy from the seventh to the ninth month were positive.

Three normal cases, from the first to the sixth day after delivery, gave positive reactions.

Two ectopic gestations, ten days after operation, gave positive reactions.

Two abortions, one three days after the birth of a six months' fetus, the other two months after abortion, with retained secundines, both gave positive reaction. (The latter case was about three months pregnant when the abortion was performed.)

One stillbirth, ten days after delivery, gave a negative reaction.

One case of pernicious vomiting, who had not menstruated for two months, and where pregnancy was suspected, gave a positive reaction.

One case at the menopause, who had not menstruated for six months, and who was not pregnant, negative reaction.

Two large fibroids, negative.

Six cases of pelvic inflammation gave a negative reaction.

Ten women who were not pregnant gave negative reactions. These cases included malaria, syphilis, tuberculosis, suppurating abscess of tooth, typhoid fever, dermatitis herpetiformis, chronic interstitial nephritis, amebic dysentery and other intestinal parasites.

Thirteen men gave negative reactions. These cases included typhoid fever, syphilis, amebic dysentery, uncinariasis, tuberculosis and minor complaints.

Four normal men gave negative reactions.

One woman, suffering with acute nephritis and delirious, gave a positive reaction. At autopsy she was proved to be not pregnant. No control of this serum was made, and when I returned to get serum for another reaction the patient was dead.

One man gave a positive reaction. The serum, however, was taken just after eating, and no control was made. The patient never returned to the clinic; therefore his serum could not be retested.

In conclusion, we believe that the sero-diagnosis of pregnancy is of definite value, and that when proper controls of the serum and placenta are made that the test is as reliable as any other sero-diagnostic method, such as the Wasserman or the Widal; that the

modification suggested by Drs. Pearce and Williams is simpler and just as accurate as the dialysis method. We have had no experience with the optical method. We have followed the technique of Pearce and Williams throughout.

We wish to thank Dr. Mann for explaining the chemistry and physiology of the test to us; Dr. Bass for his suggestions and encouragement; Drs. Gessner, Stafford, Kostmayer and Gelpi for supplying us with patients and for interest shown in the work; Drs. Strauss, Holbrook and Grafignino, of the resident staff of the Charity Hospital, for assistance in collecting material.

TREATMENT OF DIPHThERIA AND DIPHThERIA CARRIERS.*

By SOLON G. WILSON, M. D., New Orleans.

By way of introduction, I want to say that this article is based upon the treatment of about thirty cases of diphtheria as a disease, and the handling of fifty carriers, among whom were transitory and permanent carriers, and the taking from the noses, throats, and, in some instances, from the ears, cultures, numbering in all 3,000.

At this time I wish to acknowledge my appreciation of the assistance given me by Drs. Duval, Lanford and Weil in handling the laboratory and vaccin-therapy end of the work. Our observations have extended over a period of sixteen months, and permit the assertion at this time that the disease is transmitted, practically, in one way only, viz: from patient to patient, or from individual to individual.

Now, to give a brief history of the work in a large institution of about 200 persons, where there appeared every few days a case of diphtheria, although all the patients were isolated and treated in a separate isolation hospital. In order to determine the source of the trouble, systematic culture-taking was instituted, taking cultures from the noses and throats of every person in the institution, which procedure at first resulted in finding three carriers, who were not ill and had never had the disease. These children were isolated and frequent cultures were taken for a period of nine months, which cultures showed positive cultures of Klebs-Loeffler bacilli.

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

After this, however, there arose occasionally sporadic cases, which indicated that the source of infection had not been entirely located. A more thorough campaign was undertaken. The plan followed was the taking of cultures for three consecutive days from the noses, throats, and, in the cases that were having discharges, from the ears. The occasion for this thoroughness was to preclude the danger of overlooking the presence of the organism where no symptoms existed. In all cases we depended upon a twenty-four-hour growth of the culture. This resulted in finding fifty carriers.

In attempting to take cultures from a large body of people the technique is of great importance, and we found that, in order to get the most accurate report, several steps were necessary: First, to take swabs from both sides of the nose; second, from the throat; third, from the ears in cases of aural discharge; fourth, to moisten the swab with bouillon. In taking swabs it is necessary to get in all the crevices, and, without too much force, to bury your applicator in the sub-mucosa. Moistening the applicator with sterile bouillon is an adjunct of importance, as the dry applicator is likely to pass over islands of bacilli. This, the moisture will prevent, because of capillarity. The thorough going over of the same field for three consecutive days prevents the overlooking of a single case—a fact of vital importance, for one case overlooked could be the means of infecting the uninfected.

It was found that the carriers could be classified into the permanent and transitory. The transitory—meaning those people who had picked up the bacilli and had carried them for a few days—when isolated and sprayed with antiseptic solutions for a few days, all gave negative cultures.

Permanent carriers are those who have in their noses, throats or ears the organisms for an indefinite period without showing any symptoms. The contributing factors in carriers are enlarged or submerged tonsils, adenoid growths and chronically discharging ears. The ear carrier is a new phase, and in looking back over the clinical part of this investigation the burden of blame is placed upon a little girl, who developed an otitis media, and subsequently a membrane in her ear, a culture from which showed Klebs-Loeffler. This child has remained an "ear carrier."

In checking up our carriers the laboratory report showed: Three "ear carriers," four "nose carriers," forty-three "throat carriers." The throat carriers were usually of the transitory type, and are

certainly the easiest kind to clear up. The nasal carriers are the most difficult to clear up, having taken, in our experience, nine months to clear them up.

No better proof of the control of the disease can be offered than the fact that the disease has been checked clinically and bacteriologically by the segregation and isolation plan in a home where two hundred (200) people houses together. These facts lead to the encouraging conclusion that if proper bacteriological investigation at institutions, homes and schools were made, the absolute control and probably the eradication of the disease would be possible.

An overlooked source of danger is the dismissal of patients too early, as for weeks and weeks after the disease the organism remains in the affected part, and never until after three successive negative cultures should a patient be dismissed, and these should be taken at times when the family is not expecting the culture to be taken, as very often antiseptic sprays are used which inhibit the growth.

The Management of Carriers.—This is accomplished by the segregation of the different types of carriers. The transitory type when separated from the permanent type, seems to be easy enough to clear up, by using preferably a bichloride spray 1-6000, and by giving them the benefit of sunshine and fresh air. The handling of the permanent type is decidedly more of a task. Some of the nasal types remained a source of danger for nine months. Isolation and segregation play a part in clearing up these patients. Being a suitable host, the danger of a patient becoming re-infected is of great significance. Vaccine therapy theoretically should accomplish this end.

The toxin of diphtheria is unlike most toxins in that it is a soluble toxin. According to Ehrlich, a killed culture injected into the animal body is split up, liberating the toxin. This toxin acts directly upon the body cells, causing them to liberate specific anti-substances among which is a bacteriolysin, and this bacteriolysin is specific for the organism. With aid of the complement it will destroy a living diphtheria organism.

We have to report 22 carriers treated with vaccines, beginning on a graduated scale. The initial dose being forty million bacteria of diphtheria, increasing doses up to four hundred million were given, injections being made every second or third day. This method of treatment has extended over about four weeks, and 15

of the carriers are free from the diphtheria organism on three culture reports.

Anaphylaxis is a condition to be reckoned with, but in my experience this feature has never given any occasion for concern other than an anaphylactic urticaria which has passed off in 24 hours.

The best explanation of the nature of anaphylaxis is that it is due to the reaction between specific antibodies present in the cells and the introduced antigen. In passing sensitization, the body cells absorb the introduced antibodies from the blood, and the animal is thus made anaphylactic. The function of the anti-bodies present in the serum is to neutralize the introduced antigen, and so as to protect the body cells. The anaphylactic animal regularly contains in his circulation an insufficient quantity of antibodies to protect the body cells. The immunized is potentially anaphylactic. His body cells possess anchored immuned bodies, but are protected by those in circulation. Exactly the same antibodies are present in anaphylaxis as in immunity. In the former they predominate in the cells—in the latter, in the serum.

Treatment—In principle diphtheria antitoxin acts in two ways: First, by neutralization of the toxins already formed, and second, by destruction of the false membrane, which has been clearly proven to be the causal factor in the formation of the toxins. This latter feature seems to be the most important step in the handling of a case, because as soon as the false membrane is checked or destroyed, the patient improves.

Experimentally, Miller demonstrated the important part the membrane played with his colloidin sac introduced into the guinea pig. As long as the sac or membrane diffused the toxines, just that long there remained source of danger. The unfortunate part, is that we are unable to estimate the necessary dose, because we have no means of measuring the amount of toxin present in the patient. The enormous doses often required are due to the fact that antitoxin administered subcutaneously, being a foreign protein, is subjected to a rapid destruction by the tissues. The small doses are sufficient to neutralize the toxines formed, but the diffusion from the membrane acts as a source of constant hemic reinfection. Large doses offer an advantage over repeated small doses in three ways: First, they meet the amount of destruction by the tissues. Second, they neutralize the toxins. Third, they rapidly check and destroy the membrane, the fountain source.

The value of the laboratory in controlling the spread of the dis-

ease cannot be overestimated, but its value for diagnostic purposes so far as the disease is concerned, does not count for much other than as a means of confirmation of your clinical diagnosis. The clinical picture of diphtheria is one so clear that it is hardly possible to confuse it with tonsilitis, and when the picture is a border line case, my experience has been that there is no occasion for alarm so far as your patient is concerned, and that in this type of case we can wait for clinical developments, and laboratory confirmation.

A great many times there are obtained negative cultures on cases, that clinically are typically diphtheria. A great many errors may enter into the reports that you get, and the results may be negative, due to bad culture media, bad implantation on the culture media, bad technic in taking the swab, overlooking the point of lesion, etc. Hence the guide for diagnosis must be your own trained eye. In giving diphtheria antitoxin your purpose ought to be to give one big dose, and from my tabulation of cases, most of which were severe, more than two large doses were rarely ever given and the standard minimum dose given was ten thousand units. The effect upon the membrane in throat and nose, which after all should be your signal guide, is not seen for 24 hours, and the full effect not before 48 hours, which has led to the conclusion that the giving of repeated doses every three or four hours is unnecessary, and a bad practice, as the effect is seen in 24 hours, and a lapse of 24 hours should intervene between doses. This is a safe and certainly a sane practice.

At the expiration of 24 hours, if the membrane in the throat or nose has not diminished, then the second dose of the original amount should be repeated. We found that in all our cases that were given antitoxin early, we did not have to repeat the dose. The temperature should not be the guide for repeating the dose, as there is a reaction of temperature after giving antitoxin, and in some cases the temperature continues after the membrane and general symptoms have disappeared. The comfort of your patient adds materially towards getting the best results, therefore, the intramuscular injection of the serum should have the preference because it is less painful and does not leave the patient with a distressing infiltration as does the subcutaneous injection. Further, the application of the ice bag to the throat gives a great deal of relief. An adjunct that has been a source of great relief to my patrons for distressed breathing, is the constant burning of a croup kettle containing compound tincture of benzoin.

Question of Operation for Adenoids and Tonsils on Diphtheria Carriers.—The presence of enlarged, submerged tonsils and adenoid vegetations act as fertile soil for diphtheria bacilli to live in and among carriers these conditions are usually constant; so the question of removal during the carrying stage comes up. Theoretically, the diphtheria bacilli are not the class of organism that would produce a septic infection, because of the new denuded area being involved, but practically, I have to report that in two cases tonsilectomy in the presence of Klebs-Loeffler was followed by very septic symptoms, which responded only to diphtheria antitoxin. Hence from these experiences alone, the conclusion would be that surgical interference is contraindicated. A safe plan would be to determine the presence or absence of this organism before operating. The frequency of diphtheria carriers being very much greater than was originally supposed, as a preliminary to tonsillectomies and adenectomies, culture taking is advised.

RESUME.

1. The organism of diphtheria is transmitted from individual to individual and man may serve as the intermediate host for a short period, or he may harbor the disease for months and months, never developing the disease or never having had the disease.

2. The organism may be found in the nose, throat or ears.

3. The wiping out of the disease is possible by segregating the carriers.

4. The carriers are best treated by sunshine, segregation and "vaccine therapy."

5. The best results in the treatment of the disease is by large doses of concentrated antitoxin, 10,000 units being the initial dose, given intramuscularly, with a period of 24 hours between doses, the membrane being the chief guide for repeating the dose, except, of course, in the laryngeal type, and in this type the stenosis and cyanosis serving as guide.

It is rarely necessary to give more than 10,000 to 30,000 units of antitoxin in any case of diphtheria, and the earlier the serum is given the smaller amount will be required. Finally, nose and throat operations are contraindicated in the persons while they are carriers, and this fact determined before all operations on the nose and throat.

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ACIDOSIS: TWO TYPES DEMONSTRABLE—AN ENDOGENOUS AND AN EXOGENOUS.*

By ALLAN EUSTIS, B. S., Ph. B., M. D., New Orleans.

Acidosis, spoken of also as acidemia, acetonemia and acetonuria, has engaged the attention of the medical profession ever since 1857, when Petters¹ announced that the sweet odor of the breath in diabetes was due to acetone and not to sugar, as was at that time considered. Shortly afterwards Kaulich² described acetone in the urine of patients dying in diabetic coma, and this led to a vast amount of research leading to a better understanding of those conditions in which acetone was present in the urine. The development of knowledge along these lines is fully brought out by Ewing³ in his Cartwright lectures, to which one interested in its bibliography is referred. It must be borne in mind, however, that there is never a condition of true acidemia, but that in those conditions of so-called acidemia there is merely a decreased alkalinity of the blood.

Advance in our knowledge of the chemistry of these conditions has been rapid in the last ten years, due to the work of Kossel, Abderhalden, Dale, Mendel, Embden, Von Noorden, Falta, Starling and others. By perfusing through the liver and other isolated organs, definite products of proteid cleavage, we are able to ascertain the fate of many of the products of intermediate metabolism of proteid in its passage to urea and carbon dioxide. Our knowledge is as yet incomplete, and we will of necessity be compelled to await the research work of physiologists and pharmacologists now going on throughout the world, to explain many of our clinical phenomena and apparent paradoxes met with in cases of so-called acidosis. The presence of acetone in the urine in these conditions has apparently occupied the all-absorbing points of discussion with a tendency at one time to place the blame for the presence of this substance upon faulty carbohydrate metabolism, later, upon faulty fat metabolism, and latterly, upon faulty proteid metabolism.

Acetone, per se, is comparatively only slightly toxic³ occupying a place midway between alcohol and chloroform, but its progenitors diacetic acid and betaoxybutyric acid are much more toxic. The symptom complex of these conditions varies enormously, and is due undoubtedly to the presence of other toxins, as yet unknown.

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

Even diacetic acid may be excreted in large amount without any immediate toxic action, according to Von Frerichs⁴, Von Jaksch⁵, Albertoni⁶, Dreshfeld⁷ and others, while Gerhardt and Schlessinger⁸ reported a case of syringomyelia excreting 40 gms. of betaoxybutyric acid with no symptoms referable to this organic acid.

That the presence of acetone, diacetic acid and betaoxybutyric acid in large amounts, in the urine may have grave prognostic significance there is no doubt, but its presence in large amounts in certain cases, especially in children, should be interpreted only as a guide to rational therapy. It is no cause, however, for unnecessary alarm in either physicians or parents, and to demonstrate this is the object of this paper. Improperly treated acidosis associated with acetonuria is a formidable condition, but with a knowledge of the pathological chemistry attendant therein, and bearing in mind that large amounts of acetone are excreted in starvation, in pneumonia and in conditions in which there is only slight reduction in the alkalinity of the blood one can treat a case more intelligently. Besides acetone bodies the excretion of ammonia must be determined, as this is a better guide to the degree of acidosis than the determination of acetone bodies.

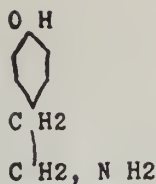
A knowledge of the physiology of nutrition as well as a knowledge of the pathological chemistry of disturbed liver function simplifies the subject vastly. Those cases of acetonuria in children associated with cyclic vomiting can only be intelligently dealt with by remembering Ewing's words, in speaking of the highly toxic alkaloids isolated by Cassaet⁹ from the stools of gastro-intestinal acidosis, viz.: "It is much more reasonable to attribute the symptoms to this class of substances than to any form of acidosis." It has been my experience, in those cases which I have seen in consultation, that the average practitioner lays too much stress upon the acidosis and not enough upon the putrefactive processes going on in the intestinal canal, and to this fact is often due the fatal termination of many cases.

It must be borne in mind that carbohydrates before absorption by the portal circulation are converted into dextrose (glucose), the latter being transformed by the liver into glycogen and stored in the liver cells as a source of energy, being given off again by the latter organ as dextrose when the normal (0.09%) content of dextrose in the blood is lowered on account of its utilization by the several tissues as fuel. Complete oxidation of dextrose results in car-

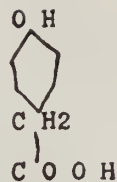
bon dioxide and water, but where metabolism is at fault one may find glycuronic acid, gluconic acid and lactic acid. Acetone has been formed in the test tube from dextrose, but all efforts to produce acetone in the living organ from this substance have been futile. The point which interests us is that the intermediate products of carbohydrate metabolism are comparatively only slightly toxic.

It has for many years been known that if the glycogen of the liver is exhausted the body draws upon its fats to furnish the necessary energy for tissue changes, but inasmuch as the liver is unable to completely oxidize the fat, we have a formation of betaoxybutyric acid, diacetic acid and acetone. This is evidently what takes place in starvation and also when carbohydrates are rapidly withdrawn from the dietary of diabetics. In those cases in which this is the source of the acetone, it can be considered of endogenous origin. Ingested fat, especially butter, will act likewise, hence the clinical importance of regulating the intake of butter, the acetone in this instance being of exogenous origin. Undoubtedly the body proteid is also called upon to furnish fuel in starvation, as it has been shown by Mendel¹⁰ that carbohydrates fed to a starving dog will diminish the nitrogen in the urine, the latter being an index of the amount of tissue proteid burned up.

When we consider the complexity of the proteid molecule and the many different substances formed in its transformation to urea, it is not surprising that the intermediate products are only just now being isolated and that their physiological action in many instances is as yet unknown. Proteid in the alimentary canal is split up into albumoses, peptones, amino-acids represented by leucin, tyrosin, arginin, histidin, etc., into xanthine, guanin and other hexone bases, while an alkaloid (toxin) is formed from the amino-acids by the action of the putrefactive bacteria of the colon. Each of these alkaloids or amines has its own physiological action *in the general circulation*, but it is broken up and rendered inert by the normal liver cells. Dale¹¹, by perfusing the alkaloid obtained by the putrefaction of tyrosin, which he identified chemically as parahydroxyphenylethylamine, and which was toxic to rabbits, guinea pigs and man, explained in great part the increased acidemia met with in gastro-intestinal acidosis. He showed that the liver cells were capable of breaking up this alkaloid in parahydroxyphenyl acetic acid, according to the following:



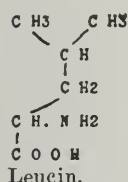
Parahydroxyphenylethylamine.



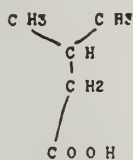
Parahydroxyphenyl acetic acid.

He surmised that the transformation took place through an intermediate alcohol, although he states that he had no experimental proof of same. Here is the formation of an acid, the toxic action of which has not been definitely ascertained, but which must now be reckoned with, in dealing with these cases.

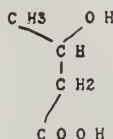
Embsen¹² by perfusing various products of proteid cleavage located the acetone forming function in the liver and showed that leucin formed acetone, as well as iso-valerianic acid.



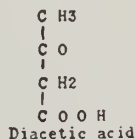
Leucin.



Iso-valerianic acid.



Betaoxybutyric acid.



Diacetic acid



Acetone

These are two examples where alkaloids from intestinal putrefaction are oxidized to acids in the liver, and lead one at once to consider the latter organ in outlining any therapy. The liver being at fault putrescin and cadaverin, two other highly toxic alkaloids from proteid would be expected to exert their toxic action, and can explain the severe prostration met with in some cases.

Tests for Acetone, Diacetic Acid and Betaoxybutyric Acid.—

Acetone is best tested for by the Le Nobel test, which consists of acidifying 10 cc. of urine with acetic acid, adding about 1 cc. of freshly prepared sodium nitroprusside solution and floating on the top of this mixture stronger ammonia water. At the junction of the two liquids a deep purple ring will appear in the presence of acetone, the intensity of color and rapidity with which it appears varying with the strength of acetone present. This test has given universally satisfactory results in my hands and is far superior to the older Legal test, where sodium or potassium hydroxide is added after the sodium nitroprusside with subsequent addition of acetic acid; this is due to the fact that large amounts of creatinin in the urine will often confuse the red color sought for in this test.

Lately, Harding and Ruttan¹³, in the last issue of the *Biochemical Bulletin*, have shown that the Le Nobel test is a positive one not only for acetone, but also for diacetic acid, detecting this latter acid in urine 1-30,000 parts, while the older ferric chloride described below is demonstrable in strengths only as high as 1-7000 parts. However, the ferric chloride test for diacetic acid is so simple that it is universally employed and consists of adding a few drop of an aqueous solution of ferric chloride to the urine. A positive test for diacetic acid is indicated by the appearance of a Bordeaux red color. It must be borne in mind that in patients taking salicylates a similar color will be obtained due to the presence of salicylic acid; when the urine should be acidified, extracted with ether and the test applied to the extract. The Le Nobel test obviates the extraction with ether and is negative to salicylic acid.

The presence of betaoxybutyric acid can be satisfactorily demonstrated only by prolonged extraction of the urine with ether in an Embden, or similar apparatus, with subsequent quantitative determination with the polariscope, this acid being laevo-rotary. This is too complicated for any practitioner not especially equipped for such work, and bearing in mind that betaoxybutyric acid yields diacetic acid on oxidation, it is simply necessary to boil the urine with hydrogen peroxide and apply the Le Nobel test for the latter acid. Practically, we seldom if ever find betaoxybutyric acid without diacetic acid, so that the former is tested for only when we wish to ascertain the total quantity of acetone bodies in the twenty-four-hour urine. It is often necessary to determine the total diacetic acid and acetone in a given sample of urine, and a test advocated by Roscoe King¹⁴, not only for acetone, but also for ammonia, is simple and sufficiently accurate for all clinical purposes. As stated above, the degree of acidosis is accurately determined only by the quantitative determination of preformed ammonia in the urine, and it is regrettable that so few hospitals and clinical laboratories are equipped to make these determinations. Decomposition of the urine must be avoided on account of the formation of ammonia from urea. Recently Folin and Denis¹⁵ have simplified this procedure considerably by their new colorimetric method, which is very similar to the method advocated by the writer¹⁶ in 1905 for the determination of nitrogen in the blood in cases of suspected uremia.

CLINICAL TYPES OF ACIDOSIS.

These can best be presented by citing a few cases from the experience of the writer.

Exogenous.—CASE I. Severe acidosis in adult, of gastro-intestinal origin, with hepatic insufficiency. Acetone breath, coma, but no sugar or albumin in urine. Mrs. B., white widow, 52 years of age and mother of five healthy children. No lues, malaria or alcoholism. A Creole by birth she had indulged all her life in articles of diet highly seasoned and rich in protein; eggs, milk and only a little rice furnishing her usual meals. When first seen by me, in consultation, she was in deep coma, face flushed, pupils equally dilated and responsive to light, pulse full and bounding, blood pressure not recorded. She was obese, weighing over two hundred pounds, with no evidence of motor paralysis, and a strong odor of acetone on the breath, coming from full respiration, which at times appeared Cheyne-Stokes in character. Her family stated that for several days she had complained of headache, nausea and vertigo, and had been nervous and irritable and that coma had preceded by a semi-stupor. Examination of the urine showed a deep red color, specific gravity 1.042, no albumin, casts, or sugar, but loaded with diacetic acid and indican, the urine turning a jet black on the addition of the hydrogen peroxide, which was used as the oxidizing agent. With the idea in mind that she was suffering from a severe toxemia two quarts of physiological saline solution was given by hypodermoclysis, a high soap sud enema with turpentine was administered, and five grains each of calomel and phenolphthallein placed on the tongue and washed down with small quantities of water. She was then placed in a hot pack and sweated profusely. In two hours she had partially recovered, and drank water with avidity, which was alternated with grape juice and citrate of magnesia, together with thirty grains of citrate of soda in syrup of citric acid every three hours. Next morning, eighteen hours after first seeing her, and after five copious stools, she was able to talk, and stated that she had not had a bowel movement for three days, and as she had been somewhat nauseated she had thought she had "indigestion," and had taken only very soft boiled eggs as food, and had drunk very little water. At no time was there any suppression of urine, and the specific gravity rapidly fell to normal, the diacetic acid and indican slowly disappearing as her symptoms improved. She was kept upon fruit juices, cereals

and an abundance of vichy, and made an uneventful recovery to complete health, which she still enjoys, four years from date of coma.

This is an example of a purely exogenous type of acidosis, and since then I have seen two similar cases which, however, were aborted before the onset of coma. In looking over the literature I have been able to find two similar cases reported by Labbe and Bith¹⁷ in Paris, one of which died in coma, autopsy revealing marked fatty degeneration of the liver, with urobilin in the urine. I saw my first case before Ehrlich's aldehyde reagent (on which I delivered a paper¹⁹ before this society last year), was generally used in the examination of urine for liver function, but the other two cases which were aborted before coma and in the stage of semi-stupor, gave a strong reaction for urobilinogen, and to this test is probably due their recovery.

CASE II. Acidosis in infant of gastro-intestinal origin. To demonstrate that similar results as mine can be obtained by other observers, the following cases of my associate, Dr. W. A. Love, is detailed as it represents the identical symptoms, and its treatment is the same with the happy result which I have observed in my own practice during the past nine years.

Dr. Love's history of cases of diacetic acid intoxication:

"CASE I. Five-year-old child of Dr. J. H. had been sick, temperature 102-105 four days, examination, nothing of note was found, except the temperature and some slight distension of the abdomen. Child was quite fretful. Sweetish odor of the breath was noted. Blood examination showed 8,259 white cells and 42% lymphocytes. Urine examination showed specific gravity 1,020, trace of indican, moderately heavy reaction to acetone and diacetic acid. Child was given calomel purge, sodium bicarbonate high enema, and small doses (10 gr.) sodium bicarbonate by mouth. Temperature was normal in twenty-four hours and under cereal-fruit diet, followed by a low proteid diet, has shown no return of condition, and acetone has not been found in urine.

"CASE II. Three-year-old sister of above patient developed the same symptoms about three weeks later, and was treated same as above.

"N. B.—The only dietary indiscretions noted in these two cases was overindulgence in red beans, oysters and fish.

"CASE III. L. S., age four years, had always been allowed, since

she started eating solid food, to select her own dietary, which up to the time that she developed symptoms I will note, had been anything but the dietary for a child of that age. On April 2, 1913, while making a call on another member of the family, I noted a sweetish odor of the child's breath, and cautioned the mother to be careful of the feeding of the child for a little while, which precaution was not taken, and on April 8 I was called to see the patient, and ascertained that for the past three or four days she had been enjoying some pork chops and red snapper. Temperature was 103°, abdomen slightly distended, and urine showed specific gravity of 1,022, indican and a heavy reaction for acetone and diacetic acid. The child had been constipated for about twenty-four hours. One grain of calomel was given in broken doses, a 1-32 high colonic flush with bicarbonate of soda, and ten-grain doses of bicarbonate of soda by mouth. After a few hours sodium citrate in five-grain doses was substituted for bicarbonate of soda and given at two-hour intervals the first day, three-hour intervals the second day, and then continued three times a day for about five days. Temperature and other symptoms, such as fretfulness, nausea, and constipation cleared up within twenty-four hours after the initial purgative. Acetone was not found after April 10. Dietary for the first forty-eight hours consisted of fruit, cereals, candy, grape juice, and since that time has been maintained as low proteid."

Some clinicians claim that the acidosis in these little fellows is due to starvation, but any one who has closely followed the urine of these patients will note that the acetone appears synchronously with the vomiting, and certainly is not delayed sufficiently long after the onset of vomiting to be accounted for by starvation. These cases also should be classed as exogenous in type and more attention should be directed to the intestinal toxemia present, which is the underlying cause of the acidosis. Proteids should be interdicted and fruit juices, sugar and other carbohydrates given in place of milk and broths. The old time barley water administered by our own mothers on empirical grounds, met this need, and I believe with better results than where the present day proprietary foods, rich in proteid are utilized, or where egg albumen is given.

Endogenous.—CASE III. Mild acidosis from inanition, due to luetic infiltration of stomach. T. C., white male, contracted lues

six years previous and was supposedly cured by mercurial inunctions and hot baths; was emaciated to a mere skeleton; weight, 88 lbs.; height, 5 ft. 9 in. He had been vomiting for six months, and emaciation had been progressive. Skiagraph taken by Dr. Samuels showed a small-non-motile stomach with stasis. Absence of hydrochloric acid noted, and lactic acid present; his tongue was dry and coated; there was no odor of acetone on his breath, but diacetic acid was present in his urine. On administering fruit juice and sugar in the form of peppermint candy and fruit tablets, the acetone in urine disappeared in twenty-four hours. Gastroenterostomy by Dr. Clark, with mercurial rubs and later an injection of Salvarsan, resulted in complete recovery, and when last seen he weighed 159 lbs. This case typifies those in which the acidosis is caused by carbohydrate starvation and the effort on the part of nature to supply fuel from its own fat and proteid material, or endogenous in type. Such is often seen in inoperable carcinoma of the stomach, in stenosis of the oesophagus, tubercular laryngitis and other cases of protracted inanition. It must be borne in mind that it is caused by dextrose starvation, and to overcome it sufficient dextrose must be given in the nourishment, whether by mouth or rectum. Another example of endogenous acidosis is to be found in the coma of diabetes, but this is so familiar to all that it need only be mentioned. All recent ideas regarding it can be found in the late monograph by Von Noorden¹⁸.

Vomiting of pregnancy, which we know is associated with acidosis and the presence of acetone and diacetic acid in the urine, is the result of a complex toxemia, not as yet fully understood, and as the result of my experience in the limited number of cases I have seen, should be placed in a category of its own, being partly exogenous and partly endogenous. Another type of acidosis which I have not as yet been able to classify, is that type met with in certain skin diseases, such as erythema multiforme; and in cases associated with an excess excretion of oxalic acid, while the acetonuria following anesthesia shows such varied anomalies that it is difficult as yet to classify same. Research work now being conducted by Dr. E. L. King, I hope will clear up this question to a great extent within a short time. Further observations are necessary, and I hope that by presenting the subject in this new aspect, some of you will be able at some future date to give us the benefit of your observations, which I trust will coincide with my own.

SUMMARY.

1. Acidosis should be regarded as either endogenous or exogenous, the absorption of intestinal alkaloids from the putrefaction of proteid material playing an important part in the causation of the latter type.

2. Acetone, diacetic acid and betaoxybutyric acid are only partly responsible for the symptoms of acidosis; parahydroxyphenylacetic acid and other organic acids probably also exerting their influence.

3. Determination of the ammonia coefficient of the urine is necessary to ascertain an accurate knowledge of the degree of acidosis.

4. There is a distinct acidosis in adults due to faulty liver function and absorption of intestinal poisons, which can develop coma and prove fatal, but in which there is no diabetes or uremia present.

5. Treatment of these conditions should be based upon a knowledge of the physiology of nutrition and upon a thorough study of the individual case.

6. As a general rule the indications in treatment should be (a) neutralization of the acids present, (b) free catharsis, (c) abstinence from proteid and fats, (d) abundant carbohydrates and water.

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PATHOLOGY—THE BASIS OF SCIENTIFIC MEDICINE.*

By ARTHUR A. HEROLD, M. D., Shreveport, La.

*"But how the subject theme may gang,
Let time and chance determine;
Perhaps it may turn out a sang;
Perhaps turn out a sermon."*

With these few lines of the illustrious Burns and with apologies on account of limited years and experience, I shall, as chairman of our section, delve into this subject of such great importance and I shall attempt to demonstrate to you the fact that, properly considered, pathology is a most fertile field for thought and study, and this section is entitled to the front rank in our meeting.

There is an intimate relationship between pathology and physiology and bacteriology, inasmuch as to fully appreciate abnormal states, one should necessarily have a thorough knowledge of the normal and, as bacteria are responsible, more or less, for the general run of pathological lesions, these two subjects are closely interwoven.

I cannot refrain, at the beginning of this address, from mentioning the admonition of my good friend and far-seeing professor, Dr. Rudolph Matas, who, when I had apprised him of the fact that I was about to enter upon a two years' internship in the New Orleans Hospital, advised me to spend all the time I possibly could in the autopsy room, for it is there that we get true light on the lesions which we diagnose or attempt to diagnose in the wards. Lucky, indeed, is he who takes such advice to heart. Three years ago, at the St. Louis session of the American Medical Association, some of us heard Dr. R. C. Cabot's oration in medicine, entitled "A Study of Mistaken Diagnoses, Based on An Analysis of 1,000 Autopsies and a Comparison with Clinical Findings." How many times we can, on retrospection, think of mistaken diagnoses which we have made—and this without the autopsy's aid—so consider for a moment how much oftener we would find errors if all our deaths should go to autopsy! Bearing in mind the thoroughness of the work at the Massachusetts General Hospital, where Dr. Cabot instructs his senior students from Harvard Medical School, let us note some of his conclusions, viz.:

Never make a diagnosis of uremia in a patient seen, for the first

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

time, in an acute illness, characterized by coma or convulsions. Such diagnoses rarely turn out right.

Never make a diagnosis of ptomaine poisoning without definite chemical evidence. General peritonitis or a tabetic crisis is usually the correct diagnosis.

Bronchial asthma beginning after forty usually spells heart or kidney disease.

Typical migraine is often a symptom of unrecognized brain tumor or chronic nephritis.

Most cases of "bronchitis" mean tuberculosis, bronchopneumonia or multiple bronchiectasis cavities.

Acute gastritis and gastralgia usually mean appendicitis, gallstones or peptic ulcer.

Systolic or presystolic murmurs, heard best at apex of a markedly enlarged heart, rarely mean valve lesions.

Myocarditis is a diagnosis which should never be made clinically.

The clinical diagnosis of the so-called diseases of the blood is the easiest and safest in medicine.

These conclusions are based on errors of omission or commission in diagnosis, learned by following cases to the dead-house.

In my own experience I can recall several cases of "typhoid" fever which turned out to be tuberculosis; further, in 1905, yellow fever was called by the name of one of its symptoms: acute nephritis.

In his "Principles of Pathology," Prof. Adami refers to the subject of this paper as "the science upon which the practice of medicine is, or should be, based." In a recent address, delivered at the opening exercises of the College of Physicians and Surgeons, Prof. Theodore C. Janeway said, among other things:

The term "practical" medicine means to-day something more than it has meant in the past. . . . I shall endeavor to show you how absolutely dependent is practical medicine, for the accomplishment of its aims, upon pathological theory.

Medicine is now, consciously, an experimental science and speculation has no place in it.

Hippocrates' mastery in external surgery and his admirable methods of personal hygiene stand out in high light against the background of his ignorance and helplessness in internal diseases, of which we have gained the mastery only through the advance of pathological theory.

The medical facts that have been elicited and elucidated in laboratories during the past fifty years have done more to revolutionize medical practice than the bedside observations of the past two thousand years.

Laennec linked the physical signs of disease, which his new

method of auscultation revealed, with the lesions demonstrated at autopsy.

One method after another for the exploration of the eyes, of ears, of the various body cavities and finally the magic of the Roentgen ray . . . would be meaningless, had not the pathological anatomist laid the foundation of the anatomical conception of disease. Working upon this theory, in Guy's Hospital, Bright uncovered the lesions of the disease that bears his name and dropsy passed out of the category of diseases into that of symptoms.

It is now realized that skill in diagnosis cannot be attained without the witnessing of frequent autopsies, and, I might add, is not diagnosis the *sine qua non* in true medicine?

Until the germ theory of infectious disease was conceived by Pasteur, the science of preventive medicine—with the single exception of Jenner's discovery of the protective value of vaccination against smallpox—had not a single real achievement to its credit.

Two hundred years before Christ, Frasinstratus in Alexandria seems to have discerned the truth that the symptoms of disease are the manifestations of a disordered physiology. Jean Fernel taught the same in Paris in the sixteenth century. Morgagni strove to correlate the symptoms during life with the lesions that he found after death. Only in the nineteenth century, however, with the rapid development of experimental physiology, did this conception take active root. Magendie enunciated it clearly, and now the study of pathology of function, with its theories of pathological physiology, have become a directing force in bedside investigation.

Diagnosis to be complete must now be based on the examination of the patient for anatomical evidence of disease, the study of the various body fluids and excretions, in the laboratory, for the etiological agent, and the search, at bedside and in laboratory, for all the various disturbance of function which may be present. Permit me to add this very important adjunct: **AND THE RECOLLECTION, IF POSSIBLE, OF SIMILAR CASES AT AUTOPSY.**

It is the study of pathology which has taught us that fever is not a disease, as was believed at one time, but it is a symptom of many diseases; if I may be allowed to use the adjective, which was once applied to certain kinds of pus, we may have "laudable" fever—*i. e.*, fever which makes the surgeon or physician feel much easier than the same pulse rate and other symptoms, in the absence of fever.

It is, perhaps, unnecessary for me to dwell on the laboratory as an aid to the clinician; it is here that deviations from the normal are noted, and these changes are due to pathology.

Why is it, may I ask, that so many American physicians and surgeons go to Germany and Austria for postgraduate work? As far as I can learn, there are two good and valid reasons: one is that the clinical facilities are more thorough, because the patients have so much respect for the professors that they cheerfully consent to an indefinite number of examinations and demonstrations; the other—and most important—is the unequalled autopsy facility afforded by the laws of these lands; the Germans' superiority in pathological work is notorious.

American medical colleges have, during the last few years, awakened to the great necessity of a proper teaching of pathology, as the basis of scientific medicine; there is a demand for capable teachers of this important branch. The profession generally, including the older practitioners, who would keep up with the times, realizes the necessity of the study and the advisability of the laboratory's aid. The great pity in this country is the widespread sentimental aversion to permitting autopsies, even though the cause of death is obscure; we believe that the time is not far distant when, through education, the masses will realize the great necessity (the benefit to humanity) that comes from just such work. But notwithstanding the acknowledged importance attached by the medical profession to physiology and pathology, our section, both at state and national conventions, is relegated to the rear and is among the least attended; and in this particular instance we are limited to five papers. Why is this? Nearly every paper read in all the other sections devotes more or less space to the pathology of the subject and, in many instances, the reports of pathologists are read. It strikes us, then, if this explanation is correct, that symposia with other sections should be the rule hereafter.

With the hope that the jambalaya of thoughts which I have presented may have entertained or, perhaps, enthused some of you, I shall now leave the floor to others, who will discuss more concrete subjects and let you decide, referring to my opening quotation from Burns, whether my message has turned out to be a "song" or a "sermon."

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SOME OBSERVATIONS UPON RECENT INTERESTING WORK SEEN IN THE LABORATORIES HERE AND ABROAD.*

By WILLIAM H. HARRIS, M. D., *New Orleans.*

Much of what one observes during a rather complete tour of the laboratories must be eliminated because of time, and again of your familiarity with the subjects from current literature. It shall, therefore, be my purpose to concentrate the more interesting and important facts concerning pathology and bacteriology, omitting unnecessary details.

Whilst nearly all of the important laboratories abroad were visited, unfortunately only three of our eastern laboratories were seen. At Johns Hopkins among many things of interest is the work with vital stains or staining *in vivo*. This work, begun by Goldsmith in Germany and furthered by Evans, Lewis and others, has offered a rich field in the investigation of histological and histopathological controversies. The injection of certain of the stains into animals, e. g., rabbits, show a selective affinity for certain of the histological structures. One sees these animals, for instance, stained blue even to the gums and teeth, and yet perfectly healthy. They are quite suitable for bacteriological injections, and the production of lesions thereby aids in the elucidation of obscurity as to the origin of certain reactionary cells. In this manner the production of tuberculosis aids in determining the origin of the epithelioid and giant cells of the miliary tubercle. Its many possibilities are clearly patent. The work of Roundtree and Geharty upon the phenolsulphonephthalein test for renal competency, although now well substantiated by other workers, and well known to you all, must at least be mentioned. This test, which is becoming more simplified, forms quite a valuable addition to our knowledge of the chemistry of the urine secreted by normal and abnormal kidneys.

At Columbia it afforded me great pleasure to find a classmate of Tulane, Dr. R. A. Lambert, continuing his work upon tissue cultivation *in vitro*, and leading to observations of interest and importance. This remarkable type of work, begun by Harrison and continued and greatly embellished by Carrel and Burrows, is of most absorbing interest. The simplicity of not only perpetuating

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

viability, but of occasioning reproduction, is astounding. With the use of simple blood plasma as a medium one can observe the contraction of heart muscle or the peristalsis of the intestines for several weeks away from the host, the growth of these by cellular extension, the multiplication of tumor cells, such as carcinomata, sarcomata (of which I have slides if any one may care to see them), the production of foreign body giant cells, and so on, at much length.

The continuous program of valuable work emanating from the Rockefeller Institute for Medical Research, directed by Dr. Simon Flexner, is so well known to you through its most valuable organ, the *Journal of Experimental Medicine*, that little is in order to be stated. Dr. Carrel's most valuable tissue cultivations and transplantations, so phenomenal as to gain the Nobel prize, are too well known to you to describe. Dr. Peyton Rous' chicken sarcoma, capable of continued reproduction by a Berkfeld filtrate of the macerated tumor mass, is most interesting. When one realizes that the etiological factor of the tumor is present in the liquid filtered from the tumor mass, it seems so tangible. It is regrettable that this quality is not common to all tumors, as perhaps our hopes of the discovery of their etiology may be nearer at hand. The tremendous tumor produced in the breast of the fowl and the large metastatic foci in the liver and other organs are indeed striking.

Dr. Noguchi's work with the spirochetæ from the primary cultivation of the organism of syphilis up to his present work, seems almost unlimited in its valuable points. His discovery, together with Moore of the *treponema pallida* in the brains of general paresis, is indeed valuable. His discovery of the spirochetæ (or *treponema*) *calligyrum*, may be regarded as unfortunate; that is, not the discovery, but that there should be such an organism so nearly related to the *treponema pallida* in many ways, thereby causing an obstacle and some confusion. We will leave this most interesting of places for the laboratories abroad.

Perhaps the most interesting laboratory of England, from a bacteriological and pathological standpoint is the Lister Institute. In this institution cultivation experiments of tumor growths are being conducted by the Ross brothers, and are very much along the line of the work of Lambert. Cellular studies for the purpose of observation of mitosis and amitosis-phenomena are being emphasized, the nuclear division of cells being easily observable under

these circumstances and the complete cycle thus readily elucidated. Work upon the cultivation of the leprosy bacillus is being carried on by Bayon. His results, he thinks, seem to substantiate the work of Kedrowski. However, these findings are not at all in accord with those of most observers, and the problem is still more or less an open question. Bayon has also worked with the chromogenic culture of Clegg, but has not attempted to work with the non-chromogenic strain of Duval, of Tulane, which is regarded by this latter worker as the specific organism of leprosy.

The London School of Tropical Medicine falls much below one's expectations, both as regards its equipment and material. A case of trypanosomiasis, or sleeping sickness, was perhaps the thing of most interest at that time. This was being treated with atoxyl and Salvarsan, with palliative but not curative effects. The institute has a hospital of fifty beds and derives its material almost entirely from a maritime source.

The Liverpool School of Tropical Medicine forms a part of the Liverpool University, and offers great inducements for the study of tropical medicine. The leprosy work is also under investigation there by Dr. Alexander, who has worked with both chromogenic and non-chromogenic strains of Duval, but has been unable to subculture the latter strain. I regretted that my trip was not made at a later date so as to have appreciated the interest aroused in these institutes of tropical medicine by the achievement of Dr. Bass in the cultivation of the malaria plasmodia, as his work has been assiduously taken up and confirmed.

Travelling through France, the great Pasteur Institute at once focusses the laboratory worker's attention. To meet the illustrious Professor Metschnikoff and to witness his personal ruddy good health makes one feel that, if he has practiced his glyco-bacteria experiments for longevity, they are indeed of much value. Investigations on plague, tumor etiology and, again, the interesting work of Levaditi upon the causative factor of scarlatina are most absorbing. His apparent production of scarlatina in the orang-outang with material from human cases has been since published, as you no doubt know, but awaits confirmation. Dr. Bertrand of this institute has taken up the amino-acids for the cultivation of bacteria as first suggested by Dr. Duval, and his work afforded me great surprise to see the potentiality of these substances as a cultivation media. He has from this drifted into the problem of

amino-acid production in the gastro-intestinal tract and has described an amino-acidophilic bacillus. He informed me that from the intestinal contents of cases of auto-intoxication he has been able to procure substances rich in amino-acids, a half c.c. of which was capable of killing a full-grown guinea pig. This would furnish us with the explanation of many of the symptoms and signs of the numerous cases of auto-intoxication in the various intestinal ptoses, atonies, etc.

At Vienna, among the most interesting of institutes may be mentioned the Royal Therapeutische Institut, directed by Prof. R. Kraus, and also the great Allgemeine Krankenhaus. Professor Kraus is working together with his assistants upon the following problems: The serum tests for carcinoma and sarcoma, tissue cultivations and also upon differentiation methods of the bacillus of tuberculosis from various acid-fast organisms. He has considered in his work the chromogenic culture of Duval and has published an article in the *Vienna Klinische Wochenschrift*, comparing this culture with that of Kedrowski, and by the specific production of lytic substances in the guinea pig has reported such to occur only for the chromogenic bacillus of Duval and not for the Kedrowski organism. Professor Kraus is also the director of Kral's Bacteriological Museum, which contains thousands of cultures, consisting of practically every known organism. The Allgemeine Krankenhaus, or general hospital, consists of over 2,000 beds, and the pathological material of this institute is perhaps the richest in the world. Every morning from 8 to 15 autopsies are held by Professor Wechselbaum and his assistants, Drs. Storeck, Erdheim and Wisner. The pathologist is, of course, most interested in such a mass of material which of necessity presents a great variety for study. The fact that the relatives agree at the time of the patient's entrance into the hospital that in the event of death autopsy privileges will be granted accounts for the large number of these procedures held. As many of us know who have been there it is indeed an unusual sight to see the number of funerals which are conducted daily from the chapels of this institute.

In Germany the two greatest laboratory institutes are Ehrlich's Laboratory at Frankfort and Koch's Institut at Berlin. At Ehrlich's Laboratory the main feature of interest is the question of the chemo-therapy of tumors. Professor Shiga, the discoverer of the Shiga dysentery bacillus, is co-operating with Professor Ehrlich

upon this work. He showed me many rats in specimen jars which had been sent to him by Professor Wassermann of Koch's Institut, and intimated that the synthetical preparation of Ehrlich and himself was promising better results than those published by Wassermann.

At Koch's Institut at Berlin, Professor Wassermann very kindly introduced Dr. Blumenthal, his assistant, assigned to the tumor therapy work, and Dr. Wolfe, who is working in the serological department. Dr. Wolfe is using entirely the original Wassermann test for syphilis, but upon explanation of the Tscheronogubow method, which he had not tried, commented most favorably upon its principles, controls and facilities. Of all the most unusual and promising observations, the use of the eosinate of selenium and tellurium in the treatment of cancer and sarcoma stands foremost. Professor Wassermann very kindly had Dr. Blumenthal to demonstrate to me the rats already treated, under treatment, and the giving of the injections themselves. They showed me dozens of rats in which the tumor had entirely disappeared, leaving only a thickened scarred area with no evidences of recurrence after many months. The injections were given intravenously every 24 hours for four successive days. After either the first or second injection a marked softening of the tumor mass is noted. In a week or so after the last injection the nodules consist of almost cyst-like areas which eventually are filled with granulation tissue and cicatrise. Upon giving the injection the little animals turn entirely red, indicating the flooding of the superficial circulation with the pink solution. No doubt this substance has been used for the human growths to which any one in the advanced stages would be pleased to submit, but their results have been kept entirely secret. It is true that many of the rats have died following the injections, and it has been attributed to the rapid breaking down of the tumor mass and the absorption of the septic material. Others have claimed that the drug itself is toxic, and with a view of improving this preparation Ehrlich and Shiga have been working with other synthetical compounds. Numerous writers have reported the use of copper, bismuth, and many metals with nearly as promising results in both the spontaneous and implanted tumors of rats.

In conclusion it gives one much pleasure and satisfaction to find our Tulane University so broadly known throughout the great institutes abroad and the work emanating from our laboratories being so eagerly taken up for confirmation or repudiation.

RABIES AND THE PASTEUR TREATMENT.*

By DRS. F. G. ELLIS and WILLIS B. BUTLER, Shreveport, La.

Rabies is a disease of the nervous system, decidedly infectious, marked by excitability or paralysis and nearly always terminating in death. The disease is conveyed to man by a bite from an infected animal, the saliva containing the virus entering the wound with the teeth. All animals may contract the disease, but dogs are most susceptible; cattle follow next in order and then cats. All persons bitten do not contract rabies, but statistics differ as to the actual percentage. One investigator, Hogyes, claims that of those bitten by a rabid dog and not treated, 15% are infected. This, however, may be much varied, as the proportion depends on the location and size of the wound, and the amount of hemorrhage. In general those wounds nearest the central nervous system are the most dangerous, namely, those of the face and hands, possibly because being uncovered and exposed the saliva on the teeth of the rabid animal easily enters the wound and is not wiped off by the clothing as is the case in bites elsewhere. Also, being nearer the brain, the virus has a shorter distance to travel along the nerves. Probably there is less danger of infection, too, when there is considerable hemorrhage, as the blood helps to wash the virus out of the wound.

The virus remains latent in the wound for a variable time. Garloch says from fourteen to two hundred and eighty-five days, but in the majority of cases the incubation period is from three weeks to three months.

The contagion has never been isolated, but experiments have proved beyond a doubt that a specific organism is the cause of the disease. If an emulsion of a rabid animal's brain be filtered through a Pasteur-Chamberland filter, the filtrate is harmless. If the emulsion is filtered through a Berkefeld filter, the virus is found in the filtrate. Heating at 50 degrees C., 14 hours' exposure to light, antiseptic solutions and the gastric juice also destroys the virus.

All efforts to cultivate the specific organism on artificial media have failed. Many investigators have claimed to have found the specific cause, but of them all there is only one that has stood the test of investigation. This was the great discovery by Negri in

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1903 of the bodies found constantly in the brain of rabid animals called Negri bodies. Negri thinks these bodies are of the nature of protozoa, and they are found in over 96 per cent. of all the cases of rabies examined. They are now universally considered as diagnostic of rabies, and the demonstration of their presence does away with the necessity for animal inoculations.

There is an idea among some of the members of the profession that these Negri bodies are a sort of myth and that it is useless to send an animal's head to a laboratory for diagnosis, because the pathologist simply throws the head into the trash pan without even looking at it. Nothing could be farther from the truth, for when present the bodies are very easily found, and the diagnosis made certain. In our examinations of the head the Negri bodies when present were found in the first four smears made.

Symptoms: There are two forms of rabies, the furious and the dumb or paralytic.

(1) In the furious form the incubation period is from three weeks to three months. There is marked change in the disposition of the dog. The affectionate animal becomes morose and the treacherous one, cowardly. Later there is the tendency to roam, and if allowed, the animal travels aimlessly, is nervous and irritable, snapping and biting at all objects in his path. Returning exhausted from his roaming, he hides away in some dark corner. The animal eats all sorts of indigestible objects such as pieces of wood, feathers, stones, etc. The froth sometimes seen around a rabid animal's mouth is caused by the excessive saliva being churned into a foam by the restless movements of the animal's jaws.

There is an erroneous idea which is fostered by the name hydrophobia, that rabid animals are afraid of water. In reality they try to swallow water, but are prevented by the existing paralysis of the throat. This condition of the throat also changes the bark into a sort of yelp. The paralysis rapidly extends to the muscles of the hind legs and the furious form of the disease passes into the dumb. Death ensues in from four to eight days after the appearance of the first symptoms.

(2) The dumb form is much less frequent. In this the paralysis sets in early and there are no symptoms of frenzy and irritability in the early stage. The animal becomes depressed, hides away and in one to three days is dead.

Postmortem: There are no constant and definite lesions found.

The most suggestive feature is the presence of wood, earth, feathers, etc., in the stomach. There is, however, an inflammation of the meninges of the brain and the spinal cord as well as of the mucus membranes.

Transmission of the Disease: While the virus is most frequently found in the central nervous system, and in the salivary glands, it may also be present in other glands and secretions, as the mammary glands and milk. Food containing the virus cannot transmit rabies to normal animals unless there exist abrasions along the alimentary tract. These abrasions are most frequent on the lips and mouth, and therefore rabietic food is dangerous. Rabies is not transmitted by the blood.

Diagnosis: When an animal is suspected of having rabies, better tie him up and watch carefully for a few days. It is a mistake to kill the animal immediately as, if infected it will die in a few days any way, and the symptoms may be noted as the disease progresses. For diagnostic purposes examination of the animal's head is made as soon after death as possible. The skull cap is sawed off and the brain removed. The hippocampus major lobe of the brain is then located and smears made from the gray matter of this portion by pressing a small piece between two coverglasses. Methyl alcohol fixes the smears and they are then stained by a special method. Under the microscope the Negri bodies appear as round or oval bodies 1-20 μ in diameter and containing one or more nuclei or chromatoid granules.

An emulsion of this lobe of the brain may also be prepared and injected into a rabbit subdurally. This, however, takes a longer time and the value of the comparatively rapid method of diagnosis by the finding of the Negri bodies is increased.

Prevention of the spread of the disease by taking measures to exterminate it among dogs is probably the best way, as it is nearly always the dog that does the biting.

The treatment may be divided into (1st) the Local Treatment of the wound, and (2nd) the Systemic or Pasteur Treatment.

(1) *Local Treatment:* As soon as possible after the wound is inflicted it should be opened up, if not already an open wound, and thoroughly cauterized. Several different chemicals may be used with fair success, but the best are either a strong solution of lysol, or fuming nitric acid. Carbolic acid and other chemicals may be used, but they do not serve as well as the lysol or HNO_3 . The

wound should be thoroughly swabbed out with the solution, being careful not to miss any part of it, or any place where the skin is abraded. Then it is well to wash it with sterile water. After this is done it is treated as any ordinary wound would be. That lysol is about the best and most practicable is shown by the fact that it is not so destructive or painful, and not so dangerous as either carbolic acid or HNO_3 . It has been a number of times demonstrated that the application of lysol to a wound made purposely on a guinea pig or rabbit, by shaving the side and abrading the surface for a large area, will prevent the animal contracting rabies even when the "virus fixe" is rubbed into the wound either immediately before or after the lysol is applied. It is very generally used in laboratories in from 2 to 5% strength to disinfect the hands after handling the brains and cords of rabid animals.

(2) *Pasteur Treatment*: This derives its name from its discoverer, Louis Pasteur, and is essentially a *preventive* treatment. It has been modified and changed very materially in the last year or two. The old method of using emulsified cords taken from rabbits which had died of the disease, and drying these for 14 days down to one day and using these in succession as the whole treatment has been abandoned by all first-class laboratories. But instead several rabbits are inoculated with different strains of the virus obtained from different localities and each strain is run through successive rabbits until the fixed virus is obtained in each case. Both the virulent and dumb types are used. Then the treatment consists in an emulsion made from these different cords and in addition the brain substance which has been properly treated and attenuated. The injections are made preferably under the skin of the abdomen, and with a 24-hour interval of time. Nothing weaker than the eight-day cord is used, and this is used at the first treatment, gradually increasing to the one-day cord. Twenty-one to thirty days are usually required to complete the treatment, the fairly strong brain substance being added during the last few days, and sometimes small amounts are added in the early days, especially when we have a severe bite, or one near the face, to deal with. Very few laboratories keep more than one or two strains of virus, but have a system of exchange, one with the other, using several strains in this way.

This treatment has proven very successful, as shown by the remarkable results obtained by Hogyes and many others. Litterer

has only lost one case in about 500. So far we have only treated a limited number of cases, all of which were successful. This latest treatment is an improvement over the old method and is much more scientific. Some have abandoned the cords entirely and use only the brain substance. It is usually considered that immunity is fully established ten days following last injection.

THE DIAGNOSIS OF THE PRIMARY ANEMIAS AND OF THE LEUKEMIAS.*

By CHAILLÉ JAMISON, M. D., New Orleans.

The object of this paper is to emphasize some of the important points in the diagnosis of the primary anemias and the leukemias; to call attention to some of the common diseases of this region which are easily confused with them, and to show the impossibility of accurately diagnosing these not uncommon blood diseases without the aid of a microscope.

There are two primary anemias, chlorosis and pernicious anemia. There are three leukemias, spleno, myelogenous leukemia (or myeloid leukemia), and chronic and acute lymphatic leukemia (or lymphoid leukemia). I will not speak of chloroma or the mixed anemias, for they can nearly always be classed under one or the other of the headings given.

The victims of chlorosis retain their sub-cutaneous fat in a remarkable manner. The subjects complain of palpitation and breathlessness, and there may be a tendency to fainting, with puffiness of the face and swelling of the ankles, and sometimes even general anasarca. A systolic murmur is heard at the apex or the base. Fever is not uncommon. Such are a few of the more important clinical symptoms. How very easy it is to confuse a case of acute nephritis with one of chlorosis; there is the same appearance of anemia, the oedema of the face and ankles; the same breathlessness and faintness; both diseases occur in the young; the peculiar greenish tint of the chlorotics skin may give one a hint, or a good history may save a mistaken diagnosis.

The heart murmurs, usually a prominent symptom of chlorosis, may lead to a diagnosis of cardiac disease, especially if there is some misleading etiological factor in the history.

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But, though the clinical symptoms may be obscure and insufficient for a diagnosis, we always have a sure method of diagnosis in the microscope. The hemoglobin estimation will be low in chlorosis; it will also be low in any secondary anemia, such as that of nephritis or heart disease. But on counting the total number of red blood corpuscles in a c. mm. those from a case of chlorosis will often be normal in number, while in secondary anemia of any kind the total will usually be reduced. In other words, chlorosis shows a very low color index; secondary anemias show a color index of about one, *i. e.*, normal.

Cabot remarked that the incidence of pernicious anemia in any district is largely a matter of the keenness of the physicians of that district. It is certainly not uncommon in this State, but of the many cases which have been diagnosed at the Charity Hospital in the last three years I do not believe that one has had the diagnosis made prior to admission, although some of the cases were in the last stage of the disease. This is not due to the lack of diagnostic keenness on the part of the practitioners of Louisiana, but is due to the fact that there are no pathognomonic clinical symptoms of the disease, except the microscopical findings, and that the majority of the physicians of this region have not had the opportunity of learning the slight amount of microscopical work necessary for such diagnoses. Perhaps the most common mistake in the diagnosis of pernicious anemia is to call such cases malarial cachexia, and it is easily understood how such a mistake is made, for both conditions are often associated with emaciation, the pallor is common to both, the languor and lassitude are prominent symptoms, an enlarged spleen may or may not be present in either disease, both are associated with attacks of remittent fever, both are of long duration and refractory to treatment.

I saw a case about a year ago, in the Charity Hospital, who had been treated for months for malaria; the most superficial examination of the blood would have made the diagnosis. I wrote to the physician who had attended the case, asking for some family history that the patient could not supply, and explaining to him that the patient was a victim of pernicious anemia. He replied that he had attended seven of the patient's brothers and sisters, all of whom had died of malaria. He had had no microscopical examination made, and had told the patient that I saw that he had malaria. I think that there is little doubt that most of that family died of pernicious anemia.

There have been cases of pernicious anemia with the diarrheal symptoms, which are so marked at times in the course of the disease, which are called dysentery, but examination of the stools failed to show either amebæ or the dysentery bacillus, while examination of the blood immediately made a diagnosis.

The microscopical diagnosis of pernicious anemia rests primarily on the presence of a high color index: in the average case the total count will be found to be between 1,000,000 and 2,000,000 r.b.c. per c.mm., while the white corpuscles will be about normal; the haemoglobin, though relatively high, is reduced, but the color index is always above one. On examining a stained specimen of blood, the following morphological changes will be observed: poikilocytosis, polychromatophilia, stippling of the red cells, occasionally Cabot's ring bodies; nucleated red blood cells can always be found in a case of pernicious anemia if a long enough search is made, and they are usually quite easy to find, especially at the blood crises, when they are thrown into the peripheral blood in "showers." Especially characteristic of pernicious anemia is the preponderance of the large red cells in the blood, *i. e.*, the megalocytes and megaloblasts. An occasional myelocyte is usually seen.

Spleno-myelogenous leukemia in my experience is the commonest of the leukemias; it is certainly the easiest to diagnose, both clinically and microscopically. The principal clinical symptoms are, briefly, anemia, and its accompanying symptoms, *i. e.*, pallor, palpitation, breathlessness, enlargement of the spleen, and sometimes of the lymphatic glands; hemorrhages from the mucous membranes. It must be remembered that these symptoms are only present in any marked degree, after the disease is fully developed, and it should be the desire of every good diagnostician to make a diagnosis as early as possible, especially if there is any hope of good results from treatment. This disease is notorious for the vagueness of its early symptoms, and an early diagnosis by clinical methods alone is an utter impossibility; while a diagnosis late in the course of myelogenous anemia is possible, it is little more than a supposition, without microscopical aid.

The common diseases which can easily be confused with myelogenous leukemia are chronic malaria, miliary tuberculosis, new growths in the spleen, uncinariasis and the splenomegalias. All of the diseases mentioned have some prominent symptom, which is also a prominent symptom of spleno-myelogenous leukemia, and

none of them have any cardinal clinical symptom which will absolutely differentiate them.

It is, therefore, necessary to turn to the microscope in order to make a positive diagnosis, and with a little practice this is easy and requires little time. In chronic malaria we find the plasmodia after a thorough search, but if not, there will be a secondary anemia, leukopenia, and the large mono-nuclear leukocytes may be found to contain pigment. There is nothing characteristic about the blood picture of miliary tuberculosis, secondary anemia and, at times, lymphocytosis are usual; uncinariasis gives rise to an eosinophilia and secondary anemia; secondary anemia and leukopenia accompany most of the idiopathic splenomegalies.

There is no more striking and characteristic picture in the whole field of microscopy than that of spleno-myelogenous leukemia. In the majority of the cases, one glance at a stained specimen of the blood will make a diagnosis and the differential and total counts will make a diagnosis beyond the possibility of error. The following is the characteristic blood picture of spleno-myelogenous leukemia; the differential count shows the myelocytes to make from thirty to fifty per cent of the total white cells; the normal polymorpho-nuclear neutrophiles and the normal small and large lymphocytes are absolutely increased and may show an absolute and a percentage increase; normoblasts and megaloblasts are common. There is no anemia at first, but sooner or later secondary anemia comes on.

Chronic lymphatic leukemia is a disease that lasts for years; in the early part of its course there are any number of vague symptoms that lead the patient to consult a doctor. But there is only one symptom that is constantly associated with this disease throughout its course and that is glandular enlargement, which is usually general, but may be localized. To mention a few of the common diseases associated with glandular enlargement: syphilis always shows a general glandular enlargement, tuberculosis frequently does; the lymphatic glands of many normal people are frequently enlarged; tuberculosis may give rise to localized enlargement of the glands, and Hodgkin's disease is always associated with local glandular enlargement. Of course it is very seldom that any of these diseases are called leukemia, but I believe that chronic lymphatic leukemia is frequently diagnosed as one or another of the diseases mentioned above; this is almost sure to be the case if a microscopical examination is not made, but it is an error that will practically never occur if the microscope is used.

On examining the blood from a case of chronic lymphatic leukemia, the stained specimen will at once show that the small lymphocytes (small mono-nuclear leukocytes) are greatly increased; and the differential count will show them to be about ninety per cent. of the leukocytes in an average case. There is a decrease in all of the other white blood cells. Nucleated red cells are never found in the early stages of the disease, and are very rare at any time. No anemia may occur, and if it does occur, it comes on late. The average total white blood cell count is about 80,000, but may run from 25,000 to over 1,000,000. Tuberculosis and syphilis both show a lymphocytosis, but never as marked or as constant as in leukemia, while the blood picture of Hodgkin's disease is normal.

Acute lymphatic leukemia is a rare disease, and is particularly rare in this part of the country. It runs a very acute course and may be confused with a great many diseases, too numerous to mention. A clinical diagnosis is less probable in this condition than in those previously considered, but the microscopical diagnosis is just as easy as it is in the chronic form, in fact, the microscopical picture is just the same as in the chronic form, only the large lymphocytes are increased instead of the small.

In conclusion, it may be said that, although from a scientific point of view a diagnosis of pernicious anemia and the leukemias is desirable, from a practical point of view it is not of very much value, as the patients stricken with these terrible diseases die, no matter what treatment is instituted. This was true up to very lately, but is hardly true at the present time. The lives of patients with pernicious anemia can certainly be prolonged very much by intelligent treatment along modern lines. Several cures have lately been reported by the use of Thorium-X. As for leukemias, the recent reports of marked improvement and apparent cures from the use of benzol enhance very much the value of correct diagnosis of this disease.

Clinical Report.

GRIPPAL LARYNGEAL STENOSIS CURED BY FIBROLYSIN.

By N. THIBERGE, M. D., New Orleans.

The multitude of interesting features involved in the following case of laryngeal stenosis has induced me to report it at length. It

was remarkable on account of the brilliant result of fibrolysin on an ankylosis of the aryteno-cricoid joint brought on by grippe.

The initial symptoms, which were to culminate in an urgent tracheotomy, gave but slight intimation of the coming ordeal.

J. B., Jr., a little boy of two and one-half years, was first seen by me December 4, 1912, for a slight rectal temperature (101°), irritating cough and hoarseness. No pharyngeal symptoms, no toxemia. Mild remedies were given, and the child allowed exercise in the open air. The fever left the next day; all seemed to be well except a little hoarseness. This at first was noticed when the child grew excited and at night. The cough was metallic. On December 16, 1912, a specialist was consulted, as the obstructive symptoms were not clearing. The nights were more disturbed, respiration was somewhat embarrassed, the spells of metallic, unproductive cough were following each other more closely. Laryngeal inspection revealed no suggestion of diphtheria, but the vocal cords, chiefly the right, were found held in adduction. The culture showed only grippe.

On December 23, 1913, when the child was brought to another specialist's office (Dr. B.) he was accidentally exposed to high wind with head uncovered. This so intensified the stenosis that a throat specialist (Dr. L.), seeing him hurriedly and not being furnished with all the facts, made a provisional diagnosis of diphtheria and administered antitoxin freely. The slight improvement following the first doses was at first attributed to the serum, but later recognized as being due to the effects of the sudden exposure of December 23, subsiding under rest and the croup tent. On the fourth day the antitoxin was abandoned, after 160,000 units had been injected, and two cultures had yielded negative results for diphtheria, but positive for grippe. Urticaria was moderate.

In the interval between December 23 and January 2 all remedial measures were exhausted. Capillary congestion slowly invaded the pulmonary tubes, profuse sweating of the forehead and nasal bridge, anxious expression, increased irritability, drawing in of the xiphoid appendix were noted when Dr. Landfried was called in.

His first step was to perform, under cocain, a low tracheotomy. It was on this occasion that a fourth culture was taken, this time directly from the trachea. No membrane could be seen, no diphtheria germs, but pneumococci in abundance in the culture showed how close the youngster had been to pneumonia.

On January 11 the child was well enough to be taken home, his

recovery being uneventful. From this time I frequently tested the patulence of the larynx, the child still being in the croup tent. Dangerous symptoms either showed at once or later, cyanosis, tirage, cough and vomiting showing every time. The child's voice was altered, but distinct.

It now became a question of either a permanent tube or overcoming the ankylosis by invading the cricoid box forcibly, using the dilator freely, with danger of a permanent impairment, or perhaps a total loss of speech. At this stage, recollecting a happy result obtained with fibrolysin in a keloid following a burn, I suggested the use of fibrolysin. This met with the approval and cooperation of Dr. Landfried, who termed the situation "a fight between fibrolysin and dilatation."

So gratified was he of the result that it is greatly through his urging that I present the case at length. The first dose was administered January 24, fifteen c. c. (half dose), then full doses every other day for twelve doses. No constitutional disturbance was noted. The stenosis gradually grew less. The frequent tests were made by closing the fenestrum of the tube by a section of the tapering end of a penholder, this being found easier to manage and fitting more snugly than the ordinary cork stopper.

The laryngeal tube was definitely removed March 13. On February 6 the child developed a slight grippal bronchitis in the fine tubes, which fortunately lasted only five days, with a maximum temperature of 103°. Otherwise his recovery was uneventful up to May 26, the child remaining well, breathing perfectly and talking in his natural voice. The tracheal wound, of course, gave no trouble, closing at once.

The case presents many unusual features:

(a) The slight initial symptoms slowly and gradually reaching the climax of an urgent tracheotomy.

(b) This operation, performed under local anesthesia in a child a little over two years old, without any subsequent disturbance.

(c) The large antitoxin dose, 160,000 units, with no improvement and very little anaphylaxis.

(d) The inability of the child to dispense with the tube, after repeated trials, over a sufficient length of time of trial.

(e) The brilliant result of fibrolysin, relieving the ankylosed aryteno-cricoid joint, allowing the vocal cords to recede at each respiration.

(f) The permanent cure.

Orleans Parish Medical Society Proceedings.

MEETING OF JULY 14, 1913.

DISCUSSION ON DR. WILLIAMS' PAPER.

DR. HARRIS: Dr. Miller had a similar case at the Presbyterian Hospital two years ago. The patient was a young man 19 years old, with symptoms of appendicitis. On operation there was found an intussusception of ileum through the ileo-cecal valve for 10 or 12 inches. On reducing this there was found a constriction of the ileum. The specimen was removed and sent to the laboratory. I could hardly get a small wire through the intestines at the constricted point. Microscopically the specimen proved to be a sarcoma. The patient had typhoid about two years ago, the case thus showing a tendency to follow Rivert's theory.

DR. HOWARD D. KING: Some years ago Libman gathered statistics of 3,900 laparotomies and found 89 sarcomas of the small intestines or about 2%. Cases have been reported in children. Here they may be overlooked more often than in adults. Carcinoma tends to cause obstruction; sarcoma to cause diarrhea. The latter, for some reason often resembles appendicitis. There will soon be a book published on radiography and radioscopy of the intestines, with two chapters on sarcoma. The medical man should refer cases of obstruction earlier.

DR. GENELLA: The literature has called attention to a new finding, and I have observed it in one case. If there is a malignancy in the gastro-intestinal tract we get about one inch decrease in transverse cardiac dullness on changing from the standing to the lying posture. This relaxation of the myocardium is easily explained pathologically.

DR. WILLIAMS (in closing): In reply to Dr. King I would say that I do not wish to be understood as saying sarcoma does not occur in children. One case of congenital sarcoma has been reported. In adults we could also look for sarcoma elsewhere.

DISCUSSION ON DR. GELPI'S PAPER.

DR. S. M. D. CLARK: I am not an opponent of this instrument, but I have got accustomed to the Smith hooks. The idea seems very good, especially where the necessary assistants cannot be had. I would be delighted to use it at the next session.

Louisiana State Medical Society Notes.

In Charge of DR. L. R. DEBUYS, Secretary, New Orleans.

SECOND DAY, APRIL 23, 1913.—EVENING SESSION.

In the absence of Governor Luther E. Hall, the president called upon Dr. Isadore Dyer, of New Orleans, to address the Society. Dr. Dyer spoke as follows on

MEDICAL EDUCATION.

Medical education in the South has undergone many changes during the last twenty or thirty years. It has undergone very rapid changes within the last four or five years, and the South is soon to come entirely into its own, I believe, by the elevation of such standards of medical education as will place it on a plane with medical education in any other part of the country. Medical education to-day is entirely different from what it was when some of the members of this society began the study of medicine. Then little or no preliminary preparation was required. A student indicated his intention; he was accepted on his face so long as he behaved himself, and was allowed to continue at the medical college until he wore out his own patience or that of his instructors.

Things are different now. Not only must a student be prepared to study medicine, to qualify, during his course as a student, in attendance, but in actual service as well, in order to be graduated. The standard of entrance has risen from a mere superintendent's certificate to high school graduation; now the subjects which the student has covered during his high school course must be attested before he is allowed to enter some of our colleges.

The American Medical Association, the Carnegie Foundation for the Advancement of Education, and the American Medical College Association have arrived at a point where some standardization of entrance and some standardization of the curricula in the medical courses may be agreed upon. I should like you to notice that I put the whole subject in the futurative, because in my judgment the matter is far from settled.

The Council on Medical Education of the American Medical Association has from time to time announced a dictum with regard to the requirements on which they propose basing their classification of medical colleges, but there is a spirit of unrest among those who conduct medical colleges. The American Medical Associa-

tion does not conduct medical colleges. It may have a derived ability to pass judgment on medical colleges from studying a large number of them, but their studies are based upon statistics, upon the authority of observation, whereas the educator himself is conversant with the daily work in the class room, with the standards of students, and in the sections of the country from which they come. He is conversant with all the studies and all the subsidiary education in the grammar schools, the high schools, and the subsidiary colleges.

The spirit of unrest among medical colleges rather inclines to the consideration of the age of the student at entrance and the age of the man at graduation, with the idea that they may so serve his medical education as to specify the full quota of requirements before a man has reached the age in which he may become unfit for application. At present the average age of graduation in this country is nearly 27. In some of the other countries of the world the age is one or more years under this. The problem is acute, and when it has been better worked out, it is not at all improbable that a new plan may arise from the varied discussion which has taken place with regard to medical education during the past five or six years, to the end that there may be derived a course in medicine to occupy more of the actual time, but to permit the student to enter direct from the high school. In other words, the medical course, instead of being one of four years, may be one of five or six years—a five years' course, to consider, in the first year of the medical school, instruction in the science of biology, chemistry and physics, and such training in modern languages as may equip the student for the intelligent study of medicine, and particularly of foreign medicine. Two years of the five years' course should include biology, anatomy, physiology, etc., and the last two years' work should be purely clinical, with a sixth year provided for a hospital service, which it now seems will be required by the State boards of examiners.

It has required many years of experience in medical education to bring the intelligence of many thinking men engaged in the protection of the public to seek legislation by medical practice acts, and to the point of view that the average graduate in medicine is not prepared for licensure. In other words, he is not qualified to practice medicine, because either his conscience has not been sufficiently cultivated or he actually lacks experience in the practical

work of preparing him to engage in the practice of medicine. Two or three of the States have, through State boards of medical examiners, placed the requirement of a hospital year after graduation or before graduation upon the intending applicant for license before he shall become eligible to practice. This matter was brought before a meeting of the last Confederation of State Boards in Chicago, and there is little question that some such plan will come about, so that in time the college itself will be required to have a hospital year for a diploma in medicine, or the graduate in medicine will be required to put in a hospital year after graduation. The chief factor which militates against this at this time is that most hospitals in the United States are not either associated with or related to medical colleges. Those which are related are related only by ties none too close, or they are hospitals under an administration which is not particularly favorable to medical colleges. The standardization of hospitals throughout the country can be established only by such investigation as has been carried on by the Council on Medical Education in the investigation of medical colleges, and this alone will satisfy the relation of hospitals to medical education. So much for our present standards of requirements and the possibilities within the near future.

We believe that the agitation, like all agitation in matters which concern the general economics of the public, will result in good. The standard of medical education has been raised to such an extent that many of the schools of the inferior class have gone under. For instance, in many places the schools have recognized the disadvantage of existing side by side with others which were their superiors, and finally they carried into execution a plan merging all such schools, so that the number of medical colleges has been reduced in number, and the number of graduates has decreased.

There is but one other point on which I care to touch before finishing what must seem to you a random discussion of the question in which we may or may not be interested, but in which I believe you should be interested, and that is the relation of the State to medical education.

To those of us who see the struggles of our own State in these general problems of education, it seems a very far cry to argue that there should be a closer relation between the State and medical education here than exists. I am not making an appeal for the State Medical Society to ask the Legislature for an appropria-

tion for a medical college in New Orleans. I am only submitting a general proposition and one that is bound to make its own way, in spite of any attack, and in time the State itself will recognize its medical college as an asset. In such States as Minnesota, Wisconsin, Iowa, Nebraska, Missouri, and to a less extent, in Indiana and in some of the other States in a still less degree, the medical college has assumed such importance that they are under a high degree of endowment and are able to do almost anything they please in the matter of general education. The State to-day in enacting laws governing medical practice, the State Board of Health, the reports of contagious diseases, vital statistics, has established a control over medical practice itself which necessitates almost as a corollary that it must exercise control over medical education. If the State requires that the laws which are made by the Legislature shall be included in the division to satisfy the State, it should provide the means by which a man should be properly educated and qualified as a State health officer. I believe that if the State, and I am speaking in general terms, establishes local health officers through whom the control of the health of the people is affected, it should provide a means for the education of such men.

Now, ladies and gentlemen, I have discussed briefly a topic which I have assigned myself on a moment's notice. I have in some degree fulfilled the purpose for which you called me, and I wish to thank the president and the audience for the patience in listening to my desultory remarks, which I should have preferred to put down in a more digestible form and in a way that might carry more weight.

Dr. Fred J. Mayer, of Opelousas, was then called up by President Ledbetter to address the society. Although taken by surprise and totally unprepared, Dr. Mayer consented and spoke on

THE RELATION OF THE STATE MEDICAL ASSOCIATION TO THE PUBLIC.

Mr. President, Ladies and Gentlemen: I am not in the habit of making an excuse at my inability to do a certain thing, but to-night I really feel more embarrassed than I ever did before, not on account of the unexpectedness of this call for an address, but because I do not quite know what is expected of me, not having heard the orations that preceded or what is to follow, and because physically I am unable to carry out any part of the program. I am informed that the Governor has been detained on the levees,

and that the crevasse in the program needs filling. I presume, therefore, as this is a mixed audience that something ought to be said of the relation of the State Medical Society to the public at large.

As I stand here in this historic building a flood of memories crowd around me, when I think that year after year before legislative bodies the medical profession of this State have appealed to legislators in vain for remedial action for the public's good, and time and again failed to convince them, to such an extent indeed that quacks succeeded in routing us horse, foot and dragoons; this leads me to the conviction that the public does not quite understand that the State Medical Society is not a body banded together for the purpose of increasing material benefits to the members thereof, but a body of earnest medical men who are determined to advance the prosperity of the State in so far as their relationship thereto is concerned, by insisting on a high ethical standard for the membership, and who have awakened to the fact that the highest function of the physician is not cure, but prevention, and who have determined that the people of Louisiana shall be afforded every opportunity of being educated in the fundamental principles of hygiene and in the cause and prevention of these communicable ills that daily lay their blighting touch upon the home and upon the farm.

I remember right in this room and in the chamber opposite for 120 days I stood in the trenches of the lobby when the Hygiene Bill was presented, House Bill No. 63 in 1900 and House Bill No. 73 in 1902; at that time a medical man was considered a crank to protagonize a measure that in the public mind was absurd because it could not realize that medical men, to use a homely phrase, "would tear the shingles from off their own roof." I remember in those days when the executive of Louisiana was more powerful than any potentate in Europe in so far as the appointive power was concerned; that by reason of his appointment of nearly all offices in the State giving an indirect hold upon the taxing power that the fundamental article of our Constitution which inhibits the executive from interfering with the legislative function was grossly, flagrantly and wantonly violated by the chief executive in interfering with the passage of that measure through the House and through the Senate, and that after it passed the lower House by a vote of 63 to 27, and went over into the Senate, it was referred

to the Finance Committee instead of to the Committee on Health and Quarantine, which led one of the friends of the measure from the City of New Orleans to get up and ask in a strong German accent, whether it should not have been referred to the Committee on Fish and Fisheries. (Laughter.) The bill then passed the Senate, and unanimously; for the first time in the legislative history of Louisiana the power of appointment used against legislation failed, and the people awakened to the fact that a great measure of public education in hygiene was about to pass. What happened? For the first time in the legislative history of the English-speaking race, a measure of great moment upon which the legislative will had been twice affirmatively expressed, was vetoed by the Governor, although he admitted in the language of the veto that it was a good measure. And so it is that questions of great pith and moment are consigned by ignorance, when dressed in a little brief authority, to the scrap heap. Revolutions in thought never move backward, and to-day throughout the civilized world there is a ready acceptance of the principles of the hygienic education of the masses, incorporated in these vetoed measures.

At the great Tuberculosis Congress held in Washington, the only resolution that was formally adopted practically was one which inculcated the necessity of educating the masses in the true nature of tuberculosis, and at the recent Hygienic Congress that assembled in Washington, the great exhibit was one destined and intended to educate the masses in hygiene. So it is, ladies and gentlemen, the stone which the builders rejected has now become the chief cornerstone of our medical edifice, and if this old and honorable society is only given an opportunity by the people of the State through their sympathies it will aid the magnificent efforts of your Board of Health to educate the people of the State regardless of what the loss may be to the individual pockets of the members. No individual or no society on earth has been so unselfish in its efforts to aid the people as the State Medical Society of Louisiana. When they advise you through formal resolutions, through daily utterances at the bedside, through illustrated lectures by various members in different communities of the State, not to use patent medicines, do you think for a single moment that it is because they are afraid of the pittance of the quarter of a dollar that you pay out for a box of pills, or the dollar for a bottle of tonic, which they desire to scoop in from you? Perish such a

thought! because, believe me, that every 25-cent bottle or box of pills, or dollar tonic makes work for some doctor. If he took a cold-blooded view of it, he would make twice as much encouraging your folly as he would make in his percentage on a sale of a box of pills. Ladies and gentlemen, there is not a member of this society who could not go out, if he had any sort of glib tongue, and armed with the bright band wagon, and a negro banjoist behind, and with five cents worth of worm powder, or two and a half cents of aloes, could go into any community of this State from the Arkansas line to the Gulf and buy up in the prohibition counties all the empty beer bottles, and label them with red labels, and start the negro banjoist playing, and fill up these bottles with ditch water, and drop enough tincture of aloes to give color and a bitter taste to the mixture, and then get out and sell it as a tonic, and make more money in six months than the average practitioner of medicine makes in a year's hard work, and then perhaps he could get certificates from leading men as to the wonderful virtue of this cure. The people like to be fooled, and the man who does the fooling rakes the shekels in. Therefore, when I tell you this body, in fighting patent medicines and other evils, is not actuated by any selfish desire to enrich its own coffers, but because they know that the American people, among the other unhygienic and unsanitary conditions that surround them, are having their lives sapped and undermined by the too frequent indulgence in these abominable patent medicines with their habit forming drugs.

Before leaving the subject of patent medicine, let me say to the lay people present that, admitting for the sake of argument, that the original formula of every patent medicine was culled from the prescription files of some physician, and that the formula as written was good, I think you will agree that when it was originally written it was prescribed for a certain condition and not to cure everything, as recommended on the label. Then again, in the preparation of these patent medicines, in the purchase of the crude material, the medicines or drugs that have been rejected by the legitimate trade are bought up instead of being burned, as they ought to be by the boards of health, put in a hopper and ground out in large quantities and worked up into the finished product, regardless of the percentage of active principles they may contain, whereas in the legitimate drug house there is an assay made of the crude product. That crude product or drug must represent a cer-

tain percentage of the active principle. If it falls below the recognized standard it is rejected, or the deficiency supplied. It is then ground up and made into pills, we will say, 3,000 at a time. The scoop holding a certain number of pills is taken up; each of these pills in the scoop is weighed, and the weights must represent an exact quantity, and an analysis is then made and it must represent the requisite percentage of the active principle. If it fails to exhibit this, it is put back into the hopper, it is reground and cut up, until an equal distribution is secured.

Then, in the matter of fluid extracts, after the assay is made of the crude drug, an assay is made of the finished product, and it must represent the standard. Some of the dangerous drugs are physiologically tested, and so it is that by reason of this care exercised on the one hand, and looseness on the other, the legitimate pharmacist may have to charge 50 cents for a box of pills, numbering 25, when you can get the ordinary box of patent pills for 25 cents, but the public is the sufferer in the long run.

Many of you will remember that years ago there was a famous patent tonic called Drakes' Plantation Bitters. Like most of these patent preparations, it was good for everything under the sun. Drake, who had accumulated a couple of millions of dollars in its sale, by reason of a gouty diathesis or some other ill that millionaires are heir to, was sick unto death. He tried the spas while in Europe, and he tried all of the remedies suggested by his friends, and finally he came home to die. He was dragging one leg after the other painfully, and the 999 friends whom he met suggested a different remedy for his complaints. At last, an old lady mumbled to him that she had one infallible remedy, a remedy that in her life of 75 years had never failed to cure the distemper of any man or beast. He turned to this old woman and said, "What is your remedy? If it succeeds, I will make you and yours rich beyond the dream of avarice." "Why," she said, "you try Drake's Plantation Bitters." He replied, "Hell, madam, I am Drake." If these people could only have rammed down their throats a lot of the vile patent medicine stuff they have been cramming down the throats of the American public, it would be the best punishment that could be inflicted upon them.

Now, ladies and gentlemen, I have been talking against time. I will, therefore, bring this rambling talk to a finish, closing with the sincere hope that the magnificent womanhood of this State, if

not the male portion of the community, will take deeply to their hearts and minds and understanding the necessity of curbing this patent medicine evil and taking such hygienic steps as are requisite and necessary to shorten the morbidity and mortality in this State, at the head of which stands the necessity of mosquito and fly destruction. It is hard to say which of the two insects is most heavily loaded with dynamite and does the most evil. If we are to judge by the biblical standards and its ubiquitousness, the fly takes the cake. They both have unquestionably been placed on this earth to force man to do his sanitary duty; the mosquito to compel man to reclaim waste water places. To those of us in Louisiana who suffer in an economic sense from water, it ought not to need any argument. When it comes to the fly, when you realize the fact that typhoid fever is now found in every village and hamlet in this State, when those of us who can look back thirty years will remember that it was almost an unknown disease, you can then realize the necessity of a war of extermination, by a destruction of its breeding places rather than by swatting.

With these concluding remarks let me beg the lay portion of the audience to get closer to the State Medical Society. I believe in the honor and integrity of the body in the mass as you do in an individual sense. You engage them as your family physicians. You believe in pretty nearly everything they say as private citizens, and as your private practitioners, why can you not credit them with a noble purpose and a high impulse when they act in convention assembled? Without this co-operation between the profession and the laity, it is impossible to carry on the improvement and betterment of sanitary conditions in this State. Boards of health can enact all the ordinances and regulations they please; the Supreme Court may affirm, but in the end, when the dear people, dear sometimes in every sense, are back of any important measure, something is usually done. As has been said by Lincoln or some other statesman, you can write laws and statutes, but it is the public sentiment that is behind them that makes the law effective, and until the public sentiment is behind the State Medical Society in its acts it will be unable to carry this magnificent State on to a full fruition of those things to which it is entitled by nature and now inhibited by unsanitary conditions in the home and in the market place.

DISCUSSION ON PAPER OF DR. WILSON.

DR. GEORGE S. BEL, New Orleans: This paper gives me an opportunity to say a word or two. Dr. Wilson stated very emphatically that the laboratory was not of much importance in the early diagnosis of diphtheria. While his paper was highly interesting and very educational, I cannot coincide with him. Depending absolutely upon your own eye to make a diagnosis of every case of diphtheria, or nearly every one, is not very good practice. We sometimes see what seems to be an innocent inflammatory process in the throat that the laboratory man says is Klebs-Loeffler. When you have greenish spots on one tonsil or the uvula and it is spreading, the clinical diagnosis is easy; I do not wait for a laboratory report. When you do not suspect diphtheria the laboratory man may say that you are dealing with diphtheria. Personally, I would not want to trust my own clinical experience without laboratory confirmation. What seems to be frank diphtheritic inflammation sometimes turns out to be by the laboratory findings negative. Therefore, I want to impress upon the society the fact that it is essential to have laboratory examination.

Something else strikes me. You hear about the tonsils harboring bacilli; that pus can be squeezed out of the tonsils months afterwards, or after the tonsil was well. If you read some of the textbooks on diphtheria they will tell you why you should not remove these tonsils, because there is a large avenue of infection, or open to infection, that may be full of other organisms, but it does not worry me in the development of diphtheria. If I had large tonsils, I would take large doses of antitoxin, and have some one remove those tonsils.

DR. L. J. GENELLA, New Orleans: In the symposium on diphtheria I was in hopes that some one would bring out the point which throat specialists never refer to in a medical meeting, but which is often harped on by them in private practice, and that is: "the recognition of diphtheria by the pathognomonic smell of the throat." I would like to know if any one has any faith in that, or has been able to tell diphtheria by the smell. I personally doubt it very much.

DR. McCANN, of Atkins: When I began the practice of medicine I had a very painful experience with diphtheria. I was called to see a child, six years of age. I could not see any membrane, and for fear it was not genuine diphtheria I administered the serum

very late. Since then I consider, as Dr. Bel, the microscope the only absolute certainty in making a diagnosis; whenever you are in doubt give antitoxin. Do not wait for a microscopic examination. In this case the membrane was in the larynx and trachea, and we could not see it. A tracheotomy was performed by Dr. Dowling, and as soon as the trachea was opened the membrane came up. The patient died. It is through our mistakes that we learn.

DR. ALLAN EUSTIS, New Orleans: There is one point regarding anaphylaxis that has not been brought out: in cases in which we suspect we will produce a condition of anaphylaxis by a second injection, it is easy to inject a small amount of antitoxin and wait for an hour. Sometimes it will appear in fifteen minutes, but at least within an hour you will get some symptoms of anaphylaxis if the patient is anaphylactic. If he is, and it is unnecessary to give it at once, that patient's blood is in a condition of anti-anaphylaxis, so that the next day you can give a large dose of antitoxin. I simply mention that because a number of practitioners are deterred from giving a second dose of antitoxin. A moderate injection, one or two c. c., is not enough to produce a violent anaphylaxis. If you get a negative result in an hour you can shoot in 10,000 units without danger.

DR. GEORGE S. BEL, New Orleans: In self-defense I specifically stated that anybody who suspected anaphylaxis might take place in any individual, should give small doses hypodermically and watch for the cutaneous reaction as well as the other. I made that specific statement to keep anybody from being afraid on account of anaphylactins in the individual, whether transmitted in utero or not, according to the experiments of Theobald Smith and a group of highly scientific individuals. The point referred to by Dr. Eustis was brought out.

DR. C. W. DUVAL, New Orleans: I had something to say yesterday about the removal of tonsils and adenoids in these diphtheria carriers. I still think there are no contra-indications to the removal of these tonsils and adenoids by surgical means.

Dr. Wilson speaks of two cases in which the tonsils, or these structures, were removed without the development of diphtheria, because they responded to antitoxin treatment afterwards. In the case of the true carrier the individual has had diphtheria, and he is immune, certainly, to the diphtheria organisms. The only other organisms that might give trouble are the streptococci and pneumo-

cocci, and things of that sort, in the throat. In a carrier perfectly normal, that has no diphtheria or any other infection clinically, I cannot see why these organisms are going to cause any trouble by getting into a place where the tonsil or adenoid has been removed—that is, allowing them to get through, because the mucous membrane is hard to destroy. In the normal individual these organisms are present in the throat, and the removal of the tonsils or adenoids in a true diphtheria carrier would not lead to a septic condition any more than the removal of the tonsils or adenoids under ordinary circumstances.

Another point Dr. Wilson mentioned which I would take a little exception to is the action of the toxins, a double action of the toxins, and neutralizing the toxins, and consequently the important action on the membrane. If Dr. Wilson will pardon the correction, I will say that antitoxin has no specific effect on the membrane; none whatsoever. The membrane is an exudate, and is gotten rid of as all exudates are gotten rid of. If it is small in amount, it is gotten rid of by so-called resolution or absorption. If it is large in amount, it may have to undergo organization. This takes place in an exudate that is on the outside of the body, and the same would be true in a diphtheria membrane in the naso-pharyngeal tract or upper respiratory tract. The membrane is an auto-digestant, a proteolytic ferment derived from the exudate itself. You see it disappear quickly if you have neutralized the toxins, because the cells of the exudate within are no longer being produced and those already present are going to pieces, liberating from the cells the proteolytic ferment which acts on the fibrin and various other elements of the exudate, which is quickly dissolved or gotten rid of, not the toxins.

DR. RANDOLPH LYONS, New Orleans: The word anaphylaxis has been used a good deal in the last few days, but we have not heard much or anything with reference to how to treat the condition. I had the opportunity last winter of seeing a case that has been reported recently by Dr. Magruder. We know from experimentation there is a marked drop in the blood-pressure. In the case I saw there were marked respiratory symptoms complained of; inability to breathe. The patient could hardly get a breath, except with great difficulty. He was pulseless for over an hour; the peripheral blood-pressure practically nil.

Another marked sign was peripheral stasis. These patients ap-

pear cyanotic and cold. The indications for treatment are, first, to relieve, as far as possible, the respiratory symptoms, which we do by giving atropin in large doses, often combined with morphin. The second indication is to raise the blood-pressure. To this end adrenalin chlorid has been of great value given hypodermically in combination with digitalin or caffein, etc.

In the majority of cases of anaphylaxis that have been reported in the literature it is stated that if they do not die within the first hour they are not likely to do so, and they may get well in spite of anything we may do or do not do. However, these cases are extremely alarming, and physicians using sera should be prepared to meet such an emergency should it arise.

DR. R. W. O'DONNELL, MONROE: In discussing the diagnosis of diphtheria, a very important clinical sign has been omitted, and that is the effect of the toxins on the heart. In laryngeal cases there is no membrane visible, but the loss of relationship between temperature and pulse is very marked. Another thing that Dr. Lyons mentioned is the rash. To those who are afraid to use anti-toxin because of a rash, I will say that I have had occasion to use adrenalin chlorid, and it acts very effectively, using from 15 to 20 minims for adults, and for children doses in proportion.

DR. WILSON (closing): I will not take up much of your time, because this subject has been discussed for the last two days. I want to say, with reference to Dr. Bel's criticism, that it was certainly a fair and just one. I do not want to be understood as discrediting the importance of the laboratory report, but I was trying to convey the idea that it is bad practice to depend upon the laboratory entirely for your diagnosis. After all, I think the clinical aspect of your patient should be your signal guide, and my experience has been, in the borderline cases and in those cases in which I was in doubt, I could afford to wait for the laboratory report, and had very little trouble. Most of the borderline cases cleared up and did not prove to be diphtheria.

In reference to the remarks made by Dr. Duval, Miller, in his experiments with colloidin sac, demonstrated very well the importance that the membrane plays in the formation of these toxins. Miller, in his series of experiments, demonstrated that, as long as the colloidin sac remained in the guinea-pig, just so long was there a source of danger, but as soon as the sac was removed the guinea-pig improved.

DISCUSSION OF PAPERS OF DRs. EUSTIS AND DEBUYS.*

DR. S. K. SIMON, New Orleans: This important subject of clinical medicine has only received its due share of attention within the last few years. The Society is to be congratulated on a number of good papers we have had on this subject. With most of what Dr. Eustis has said, I can only say that I heartily agree. I think the point has been definitely settled in regard to the origin of the acetone bodies from proteid material, metabolism of the cells from fat metabolism. This is a point I think that the physiological chemist has now universally acknowledged. It becomes of very great practical importance, as Dr. Eustis has clearly brought out, in connection with the splitting of the proteid material in the intestinal canal through decomposition processes. While I am not exactly ready to designate intestinal toxemia as a distinct form of acidosis, I think there should be a clearer understanding of the part the liver takes in a process of that kind before we speak of an exogenous acidosis. There is no doubt a splitting of the proteid processes in the intestines in adults. I cannot speak definitely of children.

Dr. Eustis deserves considerable credit for the service he has rendered, although I differ with him in calling attention to the great importance of intestinal toxemias in general. There is in adults a practical point to be remembered in regard to acidosis—the acute onset of coma in these cases is nearly always mistaken for uremia. Richard Cabot has called attention recently to this, and to the more or less rarity of acute uremia.

I had occasion not long ago to see a case of adult acidosis similar to the case the doctor mentioned, in which a diagnosis was made of uremia. Fortunately, the treatment is the same. It is one of elimination, and no great harm is done if the patient is treated for uremia. A great many cases in the past of acute uremias that have gotten well have been really instances of acidosis poisoning.

So far as the treatment of what one might call subacute acidosis in the adult is concerned, the use of sodium bicarbonate is indicated, just as Dr. DeBuys mentioned in children; and finally I want to make one plea in the examination of all cases of what one might call chronic constitutional toxemias, chronic poisoning cases, cases with persistent headaches, dyspeptic disturbances in general,

* Paper by Dr. DeBuys not published in the JOURNAL, not having been sent in by the Publication Committee.

dizzy spells. I would make the suggestion that these cases all be examined, not only for indicanuria, but likewise for the acetone bodies, so that one may ascertain if acetone bodies are present, or that there is diacetic acid in the blood giving rise to the poisoning.

DR. CREIGHTON WELLMAN, New Orleans: I am not a pediatrician, but I should like to discuss the paper of Dr. Eustis for a moment from a more general standpoint. In the first place, he suggested a classification of these cases into endogenous and exogenous types, being, so far as I know, original with him, and which promises, in my opinion, to be of considerable practical importance from a therapeutic standpoint. The conception of these cases as falling into two groups, the former being illustrated, for instance, by a case of gastric carcinoma with stasis, and the latter group of cases typified by the ordinary case of so-called intestinal auto-intoxication. It seems to me that such a classification of a patient has the merit of clarifying our ideas as practicing physicians who are called upon to treat these cases, and I believe this classification, if carefully used and worked out, will be of distinct value and very helpful, being similar to the classification by which we recognize cases of gout.

A second point I wish to make is from the standpoint of preventive medicine. I believe this whole question deserves a great deal more consideration than it has yet received.

I refer to the cases with no active clinical manifestations, who have become more or less immune to the immediate effects of these conditions, but which constitute a large group of dangerous conditions. We have in preventive medicine succeeded in tracking down the causes of a great many infectious diseases, and where we can put into operation our knowledge of that group we can accomplish a great deal towards the control; but there is a group, the so-called degenerative and constitutional diseases, which includes a large number of such conditions as we have just heard about. There is a point where research in preventive medicine is indicated. These are people who, early in life, without syphilis, without chronic infections, are subject to arteriosclerosis and other stigmata of conditions which have not yet been worked out. It seems to me, along the line of Dr. Eustis' paper, in inquiring into these conditions and the detection of them before the patient reaches a comatose condition, lies a field of great promise, and I consider it very fortunate in having listened to two papers of the type of that of Dr.

Eustis and that of Dr. DeBuys, and hope the interest in this subject which has been begun so recently may grow and give all the results which they promise.

DR. WILLIAM H. HARRIS, New Orleans: In listening to the papers of Drs. Eustis and DeBuys, I have not heard the work of Bertrand mentioned. While I was in Paris I had occasion, at the Pasteur Institute, to meet Dr. Bertrand. He has been working on intestinal contents in autointoxications, and describes the amino-acidophilic bacillus in the contents of the intestinal tract. He has shown that, in the contents of these cases, he can procure a substance which is so toxic that half of a c. c. injected into the peritoneum of a guinea-pig kills it almost instantly, indicating the toxicity of the proteolytic action of the organism. Since then he has shown that the amino-acidophilic bacillus is a frequent organism in cases of autointoxication, inasmuch as it assimilates a great many of the toxic products in the animal. I believe the point emphasized is of great interest. His work has been quite recent, but the paper has appeared in the current medical literature.

DR. S. G. WILSON, New Orleans: The papers of Drs. Eustis and DeBuys deserve to be discussed freely, though there is some danger, in our enthusiasm, of carrying this question of acidosis too far. Acidosis, as the gentlemen have shown, is certainly a primary condition in some instances, but I have found recently that acidosis is a secondary condition dependent upon so many diseases. For instance, after I have made a diagnosis depending upon the urinary findings, have given bicarbonate of soda, and have stated my diagnosis was acidosis, I have been disappointed afterward to find that there were inflammatory or infectious conditions that gave rise to acetonuria. So, in our enthusiasm, we must not forget that in a large majority of cases, such as pneumonic inflammatory conditions, infectious diseases—and I especially refer to measles—we find acetone and diacetic acid. That being the case, I think, in our diagnosis of it as a primary condition, we should be very guarded.

DR. EUSTIS (closing the discussion on his part): It is certainly very gratifying to hear some of the discussions that have taken place, and first of all, I want to thank Dr. Simon for his magnanimous spirit in saying what he did.

Regarding the question brought out by Dr. De Buys, that he had never seen bicarbonate of soda do any good, or where he had to resort to it, it did not change the prognosis of the case, I will

say that not only will the intravenous injection do good, but it will materially influence the prognosis. I wish to relate the case of a little boy in a semi-stuporous condition, with a large amount of acetone and diacetic acid, vomiting, with a pulse of 166. He was given thorough purgation with calomel, combined with phenolphthalein, and while waiting for the calomel to act he was given two pints of bicarbonate of soda solution with glucose by Murphy drip. He was able to retain that the first six hours. The bowels began to move, and the next morning the nausea stopped; he was given fruit juices, and in 24 hours his condition had improved remarkably, going on to complete recovery. I have known of fifty other cases I could mention if necessary. I do not look upon this condition with the same horror that the pediatricists do. A great many practitioners forget we have other toxemias besides the acidosis.

Regarding Dr. Simon's statement that he did not feel justified in accepting the liver as yet as the cause, and did not wish to accept the type of exogenous, I will say that in cases reported by Loeb and Smith, there was one that ended fatally in coma, and the pathologic findings were marked fatty degeneration of the liver without changes in the kidneys. The seat of trouble is in the liver, and we can look on these cases as of the exogenous type. The endogenous types are those associated with starvation, *i. e.*, tubercular laryngitis, etc. They have an associated acidosis, and they have a coated tongue. Cases with syphilitic infiltration of the stomach in which there is acidosis from carbohydrate starvation from constant vomiting, and a high amount of acetone, would clear up promptly, not from purgation, but by giving them grape juice and peppermint candy, and giving them sufficient carbohydrates.

DR. DEBUYS (closing the discussion): I want to ask Dr. Eustis one question before I begin to close this discussion, and that is with reference to the age of the boy in whom he used the intravenous injection.

DR. EUSTIS: This was not intravenous. This was given by rectum. The boy was five years of age.

DR. DEBUYS: I mentioned specifically that glucose and soda by the bowel are absolutely indicated, and particularly when a child cannot retain anything by the mouth. I mentioned also the inadvisability of endeavoring to give anything intravenously to the child, and specified that the time you would like to give an in-

travenous injection is the time that you cannot do it on account of the irritability of the child. You have to anesthetize the child to get into his vein. Again, if you can give the child, after he is quiet, an intravenous injection it is generally too late to have any effect. Any one who has had much experience with acid intoxication will at some time see a fatal case, and will never forget the sight, and will become impressed with the importance of the condition. As I mentioned in my paper, if a case comes to you early it should get well. The mortality is very low, but in those cases in which there seems to be no absorption you cannot overcome the pathological condition, and these cases will die. That is the experience I have had not only with infants but with children in whom I have given intravenous injections. I have had other cases which have led me to believe that the vein of the child should be considered with a great deal of precaution. In trying to give intravenous injections of salvarsan, as I mentioned in a previous paper, there has been great difficulty in introducing it into the vein. In fact, sometimes it seemed impossible to do so. One word in reference to Dr. Wilson's remarks. I cannot agree with him that we are likely to go too far in regard to acid intoxication. I mentioned the fact that the condition is always secondary in the acute exanthemata. It appears before the eruption, and the diagnosis is easy, and these acid intoxications need little or no special attention. In the other type, however, the idiopathic or apparently primary type, the conditions should certainly always be considered seriously.

In order to make a diagnosis of acid intoxication in a child, it is absolutely essential to rule out all other possibilities. The diagnosis is made by exclusion in a great measure. It is well to remember that the onset of tuberculous meningitis may simulate an acid intoxication.

DISCUSSION ON PAPER OF DR. HEROLD.

DR. GEORGE F. BEL, New Orleans: The interpretation of physical phenomena and signs have been well impressed upon me. I must confess that pathology has done more for me than any other branch of medicine; the more I go into pathology the better I can interpret physical phenomena and the clinical findings; the more confidence I have in pathology. I must admit it is impossible for any internist to teach physical diagnosis or clinical medicine from its A B C to the end, unless he has a correct knowledge of the

pathology he is talking about. That pathologic knowledge I have gained from experience and from the work of others, and I did not have to go to Vienna. I got it in the City of New Orleans through its pathologic department. In my visit to Europe the knowledge I gained in the pathologic department in New Orleans served me to as good purpose as knowledge obtained elsewhere. I commend to the medical men, particularly those who are teachers, to continue to study pathology. Furthermore, the more experience I have in interpreting physical signs, the more respect I have for the laboratory findings. The laboratory man and the clinician are inseparable. They should go hand in hand. I would not expect the laboratory to do impossibilities.

I repeat that the more experience I have and the more I associate with pathologists and bacteriologists the better fitted I am. If a clinician sends a specimen to a laboratory and does not find out what he wants, the laboratory man is criticized. In other words, if the laboratory man misses the specific organism which the clinician thinks is present, the latter concludes that the laboratory is at fault, whereas it may be with the clinician himself in not having sufficient knowledge of pathological anatomy to interpret the difference between a foreign body and such things as proliferation, degeneration, and so on. The sooner we learn that, the more respect we will have for the laboratory.

DR. E. L. MCGHEE, Hammond, La.: As one of the older men of the profession, who graduated in 1874, when there were very few, if any, microscopes in New Orleans, I want to compare that day with the present. The chairman of this section has certainly given us a good sermon. I am sorry there were not more men from the rural districts who could have heard this paper and what Dr. Bel said. Pathologic conditions could not be understood were it not for the aid of the laboratory. It was in the library that some gifted man would bring out some theory, and we would accept it because of the magnificent way in which he expressed himself. But to-day, gentlemen, we go to the laboratory and we find that it can be relied on in most instances. Of course the laboratory man is liable to make a mistake the same as others. He must prove the conclusions he has come to and the ordinary practitioner can see his demonstration. Medicine to-day rests on a different footing from what it did many years ago, due altogether to the *laboratory*. We who are clinicians suspend our diagnosis until a report from the laboratory comes.

We have hundreds of practitioners throughout the State who pay little attention to laboratory work, and some of them do not know its significance. They are the men who should read the remarks that have been made on this excellent paper.

DR. WILLIAM H. HARRIS, New Orleans: First, I wish to congratulate Dr. Herold in bringing out a point which we are so desirous of having brought before this society. Six years ago I started with clinical medicine. As a recent graduate I was deficient in a knowledge of histo-pathology, and took up the study in the laboratory. It was only a question of a few years when further light was thrown on the subject, and I realized the great importance of the subject, and forgot my internal medicine and drifted into pathology and bacteriology, and many things that were previously obscure could be explained by histology. The clinician should co-operate with the pathologist and they should work hand in hand. I do not know of any greater satisfaction scientifically than to follow a case from the ward to the autopsy, if it be necessary, and find the symptoms cleared up and our science verified.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

DIPHTHERIA AND CARRIERS.

Just at the present time, when the public schools and others are about to re-open, the subject of disease carriers is a particularly timely one.

An interesting article on diphtheria carriers and the discussion thereon published in this issue of the JOURNAL may well serve as an introduction to what we wish to bring out as forcibly as we can.

Diphtheria has lingered here in New Orleans a little more than usual during the vacation period, and we fear a serious recrudescence if strenuous measures are not taken to prevent an indiscriminate contact between the healthy children and those who may just have had the disease, but are still harboring bacilli enough to communicate the infection, or those who are only "carriers."

We feel satisfied that the Board of Health of the City of New Orleans is following the usual rules and is having the sanitary laws observed as well as it can; these few words are in no sense to be taken as a criticism. However, we feel that a note of suggestion to the Health Board should not be considered out of place any more than a warning to the profession should be.

In view of the fact that increased experience has shown the danger of "carriers," not only those who *have had* the disease, but those who have been and are apparently free from it, extraordinary efforts should be made to discover these among school children as soon as the schools re-open. We firmly believe that an extra expenditure is justifiable under existing circumstances.

The members of the medical profession should be, and, we believe, are, ready to co-operate with the Board of Health in any manner that the Board may desire and consider practicable.

THE PASTEURIZATION OF MILK.

It has long been accepted by the profession that the pasteurization of milk is sufficient to make it safe, but there have been two objections entered against the general use of this process which have

militated against its free adoption. The first was the change in taste, which made it less agreeable to the consumer, and which was objectionable mainly to the partaker of the milk so treated. The second, more important, and which made pasteurized milk to be looked upon with disfavor by many physicians, was the lessening of its nutritive value.

The United States Department of Agriculture conducted a series of experiments, through its dairy division, in order to find a way of killing disease germs in milk without giving it a cooked flavor or rendering it less digestible. It has determined that when milk is kept at 145° F. for thirty minutes the bacteria that survive are mainly the lactic acid bacilli, which are important for the normal souring of milk, instead of the putrefactive bacteria, which remain after a pasteurization at high temperatures, giving the milk a tendency to rot instead. In addition, the chemical changes from low degree pasteurization are very slight, the protein and the phosphates of lime and magnesia remaining practically unchanged.

Other advantages are from the standpoint of economy only, yet are worth mentioning. The process requires less heat, as it is found that it takes 23½ per cent. less heat to raise milk to a temperature of 145° than to 165°. Also, in the same ratio, less ice is needed to cool the milk to the shipping and keeping point.

The recommendation of the Department of Agriculture seems to be given advisedly, and is to the effect that "when market milk is pasteurized it should be heated to about 145° F., and held at that temperature for thirty minutes."

This modification of the process of pasteurization promises to be an improvement, and should increase the consumption of milk so treated.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

MANAGEMENT OF PREGNANCY AND LABOR IN THE PRESENCE OF PELVIC CONTRACTION.—(*Lancet-Clinic*, 1913, cix, 200; by *Surg., Gynec. and Obst.*)—Schwartz urges an educational campaign, both among the laity and the profession, to impress upon them the neces-

sity of medical supervision for all pregnant women, by showing how it prevents many of the gravest complications and permits the early detection of pathological conditions, enabling us to meet them in good time. This work is aided at Washington University by the employment of prenatal nurses, who instruct expectant mothers in the hygiene of pregnancy and have them report to the obstetrical dispensary at stated periods. Routine pelvic measurements are taken in all cases, and pelves are classified as normal, moderately contracted, or highly contracted. As moderately contracted, he classes pelves with a true conjugate of from 8 to 10 c. m.; under 8 c. m. they are highly contracted. The particular form of contraction is of little practical importance, the question being, is there sufficient space for the safe passage of a viable child?

Cases of moderate pelvic contractions in primiparous women in which the head has failed to enter the pelvis a week before term should enter a hospital and be given the test of labor; if this test fails, they should be delivered by pubiotomy. Cases of moderate pelvic contraction in multiparous women with a record of craniotomy, high forceps, or pubiotomy, should enter the hospital six weeks before term and be delivered by artificial premature labor. Cases of highly contracted pelves should enter the hospital near term and be delivered by Cesarean section.

In the discussion, Davis questioned the advisability of pubiotomy. He stated that he had never performed the operation, and that he has never seen a case where it was an easier or safer operation for the mother; that it is not a suitable operation in the presence of sepsis, and that without sepsis the Cesarean operation is simpler and better.

MILLER.

CARCINOMA OF THE UTERUS IN THE NON-PREGNANT AND PREGNANT.—(*Illinois M. J.*, 1913, xxiii, 169; by *Surg., Gynec. and Obst.*)—In his opening statement, Keyes cites statistics to prove that frequency of cancer in women, as compared to cancer in man, is as three to one, and that nearly one-third, or 28 per cent. (Fehling), are of the uterus. Statistics also show that cancer is most prevalent among women between 30 and 40 years, the percentage being 34; in the sixth decade, the percentage is 11. He states that sexual intercourse, fecundity and sequelæ of labor seem to have a marked influence, and old chronic inflammations leading to endocervical catarrh must play an important part.

Cancer of the uterus is discussed under three heads: 1. Carcinoma portio vaginalis uteri, occurring most often in the forty-second year, appears as a papillary growth or burrows down as a carcinoma ulcer. This first type usually grows down along the vaginal mucosa, and not up into the cervix. 2. Carcinoma endocervicis uteri occurs usually about the age of 47 years and extends upward into the fundus of the uterus, rather than out upon the vaginal cervix. 3. Carcinoma corpus uteri occurs most often at about the age of 54 years, and makes up only 3 to 13 per cent. of all cases. It is also found more often in nulliparæ.

Subjective symptoms are: (1) Hemorrhage from any trauma, spontaneous, or menorrhagia in a woman between 35 and 40 years, is suspicious; (2) odor is usually a late symptom, and speaks for extensive necrosis; (3) pain is also usually a later symptom, and may arise from a variety of causes; (4) metastases; (5) cachexia. Keyes advises early curettage in all suspicious cases, with microscopic examination of the scrapings.

Carcinoma in pregnancy and labor: (1) Carcinoma of the fundus in pregnancy is rare; (2) cancer of the cervix is more common, and may be either present at time of conception or may commence during pregnancy. The prognosis for carcinoma complicating pregnancy is much worse, because of the increased blood and lymphatic supply. About 30 to 40 per cent. of the cases terminate in abortion. Labor is delayed, and section in a series of cases saved all the viable children, and all but 6 to 7 per cent. of the women, while the expectant treatment resulted in the loss of 50 per cent. of the mothers and 70 per cent. of the babies.

MILLER.

Department of Nervous and Mental Diseases.

In Charge of DR. R. M. VAN WART, New Orleans.

A NEW MORPHIN SUBSTITUTE.—E. P. Noguera (*Revista de Medicina y Cirugia Practicas*, October 21, 1912) summarizes the considerations and evidence which have been advanced in favor of "narcophina" as a succedaneum for morphin. He points out that a mixture of all the alkaloids of opium has a narcotic effect not only greater than the morphin in it will account for, but con-

siderably greater than a summation of the effects of the different alkaloids would lead us to anticipate. Most of the alkaloids other than morphin are present in very small amount, and some of them have an action which is antagonistic to that of morphin.

It is to Straub (director of the Institute of Pharmacology in Freiburg) that we are indebted for the first attempt to explain the discrepancy. According to Straub, the increased effect of morphin, when united with the other alkaloids of opium, is due to the presence of one of them only—narcotina, which is present in very small quantity, and is by itself almost inactive. It is a case in which the two alkaloids added ($a+b$) has a physiological effect nearer to their products ($a \times b$). On cats, narcotina has no particular effect, nor does morphin produce narcosis in cats. A quantity of morphin sufficient to narcotize any other animal of equal weight produces in the cat a state of violent excitement. If, however, a mixture of equal parts of morphin and narcotina be administered to a cat, no excitement follows; the animal becomes dull, indifferent to its surroundings, and soon sleeps. It appears also from Straub's experiments on other animals that the paralyzing action of morphin on the respiratory centre is very much lessened, in some cases abolished, by the addition to the morphin of an equal quantity of narcotina. In the case of mice, the toxicity of morphin, with narcotina added, is so small as to be scarcely measurable. Straub has experimented with different proportions of the two alkaloids, and has found that the maximum increase in the narcotic effect of morphin and decrease in its toxicity is obtained when they are mixed in equal quantities. Opium contains only 0.02 per cent. of narcotina, as against 10 per cent. of morphin. Straub has had prepared a double salt, the two alkaloids in equal proportions—a meconate of morphin and narcotina—which he calls narcophina. Clinical trials of this drug in the University of Breslau and in the Gynecological Clinic of Freiburg, by Xehle, Hans Schlimpert, etc., in most of the conditions in which morphin is usually given, and in many (diseases of the organs of respiration, etc.) in which it is contraindicated, seem to substantiate these conclusions.

Narcophina is given in doses of 2 or 3 c. g. as a simple hypnotic. Sleep generally supervenes in from a half to one hour, and lasts six to eight hours. As is usual in the case of new hypnotics or morphin substitutes, it is claimed that all the undesirable after-effects are absent.—*Boston Medical Journal*. VAN WART.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

ANNATTO IN MILK.—The Supreme Court of Missouri, in one of a number of milk cases decided on the same day, affirms a conviction of violating a city ordinance by the possession, with intent to sell, of skim milk adulterated by being colored with annatto, a coloring matter declared to be used to make milk appear richer in fat than it really is. The chemist who analyzed the milk said that annatto is not harmful, and is used in coloring butter (by not being harmful he meant when prepared in a pure condition). He then described how it is made, and from what, testifying that stale urine is frequently used in its manufacture to give it stability and to keep it moist. In 1905 this court decided, in *St. Louis vs. Polinsky*, 190 Mo. 516, a prosecution for carrying and exposing for sale cream adulterated by annatto, contrary to the ordinance, that adding annatto, whether harmful or not, in order to give milk the rich and golden color of milk from cows fed on green food, was a deception and a fraud on milk users and on honest competition, and that an ordinance prohibiting it was a reasonable and valid police regulation. That pronouncement was made on a review of many authorities on full consideration, and has never been shaken or exploded.

“Adulterate” means to corrupt, debase or make impure by an admixture of a foreign or baser substance. Adulteration is a “treatment to stimulate a better article”; an “artificial concealment of defects.” When the statute denounces adulterated milk without defining adulteration, the word may be allowed the meaning given it by lexicographers and understood by people using the English language accurately.

The housekeeper who buys milk for the table or children should be protected from adroit tricks, cheating her judgment by deceiving her eyes. Peradventure, golden-hued milk speaks of cows browsing in dewy meadow grasses. It harks back to bluegrass and clover, with a sprinkle of buttercups and daisies, not to annatto or any other dye. If such good woman wants annatto in her milk, the policy of the State is to let her put it in herself.

The court concludes that annatto in milk is not only against the policy of the State and in contravention of a valid ordinance of

St. Louis, but it is a species of petty treason to domestic philosophy and the simple verities of nature itself. Counsel for the city said, in a flourish of rather startling rhetoric, that the city child now starts on its journey in life flanked by annatto on one side and by formaldehyd on the other. The court will not pass on the issue thus raised in the hot-foot of argumentation, but content itself with affirming the judgment on the cold record. J. A. S.

SYPHILITIC AORTITIS: ITS DIAGNOSIS AND TREATMENT.—Longcope (*Arch. of Int. Med.*, 1913, xi, 14) reviews the literature concerning syphilitic aortitis, and gives his personal observations regarding sixty-three cases in which syphilitic aortitis was proved to exist at autopsy, or in which the diagnosis seemed reasonably sure, from the combination of certain symptoms and signs, with a positive Wasserman reaction during life. His conclusions are that syphilis produces a characteristic lesion of the aorta, which is responsible, as shown by autopsy statistics and the Wasserman reaction, for most aneurisms, about 75 per cent of cases of aortic insufficiency in adults, many cases of aortic insufficiency in adults, many cases of dilation of the aorta, and a certain group of cases of angina pectoris. The infection of the aorta probably takes place during the secondary stage, and, though the symptoms and signs of syphilitic aortitis with complications may develop within a few months of infection, the process usually remains latent or unrecognized for an average of sixteen to seventeen years. Thus, syphilitic aortitis is probably a common cause for the presence of a positive Wasserman reaction in so-called latent syphilis. The early symptoms and signs of syphilitic aortitis are a positive Wasserman reaction, precordial pain, slight dyspnea, attacks of paroxysmal dyspnea and angina pectoris, cardiac hypertrophy, increased pulsation of the vessels of the neck, and signs of dilatation of the aorta.

Of the entire number of cases reported, twenty were treated with salvarsan. Longcope says that the precordial pain, paroxysmal dyspnea, and angina pectoris are temporarily or permanently relieved by repeated injections of salvarsan, but in certain instances these symptoms, especially after large doses, may be aggravated for the first forty-eight hours after injection. The permanent relief of these symptoms can only be obtained, if at all, by the most persistent treatment. It is probably difficult to reach the spirochetes

by the blood-stream, so that the diseased aorta is hard to attack. Logncope is impressed with the necessity of giving repeated doses of salvarsan, and with this method recurrences are not as frequent as formerly. He thinks that possibly neosalvarsan may prove more efficacious, or the combination of salvarsan with injections of mercury. The article is a valuable contribution to the subject, and included details of the cases observed by Longcope, with a summary of the pathological changes of the disease. J. A. S.

Department of Otology.

In Charge of DR. A. W. DE ROALDES and DR. R. CLYDE LYNCH.

DISEASES OF GULLET.—“The increased attention which in recent years has been given to them as the result of the introduction of the X-ray, and the improvement in the technique of esophagoscopy, has led me to collect and analyze the records of my cases, in which the chief clinical symptom was difficulty in swallowing,” says Logan Turner.

The records concern 113 patients, in whom a positive diagnosis of cancer was made in 68. Cancer may affect any portion of the tube, but the upper and lower ends are most frequent, while the center is rather rarely affected. To verify this fact, 29 specimens in various museums were studied, with the result that 12 involved the upper end, 4 the lower end, and 13 occupied the middle portions—a contradiction of the preceding statement. Three out of ten cases seen involved the central portion of the gullet. The fact that only 4 out of 29 showed involvement of the lower end is of considerable interest. In the 68 cases observed, 62 involved the upper end and 6 the lower end. Of these cases, 38 per cent. were males and 61 per cent. were females—rather a contradiction of the usual thought that males were more frequently affected than females.

A study of the situations involved in relation to sex shows: Hypopharynx, 26; males 7, females 19; upper end, 36; males 14, females 22; lower end, 6; males 5, females 1. It was also evident that the females were affected earlier in life than the males—the former between 30 and 50 years, and the men after 50.

Searching for a reason for the preponderance of female over male cases, Dr. Turner suggested hot tea as a possible cause. Hereditary influence was questioned in 18 of the cases, and 9 gave strong evidence of its existence; occupation furnished no key to influence the etiology, nor did residence or location. The disease seems to progress more slowly the older the individual, and is more slowly progressive in women than men. Death occurred within three months after the diagnosis, though the symptoms were complained of for months, and even years before examination.

Dr. Turner concludes as follows: 1. Carcinoma at upper end of esophagus is more common in women than men. 2. It occurs at an earlier stage in women. 3. Invades the hypopharynx more frequently in women. 4. The duration is longer in women. 5. Is more protracted, the older the patient. 6. Average duration is shorter when hypo-pharynx is involved than when limited to upper end of esophagus. 7. Laryngoscopy is absolutely essential in examination of suspected ears. 8. Esophageal bougies should not be employed as a method of diagnosing stricture. 9. A combination of X-ray and esophagoscopy furnishes the most complete information regarding the nature of the disease. 10. When a piece of the suspected tissue is removed, and no evidence of carcinoma found by microscope, the existence of simple stricture must not be inferred.

When a history is given of a bone sticking in the throat, followed by difficult swallowing, a careful examination for malignant disease should be made. The fact that difficulty in swallowing was complained of for one or more years, and the majority of the cases females, would tend naturally to have some of them regarded as functional. A diagnosis of this kind cannot too strongly be condemned, and no case of difficulty in swallowing should be classified as functional, or neurotic, until a careful esophagoscopic examination has been made.

No stronger argument could be tabulated against the globus hystericus than the above facts, gathered from a careful, unbiased observer, and it is the hope that the multitude of cases thrown in this unscientific heap may be in the future more carefully examined and more scientifically treated, especially since we seem upon the dawn of some safe and radical method of dealing with this horribly fatal disease.—*Journal of Otology, Rhinology and Laryngology*, July, 1913.

LYNCH.

Department of Surgery.

In Charge of DR. F. A. LARUE, New Orleans.

THE VALUE OF COMPLETE PHYSIOLOGICAL REST OF THE LARGE BOWEL IN THE TREATMENT OF CERTAIN ULCERATIVE AND OBSTRUCTIVE LESIONS OF THIS ORGAN.—(John Young Brown, M.D., St. Louis, in *Surgery, Gynecology and Obstetrics*, June, 1913, Vol. XVI, No. 6, page 610.) Author says: "The type of cases in which we have found this surgical rest treatment of value may be enumerated as follows: (1) Mucous colitis, associated with obstructive lesions. (2) Ulcerative colitis, amebic, bacillary, tuberculous, etc. (3) Obstructions in the colon, both acute and chronic, due to neoplasms." The report is based upon a series of ten cases so operated. Two were cases of chronic intestinal stasis with bands and flexures, improved; three for amebic colitis, all cured; one for extensive ulcerative colitis involving sigmoid and rectum, in good health now; one for obstructive tubercular colitis, relieved and lived comfortably for two months; three were for late inoperable malignancies of the rectum. The technic consists in dividing the ileum close to the cecum. The distal cut end is purse-stringed and inverted. The cecum is next incised and purse-stringed around a large catheter, which is brought through a stab at McBurney's point, the wall of the cecum and the parietal peritoneum here being tacked together for safety. A large tube is then inserted into the proximal cut end of the ileum, is properly restrained by inversion and suture, and is brought up to and just out of the wound in the wall, being sutured there. The abdominal wound is closed without drainage. The fecal evacuations take place through the tube in the ileum, and the lesion of the large bowel is treated through the opening into the cecum. At such time as may be established by the character of the washings of the colon, the bacteriology, etc., the lesion is cured, the fecal current is re-established by a second operation, opening the abdomen and making a side-to-side anastomosis between the ascending colon and the ileum.

WILLIAMS.

THE FIRST SUCCESSFUL CASE OF RESECTION OF THE THORACIC PORTION OF THE ESOPHAGUS FOR CARCINOMA.—(F. Forek, M. D.,

Surgery, Gynecology and Obstetrics, Vol XVI, page 614, June, 1913.) The author here reports the first case in which the thoracic esophagus was resected successfully for cancer. The operation has been done a number of times, with uniformly fatal results, usually either due to the manipulation of the pneumogastric nerve during the dissection, or to leakage of the proximal stump of the severed tube. The first accident (pneumogastric disturbance) did not occur in this case, and the second (leakage) was avoided by what is a novel method. After resection of the portion of the esophagus which lies behind the aorta, the most dangerous area surgically, it has been the habit of operators heretofore to close both proximal and distal ends of the cut tube, and feed through a gastrostomy opening which had been previously made. In this case the proximal stump of the esophagus was brought out of the posterior mediastinum, up into the subcutaneous tissues of the neck, and its opened end sutured to the edges of a stab wound in the skin just below the clavicle on the left side. The patient chews her food and swallows it in the normal way, the bolus passing to the stomach through a tube which connects the esophagus with the gastrostomy opening.—WILLIAMS.

THE FATE OF BONE GRAFTS.—(Frederic J. Cotton, M. D., and Halsey B. Loder, M. D., *Surgery, Gynecology and Obstetrics*, Vol. XVI, page 701.) The authors have worked on a series of experiments covering the fate of transplants of bone and cartilage. Transplants of spongy bone (the articular ends of bones with cartilage attached) have always worked out successfully, provided the technic of asepsis is perfect. The transplants were all homoplastic. In addition to rigid asepsis, good approximation of grafts is necessary and firm fixation is also required. The fragment very rapidly becomes firmly fixed in place, and adhesions are absent or are very delicate. Without going into the details of repetition as to the histologic changes taking place in the graft and the host bone, the result is that the transplanted bone acts as a scaffolding, upon and into which the new bone cells grow, after a while entirely replacing the graft.—WILLIAMS.

Medical News Items.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an examination for professor of pharmacology, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Hygienic Laboratory, Public Health Service, Washington, D. C., at a salary of about \$4,500 a year, and vacancies as they may occur in positions requiring similar qualifications. The specific position mentioned above is one of much responsibility, and it is desired to secure the services of a man who has had broad training and extensive practical experience in various branches of pharmacology, physiology, physiological and pharmaceutical chemistry, chemotherapy, etc., as they relate to medicine and the public health, and who is well qualified to undertake work of a research and supervisory character. Applicants should have had practical experience in the study of metabolism as well as in experimental pharmacology; they should have had some experience in clinical medicine. Especial weight will be given to original publications on the above subjects. Applicants will not be assembled for examination, but their relative qualifications for the position will be rated upon the evidence adduced as to their general and scientific training and education, their practical experience and fitness, and their publications. An educational training equivalent to that required for the degree of Ph. D. from a university of recognized standing, and not less than ten years' experience in pharmacology and closely allied subjects since leaving the university, are prerequisites for consideration for this position. Applicants must not have reached their forty-fifth birthday; they must have been actually domiciled in the State or Territory in which they reside for at least one year previous to the examination, which is open to all citizens of the United States who meet the requirements. Persons who meet the requirements and desire this examination should at once apply for Form 1312 to the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of Examiners, postoffice, New Orleans.

NEW YORK AND NEW ENGLAND ASSOCIATION OF RAILWAY SURGEONS.—The twenty-third annual session of the New York and New England Association of Railway Surgeons will be held at Hotel Astor, New York City, on Wednesday, October 22, 1913. A

very interesting and attractive program has been arranged. Dr. Hugh H. Young, of Baltimore, will deliver the "Address in Surgery." Railway surgeons, attorneys and officials and all members of the medical profession are cordially invited to attend.

THE INTERNATIONAL MEDICAL CONGRESS convened in London, August 5. Doctors from all parts of the world, estimated to aggregate 10,000, and including great specialists in all departments of medicine and surgery, attended the congress. Resolutions calling on all governments to institute a system of confidential notification to sanitary authorities of the contagious diseases were adopted at a sectional meeting of the International Medical Congress.

MOSQUITO IN DELTA TO BE STUDIED.—The Department of Agriculture has decided to send Dr. D. L. Vandyke, of the Bureau of Entomology, to the territory around the Delta of the Mississippi River, where the insect pest does much harm in disseminating malarial fever. He will be occupied probably six months or more in studying the disease.

ANTI-CHOLERA SERUM DISCOVERED.—Dr. Pierre Roux, director of the Pasteur Institute, has recently announced, before the Academy of Sciences, his discovery of an anti-cholera serum. He said that monkeys which had been infected with cholera had been perfectly cured by inoculation of the serum.

PREPARE TO FIGHT INFANTILE PARALYSIS.—Physicians in New York and other large cities, anticipating a recurrence of an epidemic of infantile paralysis, regarded as a hot-weather affliction, are preparing to combat the development of the disease. The *Medical Record* states that in 1907 New York, with its 2,000 cases, felt the widespread ravages of a disease that heretofore had dealt its maiming blow chiefly in sporadic outbreaks, but since that year the arch-enemy of childhood has not been entirely banished from its lurking places. In 1909 and 1911 it again assumed epidemic virulence. Precautionary methods are being undertaken as a result of the knowledge that the disease follows a definite law of periodicity.

NEVADA UNIVERSITY CRIPPLED.—No less than nine members of the faculty of the University of Nevada, all valued professors, have resigned during the summer and quit the institution. More lucrative positions elsewhere, with broader fields of activity, are given as the cause of their leaving.

THE AMERICAN PROCTOLOGIC SOCIETY has elected the following officers for the ensuing year: President, Dr. Joseph M. Mathews, Louisville; vice-president, Dr. James M. MacMillan, Detroit; secretary-treasurer, Dr. Alfred J. Zobel, San Francisco; executive council, Dr. Louis J. Hirschman, Detroit; Dr. J. Rawson, Pennington, Chicago; Dr. William M. Beach, Pittsburg, and Dr. Alfred J. Zobel, San Francisco. The office of the secretary-treasurer is 518-520 Shreve Building, San Francisco.

ATLANTA MEDICAL COLLEGE.—In order to build up a great medical school in Atlanta, the Atlanta College of Physicians and Surgeons and the Atlanta School of Medicine have been consolidated under the name of Atlanta Medical College. The consolidation assures the new college a place in Class A.

WHITE PLAGUE KILLING OFF PEOPLE ON ALEUTIAN.—Officers of the revenue cutter Unalga report that tuberculosis is rapidly depopulating the Aleutian Islands, west of Unga. In all villages where the government does not provide medical attention there were two deaths to one birth. Unsanitary conditions are said to be largely responsible.

THE ANNUAL CONVENTION AND CLINIC of the American Association of Official Surgeons will be held at Chicago, September 23 to 26, inclusive.

NEW HEALTH-MARRIAGE LAW.—Governor Tener, of Pennsylvania, has recently signed a bill requiring all applicants for marriage licenses to set forth in the applications that they are not afflicted with transmissible diseases. The new law prohibits the issuance of marriage licenses to any person who is an imbecile, epileptic, of unsound mind, or to any person who has been an inmate of any county asylum or home for indigent persons, unless it appears that the cause has been removed and that the applicant is able to support a family.

REMOVALS.—Dr. S. E. Frierson, from Lynn, Miss., to Touro Infirmary, New Orleans. Resident physician.

Dr. T. B. Odom, from French Settlement, La., to Prairieville, La.

Dr. B. L. Bailey, from Magda, La., to Oberlin, La.

Dr. D. F. Waide, from 846 Audubon Building to 838 Audubon Building, New Orleans.

Dr. B. F. Bremer, from McNary, La., to Glenmora, La.

Dr. E. L. McGehee, Sr., from Maison Blanche Building to Cusachs Building, New Orleans.

Dr. H. F. Byers, from Grenada, Miss., to Senatobia, Miss.

Dr. H. E. Sevier, from Millikin, La., to Tallulah, La.

The *International Journal of Suregry*, from P. O. box 587, New York City, to 100 William street, New York City.

MARRIED.—On August 4, 1913, Dr. Edward York Ames, of Shreveport, La., to Miss Magnolia Frierson, of Pollard, Ala.

On August 6, 1913, Dr. Roy McLean Van Wart, of this city, to Miss May Llewellyn Jones, of Bramwell, West Virginia.

DIED.—On July 24, 1913, Dr. Eugene Sabatier, of Opelousas, La.

On July 24, 1913, at Starkville, Miss., Dr. J. W. McGruder, aged 76 years.

On August 11, 1913, at Alexander, N. C., Dr. W. J. Clontz, aged 59 years.

On July 28, 1913, at Hot Springs, Ark., Dr. August Renner, of New Orleans, aged 54 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

What Heart Patients Should Know and Do. By J. H. Honan, M. D. Dodd, Mead & Co., New York.

It is by no means an easy task to decide what any heart patient should know and do, and it is still more difficult to tell this in a reasonably clear and plain form. Then, too, "heart patients" are not all alike, and what one should know and do may be very different from what another one should. Consequently, it is an impossibility to write a book of this sort against which more or less just criticism may not be made. The book under review seems to meet these objections as well as could be reasonably expected and may well be useful in certain cardiac cases or those who have the home supervision of such patients. It would, however, be unwise to put this book in the hands of all such patients without having previously read it and without supplementing it by some advice as to how the patient should read it.

J. T. H.

Vaccine and Serum Therapy. By E. H. Schorer, B. S., M. D., Dr. P. H. C. V. Mosby Company, St. Louis.

This subject is one which is in the limelight these days, and consequently this work will interest a large number of physicians. The descriptions and discussions while clear and complete are also concise and give the reader, especially who is not a specialist in the lines, a good idea of the present status of theory and practice in this field. The reviewer believes that this work will be of value to those interested, as progressive students and practitioners, in the field of medical practice in which the future of therapy appears to lie. Especially commendable is the sane statement of results as obtained with the various sera and vaccines by the different workers, who are liberally quoted in the text.

J. T. H.

Electricity in Diseases of the Eye, Ear, Nose and Throat. By Franklin Coleman, M. D., M. R. C. S., Eng.

While we realize that electricity has not been definitely seated among the modalities of medicine, this work leaves the question just where it started. While the chapters on Physics of Electricity is sufficiently elementary to be grasped by the least informed, one is called upon to read the parts devoted to the treatment, with the keenest selection between good and otherwise, and to criticise so many of the statements as opposed to the concensus of opinion as expressed by our national and international societies and the "Masters" of our work—it is perfectly apparent that this volume is not intended for the younger student, who, believing what he reads, may be led astray in some ways and many places. LYNCH.

Cardio-Vascular Diseases. By Thomas E. Satterthwaite, A. B., M. D., LL. D., Sc. D. Lemcke & Buechner, New York.

A series of monographs in book-form issued as an addendum to the author's work on Diseases of the Heart and Aorta. These monographs have been revised as they include all of the recent advances in the anatomy, physiology, pathology, diagnosis and treatment of cardio-vascular diseases.

All needlessly technical terms have been avoided, a task which ought to make this new book still more attractive to the general practitioner.

DUPAQUIER.

Summaries of Laws Relating to the Commitment and Care of the Insane in the United States. Prepared by John Koren. The National Committee for Mental Hygiene, New York, 1912.

This paper-bound volume of some 300 pages is the third publication of the National Committee for Mental Hygiene. It contains in a systematic form the summaries of the present existing laws of the several States of the Union, including the District of Columbia, as prescribed in regard to the insane and the various provisions made for them. The essentials of the laws of each State are reproduced, the matter being presented under the following headings: 1. Administration and Supervision. 2. Provisions for the Care of the Insane. 3. Commitment. 4. Conveying Patients to the Hospital. 5. Transfer of Patients. 6. Parole and Discharge of Patients. 7. Cost of Maintenance, and 8. Criminal Insane.

The value of the work is increased by the presence of marginal numbers referring to the original statute from which the section is taken.

No other work presenting the modern conception of this important subject has been published. The National Committee for Mental Hygiene is to be thanked for the accomplishment of this task, which allows one to make a comparative study of this subject and to judge for himself the necessary changes to be made in our laws for the betterment of those mentally afflicted.

CAZENAVETTE.

The Modern Treatment of Nervous and Mental Diseases. By American and British Authors. Edited by William A. White, M. D., and Smith Ely Jelliffe, A. M., M. D., Ph. D. Lea & Febiger, Philadelphia and New York.

This is the first volume of a system on the Modern Treatment of Nervous and Mental Diseases. It is a magnificent production of nearly 900 pages, with 25 colored plates and numerous illustrations and diagrams.

The text is divided into nineteen chapters, contributed by as many authors, American and foreign. The subject matter is presented in an entirely different manner from that usually found in ordinary treatises on the subject.

The first two chapters are contributed by William A. White and S. S. Colson, respectively. The former presents as a fitting introduction to this valuable work, the subject of eugenics and heredity in nervous diseases, and the latter, that of education as the modification of behavior for social adaptation. To mention that Havelock Ellis contributes a chapter on the sexual problems, their nervous and mental relations, is sufficient comment, for every one knows how valuable and interesting his contributions are.

Henry H. Goddard writes on The Educational Treatment of the Feeble-minded, and to that end contributes a chapter of 52 pages, wherein the definition, classification and causes of feeble-mindedness, the various tests, including the De Santis, Binet-Simon and others, are thoroughly discussed.

The latter part of the chapter is devoted to the principle of training of those so afflicted. In this chapter alone we find seven colored plates taken from various sources.

Limited space precludes the possibility of alluding to all the excellent features of this work. Much could be said in favor of the chapter on disturbances of the internal secretions and systematic disorder by Henry A. Cotton, also that on the mania-depressive psychoses and their treatment by Clarence B. Farrar.

Those who labor under the impression that there is little or nothing to do for those suffering with nervous diseases would do well to consult the volume. How astonished they will be to find, for instance, a chapter of 86 pages, by Ernest Jones, devoted solely to the treatment of the neuroses and psychoneuroses; and again, from the pen of Adolph Meyer, a contribution of over 50 pages, devoted to the treatment of paranoiac and paranoid states, etc.

It is the firm belief of the reviewer that this work should be within reach of everyone desiring to treat nervous diseases. It will prove of particular usefulness to those devoting their attention to this branch of medicine and more so to those connected with institutions where nervous and mental diseases are treated.

CAZENAVETTE.

Tuberculin in Diagnosis and Treatment. By Francis Marion Pottenger, A. M., M. D., LL. D. C. V. Mosby Company, St. Louis, 1913.

This book will prove valuable to all practitioners, showing, as it does, the best ideas on tuberculin therapy; also the proper technique for administering tuberculin. That tuberculin under proper conditions is a

valuable remedial agent goes without saying, but that proper dietetic, sanitary, moral and other regulations are to be strictly observed, should also be stressed.

We quite agree with the author that latent tuberculosis is dangerous, and that only a complete healing is safe. "A healed lesion should show no reaction to any of the tests after a lapse of sufficient time for the excessive amount of antibodies which were required for the defense of the body, and which were called forth by the stimulation of the toxins produced during the state of activity have passed away. Until such time the reaction should gradually lessen in strength."

While it is true that there cannot be any maximum dose of tuberculin, the author considers that 10 milligrams has proved accurate in his hands. The author speaks highly of von Pirquet's cutaneous test, considering it valuable in early diagnosis. In regard to the conjunctival test, he says "I feel that it is sound advice never to instill tuberculin into an eye that shows any diseased condition." On account of this untoward eye condition in two instances, the reviewer discontinued this test long ago. The Moro and the Liqueur's test are not commended.

In the appendix there is given for the first time in English, Koch's announcement of the discovery of tuberculin. This monograph lends a hopeful and encouraging aspect to the subject of tuberculosis. Books of this kind are a distinct contribution to medical literature. STORCK.

Publications Received.

C. V. MOSBY COMPANY, St. Louis, 1913.

"Genito-Urinary Diagnosis and Therapy," by Dr. Ernest Portner, translated and edited by Bransford Lewis, M. D., B. Sc.

P. BLAKISTON'S SONS & CO., Philadelphia, 1913.

"Ionic Medication," by H. Lewis Jones, M. D.

"Diagnostic Methods, Chemical, Bacteriological and Microscopical," by Ralph W. Webster, M. D., Ph. D. Third edition, revised and enlarged.

J. B. LIPPINCOTT & CO., Philadelphia and London, 1913.

"The Psychoneuroses and Their Treatment by Psychotherapy," by Prof. J. Dejerine and Dr. E. Gaucher, authorized translation by Smith Ely Jelliffe, M. D., Ph. D.

"The Catarrhal and Suppurative Diseases, the Accessory Sinuses of the Nose," by Ross Hall Skillern, M. D.

"Mechanical Treatment of Abdominal Hernia," by William Burton DeGarmo, M. D.

J. B. SAUNDERS COMPANY, Philadelphia and London, 1913.

"Blood-Pressure, from the Clinical Standpoint," by Francis Ashley Faught, M. D.

"Diseases of the Eye," by G. E. de Schweinitz, A. M., M. D. Seventh edition, thoroughly revised.

"Gonorrhoea in Women: Its Pathology, Symptomatology, Diagnosis and Treatment, Together With a Review of the Rare Varieties of the Disease Which Occur in Men, Women and Children," by Charles E. Norris, M. D., with an introduction by John E. Clark, M. D.; illustrated by Dorothy Peters.

“Diet Lists of the Presbyterian Hospital, New York City,” compiled with notes, by Herbert S. Carter, A. M., M. D.

“A Reference Handbook of Gynecology for Nurses,” by Catherine MacFarlane, M. D.

“Applied Bacteriology for Nurses,” by Charles F. Boldnan, M. D., and Marie Grund, M. D.

MISCELLANEOUS.

“Public Health Reports,” Volume XXVIII, Nos. 28, 29, 30, 31, 32. (Washington Government Printing Office, 1913.)

“Paratyphoid Fever: A Report of an Outbreak in a Hospital in Roanoke, Va.,” by L. L. Lumsden. (Washington Government Printing Office, 1913.)

“The International Hospital Record.” Volume 16.

“Department of Sanitation of the Isthmian Canal Commission for the Month of June, 1913.”

“Police Control of Prostitution; Methods to Be Employed in Their Limitations,” by G. Sherman Peterkin, M. D.

“Lippincott’s Blood-Pressure and Clinical Chart,” designed by Percival Nicholson, M. D.

“The Government of the Philippine Islands.” (Manila Bureau of Printing, 1913.)

“Sanitation of Flood-Stricken Towns and Cities, with Special Reference to Conditions Observed in Rivers, Towns and Cities of Kentucky,” by L. L. Lumsden. (Washington Government Printing Office, 1913.)

“The Failure of Dr. R. S. Cummings to Protect Guinea-Pigs Against Tuberculosis Infection with the Vaccine of Dr. Carl von Ruck.” (The Inland Press, Asheville, N. C., 1913.)

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans
FOR JULY, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....	6	2	8
Intermittent Fever (Malarial Cachexia).....	1	1	2
Smallpox.....			
Measles.....	2		2
Scarlet Fever.....			
Whooping Cough.....	1	1	2
Diphtheria and Croup.....	3	2	5
Influenza.....			
Cholera Nostras.....			
Pyemia and Septicemia.....			
Tuberculosis.....	21	40	61
Cancer.....	21	7	28
Rheumatism and Gout.....	1		1
Diabetes.....	1	1	2
Alcoholism.....	1		1
Encephalitis and Meningitis.....	6		6
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	14	8	22
Paralysis.....	5	2	7
Convulsions of Infancy.....	1		1
Other Diseases of Infancy.....	4	8	12
Tetanus.....	3	1	4
Other Nervous Diseases.....	6	1	7
Heart Diseases.....	41	36	77
Bronchitis.....	2	1	3
Pneumonia and Broncho Pneumonia.....	13	13	26
Other Respiratory Diseases.....	2	1	3
Ulcer of Stomach.....	1	1	2
Other Diseases of the Stomach.....	2	6	8
Diarrhea, Dysentery and Enteritis.....	41	10	51
Hernia, Intestinal Obstruction.....	6	2	8
Cirrhosis of Liver.....	7	5	12
Other Diseases of the Liver.....	2		2
Simple Peritonitis.....			
Appendicitis.....	3	2	5
Bright's Disease.....	22	22	44
Other Genito-Urinary Diseases.....	9	8	17
Puerperal Diseases.....	3	3	6
Senile Debility.....	5	4	9
Suicide.....	9		9
Injuries.....	24	17	41
All Other Causes.....	26	27	53
TOTAL.....	315	232	547

Still-born Children—White, 22; colored, 32; Total, 54.

Population of City (estimated)—White, 272,000; colored, 101,000.

Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 13.90; colored, 27.56; Total, 17.60.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....30.06
 Mean temperature.....81.6
 Total precipitation.....5.37 inches
 Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

VOL. LXVI.

OCTOBER, 1913.

No. 4

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

DISCUSSION OF PELVIC INFECTION, WITH SPECIAL REFERENCE TO THE NEEDS OF THE GEN- ERAL PRACTITIONER.*

By S. M. D. CLARK, M. D., New Orleans.

If I were able to secure an expression of opinion from those men in this room who are engaged in general work as to *what* type of pelvic disease they most frequently encounter in their daily rounds, I feel positive that the result would be practically unanimously in favor of *pelvic infections*.

It is an old but most important topic, one upon which we cannot be too well informed. To me it has always had a peculiar fascination. In my short space of time I have witnessed the employment of different plans of treatment, and to this day it is especially attractive in better understanding its management and pathology.

An excellent prospectus of the subject can be obtained by referring to this splendid outline prepared by Dr. J. B. Murphy. The subject is too extensive to treat in its entirety to-day; therefore I will try to select for discussion only some of its most common phases.

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

INFECTIONS OF THE PELVIC ORGANS AND TISSUES.

I. ATRIA OF INVASION:

- Vagina.
- Cervix.
- Uterine surface.
- Tubes.
- Peritoneum.

II. ROUTES OF SEPTIC TRANSMISSION:

- Lymph-spaces.
- Lymph-vessels.
- Blood-vessels.
- Continuity of tissue.
- (A) In parturition.
- (B) In abortions and miscarriages.
- (C) From vaginal infections from below.
- (D) From above—from abdomen or through circulation.
 - (A) Infections in parturition:
 - Vaginal lacerations.
 - Vulvitis and paravulvitis.
 - (B) Infections in cervical lacerations:
 - Pelvic cellulitis.
 - Pelvic lymphangitis (with or without abscess).
 - Pelvic thrombophlebitis.
 - Subperitoneal cellulitis: Acute, virulent, fatal.
 - From operations.
 - (C) Infections of uterine surface:
 - Placental base.
 - (a) Thrombophlebitis.
 - (b) Cellulitis of broad ligament.
 - (c) Endometritis—acute, infective.
 - Mucous surface:
 - (D) Secondary infections from tube:
 - (a) Through ostium into pelvic peritonitis.
 - (b) Through lymph-vessels into the broad ligament.
 - (E) Infections in abortions and miscarriages:
 - Thrombophlebitis.
 - Acute septic peritonitis.
 - Subperitoneal cellulitis.
 - Intramural infections.
 - (F) Vaginal infections from below:
 - Neisserian.
 - Pneumococcus.
 - Pyogenic.
 - Tuberculous.
 - Colon bacillus.

- (G) From above:
 Tuberculous.
 Carcinoma.
 Pneumococcic and allied pus infections.

As you know, the anatomical gateways through which infections enter are the vagina, cervix, endometrium surfaces, tubes and peritoneum. The routes along which the bacteria travel from these primary foci are the lymph spaces, lymph vessels, arteries and veins (especially the latter), and lastly by continuity of surface.

The location of the genital organs renders them especially prone to infection. The skin surrounding the orifices of the rectum and vagina swarm with nearly every known pathogenic organism. This unfortunate anatomical placing, combined with the trauma incidental to parturition, ideally invites the introduction of micro-organisms.

Infection is the great curse and calamity, or, better, the ghost that haunts every obstetrician. How anxious are all of us until these puerperal cases are beyond the range of danger! What a sickening sensation one experiences when a hard chill and high fever develop in a delivered woman!

Vagina.—The *vaginal canal* of every parturient woman is fortunately possessed with a wonderful process of defense in checking the infection from spreading in distant areas. It is not because infections do not occur, but the reason we so seldom see a widespread ascending vaginal cellulitis is due to a phenomenal coffer-damming infiltration, edema and swelling, that blocks the routes of dissemination.

Cervix.—I am sure all of us have witnessed this trait of vaginal injuries, but when we consider the *cervical injuries*, unfortunately a different state of affairs exists. The cervix is usually richly endowed with lymphatic spaces and vessels, it has more lymphatics than any part of the generative organs, and as a gateway of infection I am convinced has not been given *due consideration*.

We are too prone to at once conclude that the cavity of the uterus is the seat of infection, and entirely overlook the significance of tears of the cervix.

The lymphatics of the cervix drain into the cellular tissue interposed between the folds of the broad ligaments, the para-metrial,

perivesical and perirectal tissue. The infection strikes directly through, and in many of our cases of puerperal infections the *cavity of the uterus is absolutely non-involved*.

If the infecting organism is not especially virulent, and the patient possesses a good fighting resistance, the process is confined to the surrounding uterine area, and the case ultimately recovers by the disease ending in resolution or suppuration. If it ends in suppuration, this constitutes a *true pelvic abscess* and is easily drained. The wall of this abscess cavity is composed of cellular connective tissue, as in an abscess of the arm, hence will obliterate and granulate as in any pyogenic cavity. On the other hand, there is another type of pelvic suppuration, with a different pathology, and which is not nearly so amenable to treatment—*i. e.*, the fallopian tube infections secondarily involving the peritoneum. In this process the tube is the primary focus, and is lined by a mucous membrane that is almost not destructive, hence when *the pus* is liberated by vagina the collection is *reformed* through this mucosa capsule of the chronically infected tube, and the disease is by no means cured.

In cervix injuries, when the organism is the staphylococcus, it does not tend to spread to long distances from the point of entrance; rather forms a local abscess or resolves. Whereas, with the virulent type of streptococcal infection, in a certain percentage of cases the organism strikes directly through, shakes off all efforts on the part of nature to confine it, and rapidly spreads post-peritoneally, gains direct access to the blood, producing a terrific toxemia and sapremia and death. This is why, in some of our cases, we see them die without the faintest peritoneal reaction; they are simply deluged with an overwhelming poisoning that courses its way retro-peritoneally.

Remember this process has occurred, not from the cavity of the uterus, but directly from the cervix. In puerperal ovarian abscesses the infection in the bulk of cases takes place through the cervix, by going directly through the lymph spaces. Further, the veins of the broad ligament may readily become involved, and through cervix migration a thrombophlebitis develop.

Hence, the cervix is always to be reckoned with when considering pelvic infection. It tells us how careful we should be in avoiding

the carrying of infection with the examining finger, and when digital dilation is employed how necessary it is to have a sterile hand—boiled rubber glove.

In abortions the cervix is the atrium of the infection in many cases. Numbers of incomplete non-infected abortions are infected by means of the examining finger. In some way an abortion does not *impress many* of us with the same *gravity* as does a full-term delivery, but certainly it should not be so considered. In over *twenty per cent* of the infections of the pelvis that I have seen they have had their origin in an abortion.

An abrasion of the cervix often takes place during an abortion, and when an examining finger gently carries to it the offending bacteria an active infection rapidly develops. I feel that the medical man should approach the vaginal canal in a labor or abortion case with the same septic sense as he does the peritoneal or any joint cavity. Preferably rubber gloves, or, after a thorough scrubbing of the hand, place tincture of iodine upon the ends of the examining finger. Be careful to separate the labia, examine with the parts *well exposed*, and avoid, after the thorough hand preparation, carefully dragging the fingers over the anus and then tenderly carrying the freshly picked-up bacteria to an inviting area for infection.

Body of Uterus.—The interior of the puerperal uterus offers a perfect culture medium. The seat of the placental attachment is the favorite site for the invasion of infection. The body of the uterus is not nearly so richly supplied with lymphatics as the cervix, thus it is only in the most virulent type of infection that we see the bacteria going directly through the walls, producing a general peritonitis, thrombophlebitis, septic emboli, infarcts, endocarditis and death.

The infecting organism being less virulent, it most often is confined to the uterus with a sympathetic broad ligament swelling, which, if left alone, will spontaneously recover.

Every one of us recalls the routine custom of curetting every uterus in a puerperal infection. The infection was thought to be along the uterine walls, and an effort made to remove it. In the past ten years this unwarranted procedure is *not* so general. One of the most important duties of an accoucheur is to rigorously inspect

the placenta and membranes, accurately determining at the time of delivery if all the parts are intact, and then, should an infection develop, he is morally certain that the interior of the uterus is empty. This being positive, what plan of management should we adopt? By no means attempt the criminal act of curetting. The uterus not containing secundines, absolutely nothing but harm is to follow. The infection is already beyond the surface of the endometrium. If you have a fairly attenuated organism present, one that the processes of defense have succeeded in checking its progress, by this tearing down of the barrier wall or granulating zone of Bumm new avenues of infection are reopened and the organism liberated, given an open field, and is generally disseminated. Then given a case in which you are positive that the uterus is empty, what line of treatment is best to follow? From a local standpoint, should we daily, or, as I have seen, two or three times a day, be giving an intrauterine douche? *Most certainly not.* Let these patients alone; do not feel that you are called upon to be constantly tinkering with them. A masterly inactivity regarding the local side is the keynote of success. Many of these cases lose their lives in the hands of one who is always fussing around the pelvis. If you feel that you must be doing something, give them vaginal douches; they do some good, and no harm.

Aim your efforts towards a general supportive treatment, fill them with fluids, proctoeclysis, drench them with water, promote the action of the skin, keep the bowels open, feed with abundance of liquid, nutritious food. Encourage sleep and elimination. An ice bag to the lower abdomen relieves pain caused by the broad ligament infection and peritoneal involvement. Under this general plan very few of these cases die; many of them have a morbidity following, which may have to be relieved through operative measures. After the pelvic storm has subsided, leaving in its path seriously crippled organs, it is marvelous to witness nature's reparative powers in restoring these organs to their normal state, provided the physician so guides the life of his patient as to assist these natural processes in accomplishing the ultimate cure. This consists in keeping the patient physically and sexually quiet for a prolonged period, the time varying upon the severity of the damage.

During the course of a frank puerperal infection, carefully watch the temperature; if the inflammatory process ends in resolution, as many do, the fever will gradually subside to normal, whereas when the temperature continues for more than ten days, be on the alert for suppuration; make careful bimanual examinations. Should you feel a mass either hard or fluctuating, aspirate it, and, if pus is found, institute vaginal drainage and give the patient a prolonged rest in bed.

When the cavity of the uterus cannot be exonerated from containing infected material, explore the interior, having as your maxim, "Do it with the least traumatism." Use the finger, sponge forceps, dull spoon, and, after the emptying, pack the cavity with gauze soaked in normal tincture of iodine. Remove this pack in twenty-four hours. Give two vaginal salt douches a day. It is in the saprophytic type that we obtain the brilliant results after emptying. This is the type having an offensive and fetid discharge from the vagina. They are most amenable to treatment.

Tubes.—By continuity of surface the tube, with its mucosa, becomes involved. Neighboring structures are involved through its lymphatic circulation leading into the broad ligament and to the surface of the ovary. The infection, in some cases spreads along the surface of the mucosa of the tube, reaches the fimbriated end and soils the peritoneum, producing surface peritonitis, which is not nearly so grave as the retro-peritoneal type. This, in turn, may end in suppuration, forming the pseudo pelvic abscess, which, as said before, though improved by drainage, is not cured, as in the suppurating para-metritis.

Infections of the veins have a typical clinical picture. A woman does well only having 99 to 100° temperature along to seven or fourteen days, when suddenly a chill develops, with high rise of temperature. No pain. Expect a thrombophlebitis in these late manifestations of infection, the so-called milk leg. Nearly all ultimately recover, only keeping in mind the danger from emboli passing from the infected vein into the circulation, swept through the heart into the lung, with resulting pulmonary infarct, etc.

Non-Puerperal.—I would have liked to have gone into some detail of pathology and treatment of the non-puerperal pelvic infections,

but time permits only to briefly discuss a few of the commoner infections.

Neisserian.—The gonococcus is the most destructive of the germs that gain access to the pelvis. Fully 80 per cent of the non-puerperal cases are due to the Neisserian organism. It is a surface traveler and readily reaches the tubes. It first deposits in the vagina; plants itself in the urethra, vulvo-vaginal glands, cervix, and then the tubes.

Inflammation in the tubes, from any infection except tuberculosis, first causes the fimbriated end to occlude, and a like construction of the uterine opening, thus producing a closed sac. In the gonococcus, this inflammatory reaction is peculiarly destructive to the mucous membrane, forming densely organized obstructions in the lumen, and so seriously diseases the tube that it rarely ever spontaneously recovers. It has a peculiar property of causing like adhesions on the peritoneal surface, leaving a morbidity that is remediable only by radical surgical work.

Streptococcus and Staphylococcus.—In the streptococcal and staphylococcal infections of the tubes, with proper management, nature often clears away the damage, and the tube recuperates entirely, the patient subsequently becoming pregnant—all depending upon the degree and virulence of the organism.

Rest.—As experience in pelvic surgery increases, the greater becomes the desire to save every possible part of the generative group, and finally, in closing, I wish to outline a conservative course in the handling of these infections, having as its *crux* a profound respect for the *natural powers of defense and repair*, and one that I try to use as a guide.

We recall that, after all, inflammatory process is not a disease *per se*, but is only nature's reaction, device and plan of defense in combating the invading enemy. We, too, know that there is no law so conducive and helpful towards the better carrying of this protective and reparative process than is *rest*. Further, it is known that where possible we do not wish to attack an acutely highly infectious mass, when experience has taught that in the great majority of cases these will become quiescent, less virulent and possibly sterile.

Absolute physical, sexual and mental rest, combined with supportive treatment and active elimination, gives many splendid results where formerly the organs were sacrificed. The rest plan of management has not only a *curative* side, but also is a valuable agent in the pre- and post-operative care of our patients.

As we better understand the pathology we can comprehend the reason why one case of infection gets well by this conservative plan and in another only radical surgical measures give relief.

In conjunction with rest, the vaginal douche and ice bag are valuable adjuncts, though the former is not to be used during the violent acute stages of the infection. This hot douche, 110°, serves to quicken the circulation and secure an active circulatory change, thus favoring and hastening the absorption of the exudates that are associated with many of these cases.

It also, as does the ice bag, definitely diminishes pain, oftentimes rendering it unnecessary to employ sedatives. Nature is establishing her own immunity, autogenously vaccinating herself. Keep the patient in bed for several weeks after all temperature has disappeared; this will depend upon the gravity of the case. Be on the alert for suppurative foci in the pelvis when temperature is reluctant to reach normal. Allow her to gradually resume her activity. She may symptomatically, though not anatomically, be cured, but she does not care so long as she is well and still possessed of her organs. On the other hand, if, after this woman gets over her attack, she has recurrent exacerbations, or she constantly suffers during the interim of these flare-ups, then you know that serious morbidity is there; nature is not able to cope with the enemy, and surgery should go to her rescue. Give her a preparatory rest to operation. Rest her as a post-operative measure.

In our work we have had occasion to go into these pelvises after the storm had subsided, several weeks' rest given, and found absolutely nothing to do. By this plan, if an operation is necessary, it places the operator in the best possible position to practice conservatism. Though I realize that the surgical phase of gynecology *predominates*, still there is a *medical side*, and by its proper and judicious adoption numbers of women will be spared their sexual organs, and even an operation.

EMETINE HYDROCHLORID IN THE TREATMENT OF AMEBIC DYSENTERY.*

By RANDOLPH LYONS, M. D., New Orleans, La.

As a report of six cases of amebic dysentery treated with emetine hydrochlorid has just been published,¹ it is my purpose at this time to give simply a brief resumé of the previous cases and to present my experience with the new treatment in an additional case.

It will be remembered that our knowledge of the treatment of amebic diseases with the soluble salts of emetine is less than a year old. Leonard Rogers' first article appeared in June, 1912. Since then but five communications have appeared, so far as I am aware, on this subject, the last being a report of a cure of an amebic liver abscess by Chauffard.² The total number of cases on record, including my seven cases, is only forty. Our information in regard to the new treatment is, therefore, very meager, though most encouraging in its nature.

Experimentally, Vedder³ has shown that emetine will destroy amebæ in vitro in very high dilutions (1/100,000). It remains to be seen whether clinically emetine will prove to be the active principle of ipecac with reference to its action on pathogenic amebæ in man.

It is more than likely that during the next six months many reports, favorable and unfavorable, will be forthcoming, and it will be well to bear in mind that emetine is still in its infancy. There is much to be learned yet in regard to its manner of action in dysentery—its dosage, its frequency and length of administration, and finally the best preparation for use. In other words, it is still in the experimental stage. General principles of treatment of intestinal disorders apply, however, to the new therapy as well as to the older methods—that is, rest in bed and restricted diet.

In the cases to be reported, no other therapeutic measures, such as other drugs, colonic irrigations, etc., were employed. The following table summarizes the first six cases:

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

1. Lyons, R. "The Treatment of Amebic Dysentery with Subcutaneous Injections of Emetine Hydrochlorid." *Jour. Am. Med. Ass.*, 1913, April 19, Vol. LX, No. 16.
2. Chauffard, A. "Dysenteric Abscess in Liver Perforating Into Bronchus. Rapid Recovery Under Emetine." *Bull. de Médecine*, Paris, February, 1913, No. 7, LXXVIII, pp. 109-135.
3. Vedder, E. B. "A Preliminary Account of Some Experiments Undertaken to Test the Efficiency of the Ipecac Treatment of Dysentery." *Bull. of the Manila Med. Soc.*, March, 1911.

TABLE.

Case.	Duration of Disease.	Previous Treatment.	Doses of Emetine.	Total Amt. of Emetine.	Stay in Hospital.	Result.	Duration of Cure.	REMARKS.
No. 1. "M. F.,"	1½ years	Ipecac, gr. 425 in 7 days	Grains ¾; ¾; ½	Grains 1.8	8 days	Cured	Well after 4 months	Colored male, 27 years old. A very rapid cure.
No. 2. "W. L.,"	15 days	No ipecac	Grains ½; ⅝; ¾	Grains 1.8	9 days	Died		Patient had peritonitis on admission. At necropsy, gangrene of big gut, with 3 perforations.
No. 3. "E. Y.,"	8 months	No ipecac	Grains ¾; ¾; ¾; ¼; ⅝	Grains 3.6	14 days	Cured	Well after 2 months	Patient was unable to take ipecac by mouth; highly neurotic.
No. 4. "J. C.,"	5 months	No ipecac	Grains ½; ⅝	Grains 1.1	14 days	Cured	Well after 3 months	Remarkably rapid cure.
No. 5. "S. S.,"	4 months	No ipecac	Grains ½; ⅝; ¾; ⅞; ⅝; ⅝; 2/3; 2/3	Grains 5.2	39 days	Cured	Not heard from	Last 3 doses were ampoules received from P. D. Co., London, and were given to insure cure. Patient kept longer than necessary.
No. 6. "E. L.,"	3 weeks	Small doses salts and enemata.	Grains ¼; ¾; ⅝; 2/3	Grains 2.7	9 days	Cured	Well after 4½ months	Last dose unnecessary.

Case 7. Albert D. White, male, 37 years. Admitted February 25, 1913. (I was permitted to treat the case through the courtesy of Dr. Halsey.)

Present illness began about one year ago with slight diarrhea and occasional abdominal pains. The disease progressed gradually, with periods of improvement alternating with exacerbations. For the past six months his stools have contained bloody mucus and are usually accompanied by tenesmus. He has steadily become weaker and paler, and has lost twenty-five to thirty pounds. The number of actions during the last month averaged between nine and ten in twenty-four hours. A dull pain has persisted in lower half of abdomen. He now complains of dizziness and shortness of breath, and states also that his ankles are a little swollen at night.

Physical examination: Patient is a white male, poorly nourished, very pale and anemic. He appears rather dull and apathetic. Temperature normal; pulse 70, regular; rather weak and low tension. Chest negative (hemic murmur heard at times). Abdomen flat and tender in right iliac region. Examination of stool revealed amebæ, mucus and blood.

March 1, 1913. Patient had five stools in past twenty-four hours. Red cells, 3,510,000; hemoglobin, 50; leucocytes, 15,000. Emetine hydrochlorid, grain one-third by needle (P., D. & Co., London) morning and evening.

March 2, 1913. Practically no discomfort at site of first injection. Two loose stools since yesterday. Emetine hydrochlorid, grain one-third by needle morning and evening.

March 3. One semi-solid stool this morning. Contains a little bloody mucus. No amebæ or trichomonads found. All abdominal discomfort improved, except for weakness. Hemoglobin, 60; leucocytes, 14,300. Emetine hydrochlorid repeated as previously.

March 4. One stool, partly formed. Emetine injections stopped. Patient put on a light diet and given iron and arsenic. Patient has received a total of two grains of emetine hydrochlorid in three days.

March 7. Allowed up for a few hours. Specimen of feces obtained yesterday by rectal tube is negative for amebæ and blood.

March 11. White count, 9,750. One formed stool daily. Patient stronger.

March 17. Discharged. Stool examined on March 15; found normal. Hemoglobin, 75 per cent. Patient mentally somewhat brighter. Instructed to report later at office.

March 31 (office). Patient markedly improved in appearance. Has gained weight (fifteen pounds) and color. Hemoglobin was 90 per cent. Bowels perfectly normal. Patient still on arsenic and iron.

April 19 (office). Bowels normal. Has gained six pounds more.

SUMMARY.—Of the seven cases treated with emetine hydrochlorid, all were apparently cured except one, who was hopeless from the beginning. All the patients have been seen or heard from except one, and have remained well for periods varying from one to four and a half months. No bad symptoms of any kind were observed from the injections. The largest dose in the series was three-quarters of a grain. In two cases now under treatment I have used as much as two grains (equivalent to 180 grains of ipecac) in a day, with no untoward effects.

Before concluding, I think it might be well to say a word as to emetine and one of its soluble salts. Emetine is one of the alkaloids

of ipecac, and is not to be confused with emetin, which is a resinoid, and is on the market as well. Besides emetine and emetin, ipecac contains cephaelin, another alkaloid, ipecacuanhic acid and other substances of minor importance. From an amebecidal point of view, experimentally and clinically, emetine is its most valuable ingredient. The majority of my first cases were treated with emetine hydrochlorid solution made by dissolving emetine in weak hydrochloric acid, which produced a clear, deep brown liquid. It is, however, no easy matter to make up this solution, as a slight excess of acid causes considerable local irritation and infiltration when injected, and therefore should be discarded, as absorption is also probably delayed. Rogers arranged with Burroughs & Wellcome to put up the hydrochlorid and hydrobromid of emetine as tabloids, and already dissolved, in sealed ampoules (now listed by New York branch), while Parke, Davis & Co. (London branch) also supplied it in the latter form.

In cases 5, 6 and 7 the ampoules of emetine hydrochlorid, from P., D. Co., London, were employed, and caused scarcely any local irritation. More recently I have received ampoules of emetine hydrochlorid from P., D. & Co., Detroit, and, curiously enough, the two products are not prepared alike. The American preparation is a brown, clear liquid, while the London product is a clear, colorless one. The former is probably made up as above described, while the latter is presumably prepared by dissolving the salt of emetine hydrochlorid (a white powder) in saline solution. The American product is more acid in its reaction than the London variety, and consequently, in large doses, somewhat more irritating.*

I have also had some experience with the use of emetine hydrochlorid salt which may be obtained from Merck & Co. This powder may be divided conveniently into one-third grain papers. It is very soluble in water, and corresponds in reaction to approximately the P., D & Co.'s London product. The chief objection to the salt is its cost (\$2.75 for five grains).

This salt, as also the alkaloid emetine, may be administered by mouth in salol-coated pills. I have recently given the hydrochlorid of emetine by mouth (in salol-coated pills), as well as in solution by needle, to a severe case. The only advantage in giving emetine in pill form over ipecac is that in the former case the pills are much

* Since this paper was written, Parke, Davis & Co., Detroit, are listing a product of emetine hydrochlorid apparently identical with their London branch.—R. L.

smaller, and three one-third grain pills will equal 90 grains of ipecac or 18 ipecac pills. Should other things prove equal, this in itself would be a great advancement in the treatment of dysentery.

In concluding, I do not feel justified, from my limited experience with emetine, in making any definite assertions. However, I believe that the drug may prove to be of great value in the treatment of amebic disease. Whether the cures thus far reported will be permanent cannot yet be foretold; still it must be borne in mind that relapses often occur because patients are discharged as cured too soon; nevertheless the fault is attributed to the medication.

Again, many recurrences that are reported among ignorant individuals (especially true in respect to negroes) are due to the fact that the patients return to the same infected localities and conditions whence the disease was derived, and the so-called relapse may not be due to a reinfection from within, but to a fresh infection from without.

Whether emetine will replace ipecac, which is its parent, as a therapeutic agent, or will be found more valuable in conjunction with it, remains to be proven. Certainly in those cases in which ipecac for some reason cannot be taken by mouth the treatment will be a boon. As a method of administration it is far superior to the ipecac therapy, as any one who has had experience in giving large doses of salol-coated ipecac pills will vouch for. In short, from my limited experience with Rogers' new treatment, I believe it to be worthy of a very thorough trial.

THE OPERATIVE TREATMENT OF INACCESSIBLE VESICO-VAGINAL FISTULÆ.*

By F. W. PARHAM, M. D., New Orleans.

Mrs. E. consulted me in June of last year for a distressing vesico-vaginal fistula, the result of a total hysterectomy done for carcinoma not quite three months previously.

Digital examination showed the absence of the uterus and a somewhat shallow and contracted vagina. At the apex of the left vaginal sulcus the finger could easily palpate a round opening in the bladder. In the Sims position this could be well seen through an illuminated rectal speculum. Water thrown into the bladder flowed freely into

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

the vagina, and a uterine sound, properly bent, could be carried without difficulty into the bladder from the vagina and from the bladder into the vagina. The fistulous opening was surrounded by hard cicatricial tissue and presented a problem that promised to tax surgical ingenuity.

Her condition was deplorable and appealed most piteously for relief. Urine dribbled almost constantly, keeping her wet nearly all the time. She wore a urinal, which in some measure mitigated her misery by permitting her to go about, but the urinal itself became a nuisance owing to the urinous odor, which was at times most disagreeably pronounced.

I set about the effort to relieve her on June 5, 1912, when I attempted a direct closure of the fistula per vaginam. Vaginal flaps were lifted and turned back from the opening, and two sutures were carried through both margins of the fistula. These were used to pull the fistula down, so that freshening of the edges and suturing could be better done. This being done with catgut, the vaginal mucosa was closed with silkworm gut. A retention catheter was put in and left for about four days.

The technical difficulties were great, so narrow was the space for manipulating, and the operation was quite prolonged, but the closure appeared satisfactory, and I felt hopeful of the result. For a few days there was no leakage, and I felt encouraged, but on the fourth day there was some discharge of urine per vaginam, and water thrown in through the retention-catheter passed into the vagina. This became more pronounced, until it seemed as bad as before. Two weeks after the first operation I made a second attempt to close the fistula, which could now be plainly felt again.

On June 20 I opened the peritoneal cavity above the bladder and, having packed off the pelvis with pads, made an attempt to reach the fistula by detaching the bladder from above. The bladder was so bound down by cicatricial tissue that I soon abandoned this route. I then opened the bladder by a free incision and found without difficulty the fistula in the trigone of the bladder. Both ureteral orifices could be plainly seen in close relation with the fistula. Freshening was difficult and unsatisfactory, but approximation was finally accomplished with chromic gut, the bladder wound sutured carefully, and the peritoneal opening closed. The vagina was next exposed and the mucous membrane again united with silkworm gut. She was made to lie prone for the first twelve

hours, but this position became so intolerable that she was turned on the back again and the bladder kept emptied by frequent use of the catheter. For a week the condition was promising, but soon it again became evident that the bladder was again draining through the fistula into the vagina, and I had to acknowledge a second failure. This operation had lasted two and one-half hours, and my mortification was, I assure you, most keen. After regaining her strength sufficiently she was allowed to return to her home in the country about July 1. I felt sure I should never have the opportunity of making another effort to relieve her.

In October she returned to the city and again consulted me. Her general health was better and she was determined to undergo another operation, if I thought it worth while. In the meantime I had made a search of the literature for some new suggestions. I found in "Ashton's Gynecology" a reference to George Gray Ward's operation for a fistula similar to that presented in my case. I looked up the original article in *Surgery, Gynecology and Obstetrics* and found reported there two vesico-vaginal fistulæ, both following complete hysterectomy, and each showing the fistula situated high in cicatricial tissue, as in my case. Ward called them, very correctly, I think, *inaccessible*. I determined to carry out his plan, as all others had miserably failed.

I operated October 26, 1912. The procedure is well illustrated in the accompanying drawings, which were kindly made for me by my associate, Dr. L. B. Crawford. The essential features of the operation are:

1. Liberal dissection of the vaginal mucous membrane, so as to mobilize freely the bladder and bring the fistula within reach.

2. Beginning the dissection well forward, just behind the meatus urinarius, where the natural lines of cleavage make it possible to separate easily the vaginal membrane from the bladder wall.

3. The use of a lever in the bladder to push down the wall so as to make the fistula accessible for suture. This the technic accomplishes admirably.

In the dissection it is necessary to free the bladder especially thoroughly at the site of the fistula, otherwise the approximation cannot be satisfactorily done. The four flaps make this feasible. I found the technic comparatively easy and completed the operation with much less difficulty than either of the others.

No retention-catheter was used, the bladder being emptied every two hours at first and at gradually increasing intervals until, at the end of a week, the urine was voluntarily voided by the patient. No leakage showed at any time, and she left within three weeks for her home, perfectly happy.

I have a letter from the patient dated April 16 saying she is well and happy and stouter than she had ever been before. There has been no leakage at any time. She has had from time to time considerable irritability of bladder, but this seems not to be giving any disturbance at present.

The operation, as here outlined, has as its essential feature the free exposure and mobilization of the bladder so as to pull it down sufficiently to make it accessible. The inaccessible fistula then becomes quite accessible.

This mobilization of the bladder, of course, is not new, for it has been done by many operators since A. Mackenrodt, of Berlin, so clearly described its technic in 1894 (*Centrbl. f. Gyn.*, No. 8, 1894), but the special technic, as given by George Gray Ward, for the cases of fistula consequent upon total hysterectomy, is so plain and simple that it will appeal to any surgeon when confronted with such a case, and especially after several failures with other methods. It is practically the modern operation for cystocele, with more extended dissection of the bladder. My intention has not been to discuss the treatment of vesico-vaginal fistulæ, for this has been thoroughly done in the works of Kelly and others, but merely to call attention to this simple method for this particular class of cases.

I wish, before closing, to refer to the use of the fascial flap as an aid in these plastic operations. Schmidt (*Amer. Jour. Med. Science*, March, 1913) has reported one case which shows the value of such a flap. He had failed in two previous operations. In the third, after lifting the mucous membrane flaps and suturing the fistulous opening, he placed a flap of fascia lata directly over the sutured area, holding it in situ by a few catgut stitches. The mucous membrane was then carefully sutured over this. Union was prompt and the cure complete.

This is one of the latest uses of the fascial flap deserving of consideration. In my case, perhaps, either the first or the second operation might have proved successful had I interposed one of these flaps.

THE FREQUENCY AND CAUSES OF STILLBIRTH.*

By DRS. W. D. PHILLIPS AND M. THOMAS LANAUX, New Orleans.

Ideal obstetrics, says DeLee, demands that every child not congenitally deformed be delivered alive and absolutely uninjured. A perusal of all available statistics shows that this ideal is far from being realized. It is not our purpose to deal with statistics at length in this paper, but only to offer a few to show that the mortality of intra-uterine life is as great, if not greater, than that of any other period of human existence—infancy, childhood, adolescence or mature age.

The causes of stillbirth are many. Pathology of fetal life is still obscure, and its elucidation would help us to solve many a vexed question in this department of medicine. Up to a few years ago autopsies upon stillborn children were exceedingly rare, except when a medico-legal question was raised. Reports of autopsy findings in the last decade or two have thrown more light on this important subject and have brought out the fact that many unexpected conditions are liable to be found and explained in these post-mortem examinations.

In the course of this writing we will attempt to bring out some of the most frequent causes of stillbirth, and briefly offer a few practical suggestions in regards to preventing same.

Statistics: The following statistics are compiled by William F. Murray and published in the Reference Hand-Book of Medical Sciences, 1884. For the New England States of Connecticut, Massachusetts, Rhode Island and Vermont he gives 3 per cent. of all births at term, and the following American cities for the year 1883 as follows:

Philadelphia, 4.8; Washington, 10.7; Milwaukee, 5.6; New Haven, 3.3; Mobile, 17.7; Concord, 3.3; New York, 8.9; Brooklyn, 9.7; Baltimore, 8.8; Boston, 4.5; Cincinnati, 5.1; Richmond, 8.4; St. Louis, 8.0. General average, 7.6.

He states the general average of continental districts to be one in twenty, or 5 per cent., and that the report of the Dublin Lying-in Hospital gives a rate of 4 per cent. in country practice. Dr. Andrew Smith says 4.9 per cent. of children born at term are stillborn. Schultze, in 1877, estimated that 5 per cent. of children are still-

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

born and 1.5 per cent. die very shortly after birth, the result of trauma of labor.

Dr. Peter McCahey, of Pennsylvania, in the *Medical News* of Pennsylvania, August 22, 1891, says: Statistics show that fetal mortality has not appreciably diminished during the past century. Now, as in 1791, the proportion of stillbirth to children born alive is as one to thirty. Out of approximately 750,000 children born in the United States every year, 25,000 to 30,000 are dead when born. This is exclusive of premature births and the multitude of abortions, accidental and intentional."

In the City of New Orleans the total number of births in the year 1912 was 7,677. The number of stillbirths was 569—that is, a percentage of 7.1.

In the Charity Hospital of Louisiana the total number of births during the years 1906 to 1911 was 2,014. The number of stillbirths was 248, or a percentage of 12.3.

To this we wish to add the statistics of our out-door obstetrical clinic, which was established by Dr. C. J. Miller, January 1, 1912, as an adjunct to the obstetrical department of Tulane University, realizing the great necessity of allowing under-graduate students the opportunity of witnessing and assisting in the actual delivery of patients at their homes. During the year 1912 and to April 1 of this year the total number of applications for confinement in this clinic has been 803. The number confined, 395. Number of stillbirths, 15, or a percentage of 3.8. Of the total number of stillbirths, we have estimated the probable causes as follows: Two were in breech presentations and due to delay in delivering the after-coming head; one from external trauma; one in a case of eclampsia, spontaneous delivery taking place, the child evidently having died in utero; four were premature. The cause of death in the remaining eight was not determined, as we were unable to obtain autopsies, but from the history of the mothers the majority were probably of luetic origin.

We hope in the future to hold autopsies in the majority of cases of stillbirths. In the total number of forceps deliveries we had no fetal deaths.

Statistics, as one readily summarizes, vary greatly in summing up the average mortality of stillbirths—ranging from 3 to 8 per cent. The most valuable information on the subject in some respects might be gathered from statistics of private practice, as

reported by physicians in the journals, but as these are from comparatively limited numbers, they are not as accurate as we would like to have them. On the other hand, lying-in hospitals and hospitals in general will have a large number of complicated cases, and consequently more stillbirths. The fact must also be brought out that there is no uniform system in signing the certificates of stillbirths, and that premature children, who are not viable, or children who die a short time after delivery, are classed by some as stillborn. This, in a way, complicates statistics from boards of health.

However, the lowest estimate of the percentage of stillbirths given by observers amply justifies our consideration. Much more so the highest. When we consider that in the United States only approximately 30,000 children are dead when born at term, we are compelled to agree with Dr. McCahey, of Pennsylvania, when he says: "When we reflect upon the national loss implied by these figures, and upon the anguish inflicted upon the mothers who have borne so much travail, only at last to behold the inanimate bodies of their children, it would seem incumbent upon us to try to lessen this frightful mortality." To do this, the principal causes of stillbirths must be recognized.

CAUSES.—A great deal of time could be consumed in naming and discussing the many causes of stillbirths—more time than we have at our disposal—hence we will only mention the causes now, and later discuss the most important ones.

Syphilis: No one doubts that syphilis is an easy leader in the race of causes of stillbirth, but by how great a distance it is impossible to say with accuracy. Obstetricians should at all times be on the alert for this disease in pregnancy. Ruge says that 83 per cent. of repeated abortions are due to it. Abortions during the fifth to the seventh month, and premature delivery during the seventh to the eighth month, are very characteristic of syphilis. Von Winckel found 61 per cent. fetal mortality in syphilitics.

Asphyxia: One of the greatest dangers which a child meets on its way into the world is the interruption of its respiratory apparatus—that is, asphyxia neonatorum. The causes of fetal asphyxia are divided into two classes: (1) Those cutting off the oxygen supply; (2) those which cause compression of the brain. Under the first class we note (a) hard and prolonged labor pains recurring so frequently that the blood in the placental sinuses cannot be renewed; (b) partial and complete separation of the

placenta, either normally or abnormally implanted in either head or breech presentations; (c) anemia of the child from rupture of the placental vessels, as for instance placenta previa; (d) compression of the umbilical vessels either in cases of prolapse of the cord or while it still lies in the uterus. Coiling of the cord around the neck of the child may cause asphyxia, knots in the cord (we have seen two such cases); (e) compression of the placenta when it is low in the uterus either by the head or trunk, sometimes compression by the head when the child presents by its breech; (f) excessive retraction of the uterus away from the child with perhaps some partial separation of the placenta—for example, neglected shoulder presentation; (g) narcosis, as, for example, asphyxia from morphin.

Under the second class asphyxia is brought about by either internal or external compression—internal from hemorrhage or fracture; external from pressure of the parturient canal, instruments or the hands of the attendant.

Asphyxia may be caused also by premature respirations made by the child, sometimes as the result of stimuli from version, forceps or pulling of the leg in breech presentations.

Eclampsia: One-half or more of the children are stillborn after eclampsia of pregnancy or labor. This high mortality is due to toxemia, prematurity, asphyxiation by repeated convulsions of the mother with prolonged cyanosis, or injuries sustained during birth, especially forced delivery.

Placenta Previa: This condition gives us a very high fetal mortality, variously estimated from 50 to 60 per cent. The child dies from asphyxia through separation, compression or tearing of the placenta.

Inter-Cranial Hemorrhage: The frequency of cerebral injury during labor is certainly great. This has been shown by post-mortem examinations and is usually found in children subjected to much pressure to the parturient canal, instruments or the hands of the attendant, especially when delivered by forceps or by the lower extremities.

Prolapse of the Funis: There is great danger for the child in this condition; the soft blood vessels easily suffer compression and asphyxia results.

Contracted Pelvis: Abnormal presentations breech, face, brow, shoulders are four times as frequent with contracted pelvis, hence it is obvious that fetal mortality will be high. Asphyxia causes a

large number of deaths from compression of the brain, as the head is jammed through the inlet. Frequently prolapse of the cord is found in cases of contracted pelves.

Forceps Operations: The dangers to the child are intracranial hemorrhages or ruptures, compression of the brain, fracture of the skull and concussion of the brain. Almost every imaginable injury has been observed.

Breech Presentation: Asphyxia causes most of the fetal deaths but hemorrhages and injuries to the neck and spine also account for many.

Maternal Fevers: These may be caused by any of the acute infectious diseases and may cause stillbirth. As a rule the fetus stands a slow rise of temperature fairly well; on the other hand, they do not stand a sudden rise or very high temperature.

Chronic Diseases: These when found in the mother are accompanied by comparatively high fetal mortality. We may mention nephritis, tuberculosis, chronic malaria, anemias, and also poisonings of most kinds.

Nervous Shock: When this is caused to the mother it may kill the child in a manner not yet explained.

Trauma: When this occurs to the mother injuries to the fetus may occur, causing death. The trauma may be the result of falls or blows.

Habit: This has been noted by some observers, the mother giving birth to stillborn children repeatedly.

Diseases of Placenta: We may mention here for instance fatty degeneration, causing the child to be stillborn.

Diseases of Fetus: Malformations of the heart and other parts of the body, and diseases such as leukemia, often cause death of the fetus.

Paternal Causes: The father may be too old or too young to furnish fecundating germ of sufficient vigor to enable fetus to reach maturity. Nephritis and cancer in the father have also been thought to cause stillbirths.

Of the above mentioned causes of stillbirth, we wish to especially emphasize the following and offer a few practical suggestions with the object in view of lessening fetal mortality.

As soon as diagnosed syphilis should be thoroughly treated. If this is done early abortions, premature delivery and stillbirth may be prevented. In suspected cases the Wasserman reaction is of

great assistance to us. The indication is at times to give anti-syphilitic treatment to both parents. The early administration of salvarsan or the iodides and mercury is urged.

In breech cases statistics give the fetal mortality to be from 6 to 15 per cent. With proper treatment not over 5 per cent. of children should die in uncomplicated cases. Realizing the high percentage of fetal death in these cases, it is imperative that we should make early the proper diagnosis of fetal presentations, and if possible in some cases, especially primiparae, to convert a breech presentation during the last few weeks of pregnancy to a cephalic one. In other instances the case being in labor and the breech presenting it is of the utmost importance to be prepared for emergencies, in order that there will be no delay in delivering the after-coming head. To this end we should have an assistant at hand if possible to administer an anesthetic and make supra-pubic pressure if needed. Forceps should be in readiness to render aid to the after-coming head if needed. The body having been delivered should be wrapped and kept warm. When there is difficulty in delivering the head often Mauriceau's method can be employed to great advantage. Violent efforts in the form of traction on the part of the physician are to be deplored, as they often cause intracranial hemorrhages or injuries to the inter-vertebral capsules of the cervical vertebrae.

Concerning contracted pelvis, we note that the percentage of fetal mortality decreases with the degree of contraction because in the highest degree of contraction the disproportion is usually recognized and Cesarean section performed.

In the very slight pelvic contractions the fetal mortality is higher for the reason that the condition is not recognized and the patient is allowed to go into labor, and it is not until after several futile attempts at delivery by forceps are made that we realize the presence of a contracted pelvis. By this time the chances for a safe delivery by Cesarean section has passed or fatal injury has been done to the child. In view of the above the routine practice of making careful pelvic measurements is urged.

On the subject of eclampsia, the fetal mortality being so high, we consider more particularly the life of the mother and would advise rapid delivery. Should the case justify our temporizing in favor of the child, it is advisable to have the patient if possible in an institution where immediate attention can be given her.

In placenta previa, practically the same holds true as in eclampsia, that is, knowing the high fetal mortality, we primarily consider the mother. In these cases also it is deemed advisable to have the patient in an institution so that judicious and prompt treatment by means of Hirst bags and delivery by version or Cæsarian section be made.

Contrary to the last two conditions, placenta previa and eclampsia, prolapse of the funis is accompanied by only slight danger to the mother, the great danger being to the child. Early recognition of this condition is most necessary and appropriate treatment may be instituted by examining the patient carefully and correcting any malformations or presentations. Careful auscultation of the fetal heart will reveal in most instances the extent of compression of the umbilical vessels and assist materially in determining the treatment and in giving the prognosis.

Any one performing autopsies on new born children will be struck by the frequency of hemorrhages, punctate and large, in the brain, in the larger ganglia, along the sinuses and sutures. The article on this subject by Drs. Leopold Meyer and E. Hauth of Copenhagen, in the March, 1912, number of the *Archives Mensuelles D'Obstetrique et de Gynecologie* is most interesting and practical.

These observers note that after extracting the cerebral mass from the skull of new born by means of two small window-like openings in such a way as not to injure the dura, if then bilateral pressure is made on the head the fibers of the cavity are seen to stretch with force. This fact was brought out by Benecke in 1910. The tension increases greatly if pressure is made forward and backward instead of laterally and the vertex is seen to be displaced at the summit and backward. Under the influence of this pressure a displacement of the temporal is observed. The base of the skull becomes wider and the tension of the cavity increases greatly. The fibers which stretch by the upward displacement are especially those which are inserted on the mastoid portion of the temporal bone; they pass across the dura and the falx to be inserted on top on the parietal bone forming the superior longitudinal sinus. The backward displacement produces a tension in the antero-posterior fibers of the falx near the apophysis of the crista galli. Pressure exerted in this way, that is, forward and backward, often brings on ruptures of these fibers, not only in the upper thin layer of the dura, causing incomplete rupture, but also in the whole thickness

of the dura, causing complete rupture. These may extend higher in the longitudinal sinuses, and in the pit of the brain. During six months, from October, 1910, to April, 1911, these observers examined, using their special technique, 64 heads of stillborn children and children who died shortly after birth, and they found ruptures in 28 cases. One may ask of what practical importance these ruptures are from a clinical standpoint. This question is answered by the fact that out of the 28 cases in which they found ruptures, 13 were considered as having been born dead as the result of rupture and hemorrhage, 5 of these cases were in difficult forceps deliveries, 1 in a breech and 1 in an occipito posterior presentation. They also report 66 cases delivered by forceps. In 58 of these cases the application of forceps was good and delivery comparatively easy, with no fetal mortality. In the 8 remaining cases the application of forceps was not good and a good hold on the head was not obtained; all 8 children were stillborn and had intracranial hemorrhages and ruptures. These facts are very valuable to us from a practical standpoint and confirm the old doctrine that it is of the utmost importance to make a good application of forceps, and that a bad application, especially one from frontward and backward, is most dangerous. Cases in which ruptures and hemorrhages are found after normal labors are always in small children, usually born before term. The heads of small children at times do not even stand the compression to which they are subjected in normal labor. On the other hand, the heads of large children usually stand compression much better.

These are but a few of the many points which will suggest themselves to any one who will give the matter appropriate attention. We hope in the future with the number of clinic cases at our disposal to offer a more detailed report into the frequency and causes of stillbirth, and in this way corroborate statistics from other clinics.

THE CASES OF ECLAMPSIA THAT I HAVE SEEN.*

By CHAS. McVEA, M. D., Baton Rouge.

When I decided to report these cases I knew that I was treading on dangerous ground. I knew that I would be severely criticised. I knew that my ideas did not tally with the writers on eclampsia, but I knew, too, that the percentage of deaths, both to mother

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

and child, had been so great that I thought I might help some poor devil by reciting my experience and, if I could get out a free discussion of the subject, I would learn from the experience of others and would be better equipped for the next case. DeLee (1913) says the mortality of eclampsia is still from 20 to 45 per cent for the mother and from 30 to 60 per cent. for the child. My experience has been limited, I know, but what experience I have had has given me better results than that. I do not propose to start any discussion here as to the theory of eclampsia. The theories are very numerous, but we do not know the cause. We only hope that some Bass will take up this subject sooner or later and tell us what the cause is.

My only purpose is to enumerate the cases I have seen and to tell you, in an humble way, what I did, or, rather, what we did, because in every instance where I could reach another physician, I sent for him. And right here and now I want to express my thanks and appreciation to Drs. Duchien, Tucker and Stirling, one of whom was with me in fourteen of these cases.

I have seen a great many women with albumen in their urine during pregnancy, and I made it a rule early in my professional life to examine the urine, not once a month, as the books tell us, or once every two weeks, but to examine the urine of every pregnant woman every Wednesday morning. This I have done religiously, and have at times had some serious rows with these same women concerning the examinations. I have been repeatedly told that the examination was not made by my predecessors, that it was too much trouble, or that they didn't have any one to send the sample by, etc. But most of them would send it, and I never failed to examine it when it was sent.

All of these cases I have treated by eliminating nitrogenous foods, giving milk and cereal diet, an abundance of fruit and the liberal use of water, with occasionally a dose of calomel and, at frequent intervals, a saline. But the cases I want to report particularly are those of true eclampsia.

It may be of interest to you to know that only four of my seventeen cases were negroes—three of them 16 years old and one 28. Of the seventeen cases, thirteen were primiparæ; one was pregnant for a second time, two were pregnant for the third time, one was pregnant for the seventh time. Six were short, stout and full-blooded. Eleven were slender. Eight had their convulsions at night. Four

thought their convulsions were brought on by an approaching storm. Ten of these cases I saw for the first time in a convulsion. Ten of them had convulsions before delivery, two during labor, five after delivery, one six hours after delivery. Seven had their seizures at or near the eighth month. Four were sixteen years old, two seventeen years old, nine were less than twenty-five, two were over thirty-five.

Twenty years ago we were taught that the kidneys alone were at fault. Nothing was said about the liver. Today we know that the liver is as much to blame as the kidneys. Not that either causes the trouble, but some poison thrown off by the pregnant uterus and taken up by the blood current and which is not properly eliminated by the liver or bowels, kidneys and skin is the real cause of the trouble. We do not know exactly what this poison is. All sorts of theories have been advanced, but no one has yet found the true cause. We do know, however, that there are three channels of elimination—the skin, the bowels and the kidneys, and to these we must look for help.

Swelling of the feet and legs, and even of the face, should certainly cause us to examine the urine. But when this is accompanied with headache, particularly on one side, dizziness and dimness of vision, with constipation and a diminution in the amount of urine passed, we have signs enough of approaching trouble and should get busy at once. And still I have seen several cases that declared most positively that they had not noticed any of these symptoms.

During or just before an attack the patient might complain of sudden headaches, blindness, twitching of the eyelids or hands, uneasiness, dizziness, anxious, scared look, pupils will dilate, eyes may be crossed, and then your trouble *has* begun. If you can see your patient early enough I believe the attack could be warded off by a brisk purge—I prefer calomel in combination with phenophthallein and rhubarb, ten grains each. I have never seen this start-labor, and I believe I have saved several cases by giving it.

When we do not have time to give the calomel, I believe an ounce of sulphate of magnesia should be given. If the pulse is rapid, I believe in using veratrum in fifteen to twenty minim doses, given hypodermically in preference to anything else. I have given the veratrum every half hour for two or three doses, and I fully believe I have saved life by its use. I believe in keeping the patient as

warm as possible with warm blankets to stimulate action of the skin. I believe in bromid in large doses to help to relieve the nervous tension, given either by mouth or rectum every hour. I believe in normal saline solution, one or two pints at a time given just under the breast by hypodermoclysis. I believe in allowing the flow from the uterus to be as free as possible after labor. I have never seen it too free in any of these cases.

I do not believe in giving morphia, because I think it interferes with the action of the skin, liver and kidneys. I do not believe in chloroform or *ether* except just as an expedient during the operation of delivery, and I certainly do not believe in a physician's sitting by the bedside and keeping the patient under the influence of either, as was formerly done to control the convulsions. I do not believe in bleeding except in very full-blooded people. I believe that the veratrum will do the same work in a better way and with less danger to the patient, and still I believe three of these patients were saved *by the bleeding* after we had exhausted every other means. They were very full-blooded and the bleeding seemed to have helped them.

To those of you who might not have had the opportunity of seeing cases of eclampsia bled, I wish to state that this is one condition where the blood spurts from a vein almost as strong as it would from an artery. I have seen it spurt half way across the room.

I do not believe in waiting, as was formerly advised. I believe when a woman has a convulsion that she is going to have another, and I believe in going right into that uterus as antiseptically as possible, but going right into the uterus and getting the baby, the cause of the trouble, as gently but as quickly as possible. I am not unmindful of the fact that there are advocates of vaginal Cesarian section and of abdominal Cesarian section. I know that there is danger and there is going to be damage done to the patient by any of the three methods, but I believe that the best and quickest way in the *majority* of cases is to go right into the uterus with the hand, perform podalic version as soon after the first convulsion as possible. Very often there is no dilatation. If we had time to pack we would save trouble and damage to the uterus, but after the convulsion occurs I believe it best to dilate as quickly, but as carefully as possible, and to deliver the child.

I do not believe that turning is as bad as some have pictured it.

Playfair has said that there is no operation in which gentleness, absence of all hurry and complete presence of mind is so essential as in turning. I agree with his statement concerning the presence of mind and gentleness, but if you don't hurry in eclampsia you will lose one, or perhaps two lives. I do not believe in pilocarpin, because I am afraid of it. I do not believe in croton oil, because it is too irritating and often fails to act, even in five-drop doses. Whatever is given must be given in large doses, because absorption is invariably bad.

I believe in washing out the lower bowels as soon as possible and then I believe in giving normal saline solution as an enema, besides giving it under the skin, and when we can not get a dose of magnesium sulphate down by mouth, I believe we ought to put it right into the stomach through a rubber tube, and, if necessary, down through the nasal passage.

Contrary to the books, I have never seen a case of septic fever follow eclampsia. I have, however, seen a slight rise of fever for three or four days, but very light. During the convulsions we ought always to put a piece of wood between the patient's teeth to prevent chewing the tongue.

Forcible delivery is bad enough, but there is danger in eclampsia, and more danger than there is in forcible delivery. I believe forcible delivery by the regular route is better than abdominal Cesarian section, or vaginal Cesarian section. I know full well that I have done damage to the uterus in some cases, but I repaired the damage at the time to the best of my ability and I know that my cases are alive and well today.

My first case was a negress 28 years old. She had previously given birth to three children. She had at least twenty convulsions before, during and after delivery. This case was at term. I delivered her by podalic version. Both lived.

Second—Negro girl sixteen years old. Primipara. Two convulsions at the eighth month. I dilated with my hand; delivered her with forceps. Both lived.

Third—White, seventeen years old. Primipara. Normal labor at term. Several convulsions after delivery. Both lived.

Fourth—White, 22 years old. Primipara. Normal delivery at term. Convulsions began six hours after delivery. She had fifteen or twenty. Both lived.

Fifth—Negro girl, sixteen years old. Primipara. Eighth

month. Convulsions began at 4 p. m. I saw her at 11 a. m. the next morning. She must have had forty convulsions. I delivered with forceps. Both lived.

Sixth—White, sixteen years old. Primipara. Fifteen or twenty convulsions before, during and after labor. Delivered with forceps. Both lived.

Seventh—White, thirty-seven years old. Primipara. One convulsion. Eight months. Normal delivery. Child died.

Eighth—Negress, sixteen years old. Primipara. Several convulsions before delivery. Eighth month. Podalic version. Both lived.

Ninth—White, thirty years old. Primipara. Term. Normal. Thirty convulsions, all after delivery. Both lived.

Tenth—White, thirty-five years old. Seventh pregnancy. Eight months. Convulsions before, during and after. Thirty convulsions. Podalic version. Both lived.

Eleventh—White, seventeen years old. Primipara. Term. Normal. Several convulsions after labor. Both lived.

Twelfth—White, twenty-two years old. Primipara. Eighth month. Several convulsions before. Podalic version. Both lived.

Thirteenth—White, thirty years old. Primipara. Term. No convulsions, but nausea, headache, twitching, blindness. Forceps. Both lived.

Fourteenth—White, thirty-two years old. Primipara. Eighth month. Convulsions before. Podalic version. Both lived.

Fifteenth—White, twenty-one years old. Primipara. Eighth month. No convulsions, but oedema of lungs, headache, blindness, respiration 60, pulse 140. Forceps. Both lived.

Sixteenth—White, twenty years old. Primipara. Term. Convulsions before. Podalic version. Both lived.

Seventeenth—White, twenty-four years old. Primipara. Term. Convulsions before. Podalic version. Both lived.

I have seen three sisters in one family have eclampsia. Their aunt had died of it. They were children of a doctor and sisters of a doctor. And every precaution was taken to prevent trouble. The first was my patient. She had been cautioned as to the care of herself, not only by myself, but by her father, who was a well-known practitioner, and I know that she did everything in her power to prevent having trouble. I examined her urine regularly every Wednesday. I examined it on a certain Wednesday. It was

normal. That night the weather turned cool. She sat on a balcony, contracted a cold, and on Friday morning following had a convulsion about 11 o'clock. This was at or near the eighth month. I was in Shreveport. My wife wired me that my patient was sick—that she had had a convulsion. I caught a train; rode to Addis, hired a team, drove twelve miles, hired a skiff, crossed the river and went directly to the house and delivered the patient myself. She had had only one seizure. The child was delivered in the normal way, but was dead when born, although there were three physicians in the house at the time.

The second sister, thinking I had had bad luck with the other case, sent for Dr. Stirling. He was as careful with her as I was with the other, he knowing as well as I did the history of the first case. In due time his case was delivered normally. He, thinking something might happen, remained with the patient two hours and left her perfectly comfortable and with no apprehension whatever. He had barely gotten out of sight when I was 'phoned to come at once—that they could not find him, and that the patient was dying. We spent the night and half the next day there. Gentlemen, if she had one convulsion she must have had thirty. But she recovered.

The third sister had been a patient of mine since my graduation. I had delivered her five times. She had always gotten through with her labors without trouble, but she was fearful that something would happen on account of her two sisters having had this trouble. I was more cautious than ever. I lived just across the street from her, saw her at short intervals, examined her urine every Wednesday, found no albumen. But just one month before the day for delivery she awoke about 2 a. m., got out of bed presumably to empty her bladder, when the occupants of the adjoining room heard her fall to the floor. I was summoned immediately; found her having one convulsion after another. I 'phoned Dr. Stirling to come at once. I lifted her with assistance to the bed and made ready to deliver immediately. I dilated with my hand, even before Dr. Stirling reached the house, and ten minutes after he administered a little chloroform I delivered her of a living child. She must have had eight or ten convulsions before the delivery, and she certainly had twenty or thirty afterwards, the last three being very severe, and six hours apart.

These three sisters and two of their children are alive today,

and they have never shown any symptom's of Bright's disease, the urine having cleared up within a month or two after delivery.

Now, gentlemen, this is my report on all the cases of eclampsia that I have seen, covering a period of twenty years. My patients, both mother and child, are living, with one exception, that of a baby, and then I was three hundred miles away when the convulsion occurred.

REPORT OF A CASE OF CERVICAL MYOMA.*

By MILTON A. SHLENKER, M. D., New Orleans.

Definition: Robbinowitz defines a cervical myoma as one that originates within the area bounded by the internal and external os uteri.

My only apology for presenting these two specimens is that in a recent and comprehensive review of the literature on this subject Robbinowitz was able to collect in the last twenty-six years only one hundred and thirty-three cases of myoma of the cervix—evidencing its apparent rarity.

Inquiry among my colleagues who have had opportunities to deal with large numbers of myomata lead me to believe that this condition exists much more frequently than we are led to believe by the investigations of Robbinowitz, though not considered of sufficient importance to report.

The question in my case is whether or not they are true cervical myomata, for it is exceedingly difficult to determine if the myoma in the cervix had its origin primarily there—or that it is secondary to those in the other part of the uterus.

These growths follow the course of fibroids elsewhere in the uterus and they may be sub-mucous, sub-peritoneal or interstitial—according to their location. They may be supra-vaginal when situated above the portio vaginalis; infra vaginal when located within the vaginal cavity, and inter-vaginal when located midway between these boundaries. They are usually situated in the anterior, posterior or lateral wall, but most frequently in the posterior wall. They all have a tendency like other fibroids to send their branches in various directions.

* Read before the Orleans Parish Medical Society, August 11, 1913.

What is their significance? They are an etiologic factor in the production of sterility, but when the patient once conceives the pregnancy continues to term and the tumor then forms a mechanical obstruction during parturition. In addition to dystocia produced by this condition, rectal and bladder symptoms are also produced by pressure of the growth, also various neuralgic pains from pressure on the pelvic nerves.

I append herewith the history of one of the cases, with report of the pathologist:

Olive Murdock, colored, native of Louisiana, age 39. Admitted April 19, 1913, ward 38A.

Family History.—Father dead; cause unknown. Mother living; has had a tumor for eighteen years and has never been operated. Family history otherwise negative.

Previous History.—General health always fairly good. Her principal occupation for the past two years has been field work; for a year previous she had done house work. She has had the usual diseases of childhood, and had malaria ten years ago.

Menstrual History.—Menses began at fifteen, and are usually of three days' duration. She suffered with cramps usually one day prior to the period. As a rule, her menses were regular.

Has had two children at full term; labor was normal. Has had one miscarriage several months after the birth of the first child, in the third month of gestation. She was in bed for three days, and had no fever or other inconvenience. She had another full-term child eighteen months later; this confinement also was normal. She remained in bed only four days after this confinement.

Present History.—Her health has been failing since the birth of her last child seventeen years ago. She complains of pains on both sides of the lower part of her abdomen—more especially on the right side. She has been suffering with a stomach (?) trouble for the past five or six years. Her menstruation, up to the past year, has been regular and from five to six days' duration, and the quantity normal. For the past year her menstruation has been irregular, manifesting itself once, twice or three times a month. She noticed a lump in abdomen about three years ago, but paid no attention to same.

Abdominal Examination.—Multiple nodules in pelvic cavity easily palpated.

Vaginal Examination.—Tumor almost completely filling the pelvic cavity, nodular in outline. Large, apparently cystic, mass situated in upper part of tumor.

Operation.—April 23, 1913. Panhysterectomy, appendectomy, salpingectomy.

Clinical Diagnosis. Multiple fibroid of the uterus, chronic salpingo-oophoritis, chronic appendicitis. Myoma of cervix situated on posterior lip of cervix, in the supra-vaginal portion.

Recovery.—Uneventful. Discharged May 7, 1913. Cured.

Microscopical diagnosis by Dr. Couret.

Cystic oophoritis. Chronic salpingitis. Multiple myoma of uterus and cervix, with cystic degeneration of parts of the fibroid.

QUININ AND TETANUS.*

By F. W. PARHAM, M. D., New Orleans.

About twelve years ago I was called by a well-known practitioner of this city to see in a private sanitarium a man who was suffering from one of the most marked attacks of tetanus I had ever seen. I was told by my confrere that he had been treating this man for an obstinate malarial fever, and had been compelled, I understood, to resort to the hypodermic use of quinin. The salt of quinin used was the hydro-chlorate of quinin and urea. This had been used in the form of solution put up by reputable druggists and injected by the nurse under instruction of the physician alongside the spinal column. I drew off the shirt and counted nine bluish spots, five on one side and four on the other side of the spinous processes. These spots were of the size of large buttons and gave the impression of having been injected intradermally. The spots were evidently necrotic. The injections had been given during the preceding seven days, I was informed, and the signs of lockjaw had just developed the day before. In spite of all we could do the case went on to a rapid fatal ending. The question we tried to answer was, what was the source of the disease? Was the syringe infected from some previous case, or did the solution of quinine from the drug store contain the bacilli? I could find neither the syringe nor the solution that had been used. I learned from the doctor the formula and sent a prescription to the drug store where the first had been obtained. This I had examined bacteriologically, but found no bacilli. There had been no other case recently in the institution. The origin of the tetanus was shrouded in mystery, and so remained until quite recently.

About this time I looked into the literature and found five cases of tetanus reported in a French journal following the hypodermic use of quinin. The explanation was not, however, forthcoming.

Recent observations found in medical literature are of great interest and throw some light upon this hitherto obscure subject. The profession has long recognized tetanus as a distinct disease, with a definite syndrome, even from the time of Hippocrates, but it was not until 1880 that the first real step in its etiology was made by Sternberg when he was able to announce that he had produced experimental tetanus in animals by the injection of gutter water

* Read before the Orleans Parish Medical Society, August 25, 1913.

and earth. Four years later, early in 1884, Carle and Rattone published their successful experiments in producing the disease in animals by the injection of pus from human tetanus. In December of the same year, 1884, Nicolaier announced the discovery of the drumstick bacillus in animals infected with tetanus by the introduction of earth into small pockets in the tails of mice, rabbits and guinea pigs. It was not, however, until 1889 that Kitasato was able to isolate the bacillus in pure culture, taking advantage of two of its properties which he recognized, that it was anaerobic and that its spores were resistant to heat. Both these properties it is important to bear in mind, for it is upon them that the pathogenesis of the disease depends, and when the remarkable resistance to heat of the tetanus spores is understood, some of the mysterious cases reported are more easily explained. Before taking up such cases I will make a few observations regarding the nature of the disease and the circumstances under which it usually develops.

The disease is essentially a pure toxemia. The bacilli or their spores may exist indefinitely in the tissues, but no symptoms will be produced unless toxins are formed. The toxin introduced produces the characteristic symptoms, even though no bacilli are present. But even though toxins be present, no symptoms are produced until it has reached the spinal cord, and the promptness of manifestation of the disease is directly proportional to the facility with which the toxin reaches the central nervous system. The amount of the toxin required to produce the disease is least when injected into a motor nerve, less intramuscularly than subcutaneously and intravenously. In other words, its most ready access is through the nerve trunks and it is more prompt in its effects when given intramuscularly, because intramuscularly it is in nearer contact with the motor nerves through which it may be conveyed to the nerve centers. Etiologically speaking, in the disease in man, since we meet with it only clinically and not experimentally, we have to consider the conditions favoring the development of the disease when once the bacillus or its spores have been introduced. The bacillus is anaerobic; therefore punctured and other wounds which bury the bacilli deeply in the tissues *near to* the motor nerve end plates in the muscles furnish the conditions favorable for not only the development of the toxin, but for its conveyance rapidly to the spinal cord; if in addition to this the wound is made by an instrument which traumatizes greatly, and especially if it at the same time conveys

irritating material into the tissues, the most certain production of the disease is provided for.

The introduction of the bacilli, the exclusion of air by burying them deeply in the tissues or by the coincident infection with saprophytic or other aerobic micro-organisms, which use up the oxygen, are contributing factors, but the development of necrotic areas provides especially favorable conditions for their growth and toxin production. So far our consideration of the matter involves the necessity of introducing the bacillus in order to produce the disease, for without the germ there will be no disease. Valliad and Rouget, it is true, have shown that tetanus spores, freed of their toxins, become innocuous in the tissues, and Sir David Semple has carried out some convincing experiments showing that "washed tetanus spores" may be introduced almost with impunity into guinea pigs and rabbits, provided the soil be not made suitable for their development by coincident damage to the tissues giving rise to necrosis. In other words, the bacillus, even with its spores, may not be capable of giving rise to the disease; it is necessary that some toxin be introduced or produced in the tissues. The toxin actually is present (usually) when wounds are contaminated with soil or manure harboring the bacilli, but the question of moment with us in the present discussion is whether wounds or injuries unattended by the introduction of tetanus poison may not sometimes be followed by tetanus. Sir David Semple in his *Scientific Memoir No. 43*, published by the Government of India in 1911, has gone exhaustively into a consideration of this subject. He mentions ten cases of tetanus resulting from the hypodermic use of the bihydrobromide of quinin, in all but one of which the tetanus spores were absolutely excluded. In this one only it seems that the distilled water used to dissolve the quinin contained some tetanus spores, but he was able to show that even in this case the quinin was in large measure responsible for the tetanus resulting, for the water containing the spores failed in guinea pigs and rabbits to reproduce the disease when injected alone or with a non-irritant substance like morphia and succeeded in every case where the quinin was injected with it. That the quinin was not otherwise contaminated was shown by its failure to produce the disease when injected simply with normal salt solution. In this tenth case of the series of ten cases of tetanus in man, instanced by Sir David Semple, it is perhaps not difficult to explain the development of the disease, for

tetanus spores were present, but can we explain the other nine where the quinin injections were made as he assures us under the strictest aseptic precautions? Before taking up Semple's argument I shall indulge in a few general observations.

In these latter days we have come to recognize the possibility of the long residence of various micro-organisms, pathogenic in character, in the human tissues. Typhoid bacilli in the gall-bladder, diphtheria bacilli in the tonsils of apparently healthy individuals, are familiar illustrations. The same now we must admit as to the bacilli of tetanus.

Vincent in 1904 in *Annals of the Pasteur Institute* speaks of latent tetanus spores in man and explains certain cases of "spontaneous tetanus" as due to the calling of such spores "into activity by a heat-stroke, a chill, by quinin hypodermics or other depressing influences."

Matas in a valuable paper read before the American Surgical Association in 1909 called attention to the danger lurking in the failure properly to prepare patients for hemorrhoid operations, especially by excluding from their diet uncooked garden truck, like celery, lettuce and tomatoes, owing to the possibility of harboring tetanus germs. This is a small danger, as was shown in the discussion of his paper by the fellows of the association, but nevertheless a possible one. The opinion has been expressed by careful investigators that tetanus bacilli are found in the intestinal canal of 5 per cent. of mankind, and in 20 per cent. of those who work about horses. "So long," says Ashhurst, "as the mucosa of the gastro-intestinal tract is intact they are not liable to infection by this channel, on account of the antitoxic properties of the intestinal juices, especially the bile," as stated by H. Vincent.

It has been abundantly shown in experimental work on animals that tetanus spores may lie dormant for indefinite periods and then under favoring conditions be called into life. Tarozzi and Canfora (Hutchings) have injected animals with toxin free spores and as late as 31 days afterward produced tetanus by causing necrosis of tissue. Here might be mentioned long periods of incubation in animals and man. Ashhurst mentions the following: Valliard reported six cases, all over one month, one of these (Terrier's) developing after 87 days. Fox mentions injected guinea pigs suddenly developing tetanus without apparent cause after four months. Some cases of repeated recurrences of tetanus in an individual

might be similarly explained. Fink, according to Ashhurst, reports two cases showing relapses at intervals of several months and Feder a case relapsing over one month after recovery. Ashhurst especially mentions the mysterious case of Reynier, "where slight recurrent attacks of tetanus occurred throughout a period of six years and in which finally a typical and very severe attack occurred, apparently caused by the hypodermic injection of a quinin salt."

Having thus shown the presence in normal individuals of latent (temporarily harmless) tetanus bacilli or spores and also that when injected free of toxins into animals they may lie dormant for indefinite periods we are now prepared to follow Sir David Semple in his argument against the use of quinin hypodermically on account of the danger of producing tetanus. Whilst recognizing that the question of the administration of quinin in malarious countries is of fundamental importance, its irritating qualities and the impossibility of sterilizing it without damaging it as an efficient anti-malarial remedy render it dangerous for subcutaneous or intramuscular routine administration. He agrees with MacGilchrist that its power to produce necrosis of tissue renders quinin and its salts unsuitable for such use. This mode of administration he says must therefore be abandoned as a routine procedure. Semple arraigned Major F. A. Smith severely for the unscientific position he takes in criticism of his (Sir David Semple's) statements in his Scientific Memoir No. 43. Smith asserts that it has been for years his routine practice to employ quinin hypodermically in the treatment of malarial fevers, but Sir David shows that Smith's technic of sterilizing his quinin is both ineffective against tetanus spores as well as destructive of the quinin as an anti-malarial remedy.

Theobald Smith has shown that spores of some strains of tetanus resist boiling for from 40 to 70 minutes. Must we, therefore, Semple asks, boil our quinin one hour? We must do so if we are to guard against any possible contamination of the quinin with tetanus spores. If we *do* we render the quinin more or less inert as far as its quinin value is concerned. Furthermore, unless well diluted a large portion of the injection will be precipitated and deposited in the tissues. In other words, no quinin salt can be reliably sterilized without destroying its potency and when injected it will invariably produce tissue-necrosis unless so diluted as to make its use impracticable, and Sir Semple's experiments show that this necrosis, by providing a suitable soil, may determine the lighting

up of latent spores and the development of tetanus. Not quinin alone, but lactic acid or other irritating substance injected with "washed," that is, toxin free, tetanus spores he has shown give rise to tetanus, and such irritating substance may, when injected without spores, start the growth of spores latent in the tissues. Vincent in 1904 already (as previously mentioned) called attention to these possibilities, thus explaining some etiologically obscure cases of tetanus. Hutchings of Detroit in the discussion of Matas's paper referred to above mentions the following case of interest in this connection: Man suffering a crushing injury of the hand, followed by sloughing; eighteen days later amputation of three fingers and skin transplantation done; seven days later, loosening of the flap; in one week later another grafting; loosened one week later; ten days thereafter severe tetanus. This man had been in hospital all the time under constant surgical surveillance, yet developed tetanus. Would it not seem in this case some latent spores had been aroused into pernicious activity?

The following summary of Sir David Semple's Scientific Memoirs prepared by Major S. P. James, secretary to the committee for the study of malaria in India, is so well done that I have copied it from the January, 1911, number of *Paludism*, published in Simla, India:

"Cases of tetanus sometimes occur after the hypodermic or intramuscular administration of quinin, and it may now be regarded as proved that such cases are not always due to a contaminated needle or solution, but sometimes occur in circumstances in which the sterility of the apparatus used, of the fluid injected, and of the patient's skin at the site or injection, is assured. The results of the present investigation indicate the probable cause of such cases, the danger attending the hypodermic or intramuscular administration of quinin, and the procedure by which that danger may be avoided.

"The author's explanation of the occurrence of tetanus when no tetanus spores have been injected with the quinin solution rests upon the following findings: (1) Many people in good health harbor tetanus spores in their bodies, either in healed wounds or in the intestinal canal. Hidden away in the tissues, the spores remain alive and retain their virulence, but, for one reason or another, they do not grow into toxin-producing bacilli. It appears that such tetanus-spore-carriers may be quite common, for, as regards the intestinal canal carrier, Colonel Semple found the spores in the feces of four out of every ten persons examined. The frequency of 'healed-wound carriers' is not known, but probably is considerable, for it is reasonable to suppose that the majority of people have suffered slight injuries accompanied by the introduction of tetanus spores, but not followed by tetanus, and that at least some of these people harbor in the healed tissues a few spores which have not been destroyed by the phagocytes, and which, from the absence of anaerobic conditions, or from some other cause, do not grow into toxin-producing bacilli. In the thirteenth series of experiments described by Colonel Semple, eight guinea pigs were inoculated in the hind leg with spores

entirely free from toxin ('washed tetanus spores'). The animals remained healthy. At periods varying from five weeks to seven months after inoculation the guinea pigs were killed, and small pieces of the subcutaneous tissue at the site of inoculation were removed aseptically, placed in tubes of broth, and incubated. In all the eight experiments, true tetanus bacilli, which were found to be virulent, were recovered. These results prove that living tetanus spores can remain in the tissues for at least seven months without being destroyed by the phagocytes and without causing tetanus; and it is reasonable to suppose that a similar condition obtains in persons who have suffered an injury accompanied by the introduction of tetanus spores, but not followed by tetanus; most of the spores are followed by phagocytosis, but some of them escape and become hidden away in the tissues, where they remain for months or years after the wound has healed. (2) The second finding is that these tetanus-spore-carriers are in danger of suffering from tetanus (a), on the occurrence of circumstances (such as great fatigue, or exposure to extremes of heat and cold) which lower their normal power of keeping at bay the germs which they harbor; (b) when the site where the spores are lodged becomes converted into a medium which, from being anaerobic and from a failure of phagocytosis, is favorable for the growth of the spores into toxin-producing bacilli; (c) when a focus of dead tissues forms in a part of the body at a distance from the site where the spores are lodged.

"For our present purposes the third of these conditions is the most important, and in regard to it Colonel Semple has proved, especially by his series of experiments numbered III, VII, XVI and XVII, that the 'latent or dormant' tetanus spores are sometimes conveyed from the site where they were harmless to a site (such as that of a quinin injection) where they can develop abundantly and produce sufficient toxin to cause tetanus. (3) The third finding is that the results of injecting quinin hypodermically or intramuscularly are, (a) local destruction of tissue, and in most cases the formation of a slough which includes the true skin, the subcutaneous tissue and the deep fasciæ; this means the formation of a subcutaneous necrotic area which is an anaerobic medium very favorable to the growth of tetanus spores; (b) the paralysis of the leucocytes so that their phagocytic action is hindered.

"If we have interpreted Colonel Semple's paper rightly, the explanation of the occurrence of tetanus after an uncontaminated and aseptic hypodermic or intramuscular injection of quinin, is, on the basis of the above findings, not difficult. Suppose the malaria patient to be a tetanus-spore-carrier, the spores being situated in the intestinal canal; and suppose we inject the quinin solution into the patient's buttock, and by so doing produce there a local subcutaneous patch of dead tissue. Leucocytes from all parts will crowd to the injected area, and it may happen that some of them contain tetanus spores gathered from the alimentary canal as a result of an abrasion of the mucous membrane. The spores that have been conveyed to the necrotic patch will find the conditions there very suitable for development into toxin-producing bacilli; and tetanus will ensue. Similar events might happen if the tetanus-spore-carrier was a person in whom the 'latent or dormant spores' were situated in the site of an old wound on any part of the body.

"If we accept this explanation, it is easy to understand why, even in tetanus-spore-carriers, injections of non-irritating drugs, such as morphia, cocain or digitalin, are not followed by tetanus. These solutions are quickly absorbed and no local destruction of tissue results, so that the person remains free from a focus suitable for the germination and growth of the spores; and as regards those drugs, even if tetanus spores were injected along with the solution, it is probable that, the activity of the leucocytes being unimpaired, all the spores would be destroyed at the site of the injection.

"From this brief sketch it will be clear that there is considerable danger in administering quinin hypodermically or intramuscularly, even with the strictest aseptic care. For this reason it is fortunate that Colonel Semple has been able to prove, by his nineteenth series of experiments, that tetanus antitoxin is a trustworthy prophylactic against tetanus when it is necessary to administer quinin by those methods. When the drug has to be administered hypodermically or intramuscularly, an injection of antitetanic serum should be given immediately before, or immediately after, the quinin injection. Colonel Semple recommends an injection of ten to fifteen cubic centimeters of the serum into the loose subcutaneous tissues of the side of the abdomen, and states that this amount would confer upon the patient a passive immunity to tetanus for two or three weeks. If this procedure is adopted, the hypodermic and intramuscular administration of quinin can, so far as the danger of tetanus is concerned, be carried out with safety."

The papers of Captain Macgilchrist and Colonel Semple deserve the serious consideration of all practitioners of medicine, whether surgeons or internists, for they serve to explain such cases as that related in the beginning of this article.

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DISCUSSION OF PAPERS READ AT THE THIRTY-FOURTH ANNUAL
 MEETING, BATON ROUGE, APRIL 22 TO 24, 1913.

DISCUSSION ON DR. JAMISON'S PAPER ON "THE DIAGNOSIS OF THE
 PRIMARY ANEMIAS AND OF THE LEUKEMIAS."*

DR. A. A. HEROLD, Shreveport: Personally I wish to thank Dr. Jamison for calling our attention to the necessity of a blood examination in cases of anemia. He has given us pictures of the anemias and leukemias.

*Dr. Jamison's paper was published in the September issue of the JOURNAL, but the discussions handed in too late to the Publication Committee to appear in said issue.

In regard to pernicious anemia, it is a disease which, as we all know, should be diagnosed early to get the best results. I have seen several patients recently who have presented symptoms of fatigue, inability to work, etc. They were neurasthenic or hypochondriac, with the persistence of indicanuria which could not be removed by decreasing the protein intake, and in which the blood examination showed a high color index ranging from 1 to $1\frac{1}{2}$, the only other abnormal condition being a more or less poikilocytosis. I have seen four or five cases, and the point I would like to have cleared up is whether these are early cases of pernicious anemia. I have so diagnosed them and each has since improved under appropriate treatment.

DR. L. J. GENELLA, New Orleans: The essayist brings out the point that these cases are not diagnosed by the general practitioner. This is correct, but it is no discredit to the busy general practitioner. I can easily explain why: These cases are never presented to the physician for treatment for the leukemic condition, because the splenomedullary leukemic type may go for years apparently without symptoms. They may have to wear their belts looser, but that will be all the symptoms they have. A physician usually sees them for the first time as the results of some intercurrent malady like pneumonia, pregnancy or a trauma. After recovery from the intercurrent malady, whether the patient be in the hands of the general practitioner or in the wards of an institute, it is at this time that all cases are first diagnosed. Why? Because it is seen that the patient is much more depressed than the slight illness should warrant, and besides, first gives a history of having been "sick a long time and has had a lump in the side." To clear up his general diagnosis the institute staff or the good general practitioner orders a total and differential count. Anybody can diagnose leukemia (splenomedullary). After making a blood examination, all the skill that is needed is the judgment to make blood counts as a routine practice.

Last winter I saw a case in the hospital in the service of Dr. L. M. Provosty that well illustrates the long time these cases go without thinking it necessary to consult a doctor for the "lump in the side." She had been sick for three years with a lump. She had to wear her belt loose; she had no other symptoms. An attack of chills and fever sent her to the hospital. Her blood examination proving negative for malaria, and attention being called to the lump in

her side, a blood examination was made and splenomedullary leukemia was diagnosed for the first time almost three years after the patient first knew that she had a lump in her side.

She had gone through a pregnancy with a history of marked hemorrhages, but she also gave a history of having suffered from surgical injuries without any marked hemophilic tendencies. This case was a typical textbook case of splenomedullary leukemia, with one exception. In examination for coagulation time when the blood came in contact with the skin the time for coagulation was delayed. This is not as it should be. I should have gotten a quicker coagulation, but in this case it was delayed three or four minutes. Solis Cohen does not attach any importance to coagulation test as the personal equation comes into play too much. Also there are too many exceptions in the reading and noting of the technic.

As a whole Dr. Jamison's paper will give an added stimulus to the general study of leukemic conditions.

DR. ALLAN EUSTIS, New Orleans: I am very much interested in this paper. There is one type of secondary anemia which the author did not mention and which we must keep in mind, and that is anemia associated with the bothriocephalous latus. We have recently had such a case in our clinic, and it is well to bear this in mind. In some of these cases of obscure anemia we find the bothriocephalous latus. The patient was a seaman and was infected in a foreign port.

I was interested in Dr. Herold's remarks about anemia being associated with intestinal poison. We have been injecting animals with extract of feces and have noticed some changes, but we cannot draw any definite conclusions as yet. Clinically, we have had cases with a blood picture which closely simulates pernicious anemia and which clears up by relieving the intestinal poisoning.

DR. JOSEPH KNIGHTON, Shreveport: There is one feature in connection with pernicious anemia that the doctor did not mention in his paper; or, if so, I did not catch it clearly, and that is the absence in almost every case of free hydrochloric acid in the stomach contents. This is not absolutely essential to the diagnosis, but it is of interest from a therapeutic standpoint for the reason that many cases improve by furnishing hydrochloric acid liberally in connection with the diet.

DR. S. K. SIMON, New Orleans: I have seen cases of severe

hemorrhage from the stomach in individuals in whom it seems to come on without previous warning, who gave no history of any previous diseased condition. One young man came to my clinic at the Touro Infirmary vomiting blood. The history given was that he vomited that morning about a basin full of blood. The boy was almost exsanguinated; he was admitted into the ward, and in two or three days the diagnosis was very much in doubt. The abdomen was so much distended that we could not feel any of the abdominal organs. We were on the point of opening the abdomen to stop the persistent hemorrhage from the stomach. We thought he might have had ulcer of the stomach which prevented us from opening the abdomen of that boy. He finally recovered from the hemorrhage, and with the relaxation of the abdominal distension we found an enormous spleen. The blood picture was negative, and that boy has not improved. The disease is practically incurable. The reason I call attention to that is, a great many men, probably the majority of them, believe that a sudden hemorrhage from the stomach may be indicative of ulcer of the stomach. We see numerous types of hematemesis not due to ulcer, but largely due to the essential anemias as well as to other conditions, such as cirrhosis of the liver.

DR. CHAILLÈ JAMISON, New Orleans: In reply to Dr. Herold, I would say that possibly the cases he speaks of are early pernicious anemia; but the mere fact that there is a high color index does not mean pernicious anemia. To make an absolute diagnosis of pernicious anemia it is necessary to have morphological changes in the stained specimen. A diagnosis should never be made, however, unless the color index is high.

Dibothriocephalous latus does give rise to a blood picture like pernicious anemia, but so does malaria, hookworm disease, prolonged hemorrhage, etc. It is doubtful if such cases can be classed as true essential anemias; in my opinion they cannot.

DR. ALLAN EUSTIS, New Orleans: I think I mentioned the point that bothriocephalous latus anemia is a type of secondary anemia, but not an essential anemia.

DISCUSSION ON PAPER OF DR. LYONS ON EMETINE HYDROCHLORID.

DR. GEORGE S. BEL, New Orleans: Dr. Lyons has read, to my mind, a very good paper. So far as I am concerned, I must frankly admit I have never used emetine. The usefulness and rapidity of

the medicine strikes me forcibly. As Dr. Lyons has well said, any individual who has had any experience with the administration of large doses of ipecac knows with what difficulty the individual retains the same. To be sure, the patient is not going to vomit from a hypodermic injection, and this of itself makes it a remedy worthy of our consideration. The administration of ipecac in well-coated pills is not always retained. When I see a case of amebic dysentery and have to depend on salol-coated pills I feel a little shaky. It is rare enough to find a salol-coated ipecac pill. I remember my colleague who never saw a salol-coated pill. I have seen them vomited so many times that it is disgusting to see it.

How long this remedy will last, as the doctor says, he does not know. The brilliant success he has had in a number of cases makes it well worthy of trial. Again, the cost, \$2.75, commends it as a cheap remedy in private hospital practice. If you stop to think, and give ipecac to individuals in a hospital, and it costs 70 cents a day to keep that man, if you keep him two or three weeks it means more than \$2.75, and the rapidity with which it acts makes it a useful remedy. No one would hesitate to relieve the distressing symptoms of dysentery for \$2.75. What Dr. Lyons has said is very highly commendable, and this remedy is undoubtedly very useful, and I want to congratulate him.

DR. S. K. SIMON, New Orleans: I have not had universally as good results in my cases with this preparation as Dr. Lyons has reported to-day, and I am inclined to believe it may be due to a deteriorated product on the part of the manufacturers. In two cases I have had of intestinal amebiasis, there has been a recurrence in two weeks following the cessation of the emetine injections, and these injections were given exactly as recommended by Leonard Rogers, and in much larger doses than Rogers himself uses per rectum. It has been my custom to use two-thirds of a grain twice a day, which makes one and one-third grains a day as a basis. Both of these cases showed a recurrence. I have used altogether six grains, given in as many doses. One was a colored man who had a particularly severe infection, and the symptoms seemed to stop as if by magic after the second or third dose of emetine, and apparently he got entirely well. He was discharged, with the request that he return for observation in two weeks. He returned in ten days and told me had blood in his stools, with considerable tenesmus.

I immediately took a specimen of the stool and found it loaded with amebæ.

The other case was one of a white man who had dysentery for a long time—not a severe case—who received six grains. We made an examination of the stools, and he returned in the course of two or three weeks again with the amebæ in the stool. Of the other cases I have had of intestinal amebiasis, I will say the time has not been long enough to form any definite idea of this treatment. In two cases of liver abscess I saw in connection with Dr. Matas, we had some remarkable results from emetine hydrochlorid. In both of these cases following drainage of the liver abscess was a slight temperature which resisted every method of treatment. At my suggestion, we tried emetine hydrochlorid injections, and there was immediate relief of the temperature symptoms, the temperature dropping to normal almost after a second dose, and remaining there. In one case, after four weeks, the temperature had never gone beyond normal. This is a remarkable fact, and one to which I would call particular attention, as to one of the probable benefits derived from the drug.

Just one word more. I would be among those first to claim the benefit of emetine hydrochlorid, because, if this drug turns out as Rogers claims, we will have the most perfect specific in clinical medicine. There is nothing more practical than hypodermic injections of the drug with entire relief of the disease. Besides that, the lack of vomiting, with the injection of emetine, is a noticeable feature—one that we do not always avoid with the ipecac pills; but my experience has been like Dr. Bel's—that we have not had very much vomiting when it is given with the proper technic.

One practical point should be emphasized, and that is it is a dangerous practice for a practitioner to start experimenting with emetine hydrochlorid. In the course of a year or two we will have those who have control over a large material, and we will have occasion to know definitely where emetine hydrochlorid stands, and will report upon a more definite basis than we are able to do now.

DR. L. J. GENELLA, New Orleans: In regard to the question of emetine, in case any of you should become very enthusiastic, I want to say that it is very hard to get. I have tried to get it from the firm of Parke, Davis & Co., and they have absolutely refused to sell it. There are other men who have not been able to get it. It

is only sold or dispensed under conditions. Merck's emetine did not possess the specific action in one case I tried it in.

DR. ALLEN J. PERKINS, Lake Charles: This paper is valuable indeed. The emetine treatment I first noticed in the *Therapeutic Gazette* published several months ago. We know how the ipecac salol-coated pills were given, and how nauseating in many cases they were, and they were hard to swallow. Most people cannot swallow a pill of that size, and any of us will welcome such a preparation as emetine at this time. Unfortunately, it came at a time when I could not use it. I have not had any cases since. But in times of peace we should prepare for war. I have some emetine and I am going to use it the first opportunity I get.

Dr. Genella complains of being unable to get it. I believe Parke, Davis & Co. will furnish him enough to experiment with—at least, they did me; and you will get a package of the ampoules, and they will send you a clinical chart.

DR. GENELLA: They will not sell it.

DR. PERKINS: It is not for sale, but you can get enough to treat one or two cases.

DR. LYONS (closing): With regard to Dr. Simon's remarks, he said he had had eight cases, with two recurrences. We do not know yet what the proper dose of this drug is, as I stated, nor how long it should be administered. One of these cases I saw later. The patient had not been freed from ameba, so could not have had a relapse. Dr. Simon said he gave six grains. That is a good dose for one case. Allen, in Virginia, has given twelve grains in one case. Recently I have used thirteen grains in one case. You must individualize these cases. If it is a severe case you must keep up the treatment for a long period. The patient may appear to be improving. You do not want to stop, and if it is a severe case you must prolong the treatment. If we are using ipecac we give a course of sixty or eighty grains daily for a week; we then let the patient rest for a few day. If he is not all right, we give another course. We believe ipecac to be a specific. The only objection to ipecac is the mode of administration. In view of the recurrences mentioned with emetine, we should test thoroughly, with an open mind. We must wait until we have had more experience. It will take many hundred cases to judge accurately of the value of the new drug.

DISCUSSION OF DR. PARHAM'S PAPER ON VESICO-VAGINAL
FISTULÆ.

DR. S. M. D. CLARK, New Orleans: It is always interesting and instructive to listen to reports on difficult bladder cases. It is from this type of case that we really learn something; the simple, low, easily-exposed injuries are very readily cured. The injuries situated high up in the vagina, with associated cicatricial tissue, are the ones that put a surgeon upon his mettle.

There are several cardinal points to be kept in mind in treating the complicated cases:

First—The field of operation must be properly prepared. Many of these long-standing cases have numerous ulcerative foci in the vaginal tract, which is anything but an inviting surgical field. By having these cases live the greater part of their time in a bath tub, combined with touching the ulcers from time to time with nitrate of silver, they will rapidly heal, the field clear up, and too, the patient gets the greatest relief and comfort from being in this bath, regretting when night comes for them to go to bed.

Secondly—It is absolutely essential to secure the proper exposure of the field of operation. Where much scar tissue is encountered as a result of previous ulcerations, it is impossible to properly reach the fistula. An episiotomy is of great value in securing this exposure; it lets the posterior vaginal wall drop back, a speculum can then be introduced and perfect view obtained. The lateral incisions can be easily sutured.

Thirdly—and most important—The margins of the fistula must be snugly approximated, without tension on the suture. Too much stress cannot be laid on this point. The flap-splitting operation is ingenious in accomplishing just this end. Formerly it was thought necessary to approximate the vaginal mucosa conjointly with the bladder wall, but this is not necessary. The bladder wall is richly supplied with blood, can be extensively separated from its attachments, and thus secure the necessary bladder wall to close the opening and do this without tension.

In the gynecological service at the Charity Hospital I have treated some very nasty cases. It is my intention to report some of these trying cases at some future time. Recently I had one in which the entire floor of the bladder, as well as the urethra, was destroyed; still further, she had an enormous recto-vaginal fistula.

The upper vagina was completely obliterated, and the vaginal outlet, as well as the lower third, following a violent infection, had undergone calcareous change. In this case repair was impossible, so the vaginal opening was closed, thus using the sphincter ani as the control. She defecates, urinates and menstruates through the anus.

Time forbids the further discussion of this interesting subject. We should feel indebted to Dr. Parham for having given us this report.

DR. PARHAM (closing): I only wish to thank Dr. Clark for emphasizing the point which I especially insisted on—the mobilization of the bladder. You cannot do anything with these difficult cases unless the bladder is thoroughly mobilized, so that it can be brought within reach and sutured without tension.

DISCUSSION ON DR. McVEA'S PAPER ON ECLAMPSIA.

DR. L. J. GENELLA, New Orleans: Dr. McVea's 100 per cent. statistics of recoveries are so extraordinary that I hardly care to let them pass without saying something. They are extraordinary, but the most extraordinary portion of the paper is that there were so many patients that were young—young girls of 16, 17 and 18, who recovered. From my experience and the experience of men I know, they have always found these puerperal eclamptic conditions in the young, 16 and 17, have always a high mortality, usually two out of three, four out of five, and eight out of nine. As they get older, say between 35 and 45, a great many recover. I would like Dr. McVea, in closing his discussion, to go over his treatment again so that we can remember it.

DR. E. M. ELLIS, Crowley: This is a subject, in my opinion, that should not go undiscussed, because it appeals to the activity of every practitioner, be he specialist or a general practitioner. We must compliment Dr. McVea upon his splendid success in the number of cases he has pulled through in this severe malady. That reminds me, however, of an old friend and physician of mine. When I first began to practice medicine I was called to see a case of eclampsia with him. I went out about ten miles in the country and found him outside the yard sitting on a fence smoking a pipe. I said, "How is your patient?" He replied, "She is doing all right." "Is she conscious?" "Oh, no." How many convulsions has she had?" "She has had several—some seven or eight severe ones. Go

in and see her." I walked in and found she had had three or four convulsions within a short time. Everything was disarranged over the house, and she was certainly the sickest-looking patient I ever saw in my life. The baby was delivered before I arrived. The delivery was accomplished with the aid of forceps. I looked over the woman carefully, after which I said to the doctor: "Doctor, what did you send for me for? I cannot do any good. The patient is practically dead." He replied: "She is not going to die." I said: "She is practically dead now." He replied: "I will tell you, my friend, I have been practicing medicine for twenty years, and have never lost a case of puerperal eclampsia." I said, "Here is where you are going to lose one." He replied: "Oh, no, she is not going to die." I said: "What are you doing?" He replied: "I have given twenty grains of calomel dry on her tongue, and have given sixty grains of bromide of potash, and that is all I ever do for these cases." I did not make any suggestion, but I want to say to you that woman got well.

But these cases certainly require the activity of the physician; they require it at the right time, and I believe the doctor has a most excellent plan of treatment in managing these cases. In the majority of cases you see in convulsions do not resort to Cesarean section, but go right in with the hand; you can dilate the cervix, and in most cases you can apply forceps without even turning. That has been my experience.

I do not regard the mortality from puerperal eclampsia as high as the text-books would have us believe.

The plan of treatment should be elimination and control of the convulsions, and, as the author of the paper suggests, the administration of veratrum. That has been my plan of treatment, and if this is carried out we will find that the majority of cases will recover. As I have said, it is certainly a class of cases that require the activity of the physician. He should be on his job at all times.

DR. EDWARDS: I cannot say anything in regard to these cases except to compliment the doctor upon his splendid success and to lay stress on the use of veratrum. It seems to have a selective action on these cases. I deprecate the use of morphin and bromides in controlling the convulsions.

DR. ROBERT C. KEMP, Baton Rouge: There is one feature in connection with the management of puerperal women that I believe has not been mentioned in the paper or in the discussion, and

that is the use of the sphygmomanometer is observing the blood pressure. It is very rare that we will find a convulsion develop in a woman who has had a normal blood pressure, but in the presence of albumen we know, with a high blood pressure, you can anticipate at any time these convulsive seizures, or eclampsia, which becomes so threatening to the lives of these individuals.

In regard to the use of veratrum in the management of these cases after the convulsions have started, I wish to relate a case that recently occurred in my practice in the City of Baton Rouge, where a young woman, 19 years of age, had been under observation all during her puerperium. She had albumen early, consequently I was on guard in regard to her case, and in spite of elimination, and almost starvation for a week, and keeping her entirely on a carbohydrate diet, she did develop puerperal convulsions about the eighth month. Not being available at the time, another physician was called to see her. He found she was having convulsions and gave a large dose of Norwood's tincture of veratrum. I saw her soon after the administration of the drug, and had her immediately conveyed to the sanitarium for delivery. After she arrived there another dose was given, which brought the pulse down to 60.

With her pulse to 60, and the blood pressure to 120, she developed a convulsion on the operating table. She was rapidly delivered of a stillborn baby, and after this the convulsions ceased for a time. She was given more veratrum, and with a pulse of 40 and a blood pressure of 90 she commenced again to have convulsions. The next resort was to venesection and hypodermoclysis, with decinormal saline solution. After resorting to venesection and hypodermoclysis, the convulsions ceased for a time, and started again in about twelve hours. She had had large doses of bromide and calomel by rectum. We sweated her and purged her. After the convulsions started again she was bled from the other arm and an intravenous injection was given of decinormal salt solution, which controlled the condition, and fortunately the patient is alive to-day. In that case veratrum was absolutely inert, in so far as controlling the convulsions was concerned. She had pronounced heart-block, with Adams-Stokes syndrome, before she began to improve. I think the blood-letting and dilution of the toxins was responsible for saving the life of this extremely desperate case.

DR. HAWKINS: This paper by Dr. McVea is interesting. The question of eclampsia is a very interesting one to physicians who

practice in the country. I was very much interested when Dr. McVea was relating his case, and I would like to say that after twenty-five years' practice in the country I would not think of going to a case of puerperal eclampsia without a sufficient supply of chloroform and ether along with me. The question of using an anesthetic in these cases is very important, and for that reason I make this statement.

DR. G. R. FOX, Moreauville: I want to congratulate Dr. McVea on the splendid record he has made. Having practiced in the country for a period extending over twenty-six years, my experience has been practically the same as his. I have lost but one case of puerperal eclampsia in my life.

The points he has made in connection with the treatment are well taken, and they coincide with those of my father, who practiced medicine forty-three years in the country, and he lost but two cases of puerperal eclampsia. He read a paper on this subject before this Society several years ago.

As the doctor has said, we know positively nothing regarding the etiology of this disease. We agree that it is absolutely necessary in all cases to empty the uterus as rapidly as possible. In cases where it is indicated, I have practiced blood-letting, and I have had excellent results. I have adopted the use of veratrum ever since I have been in practice. I push it freely. One drug he did not mention, which has given me splendid results, is pilocarpin, given hypodermically, and I believe it is one of the best agents we have for elimination.

DR. E. L. SANDERSON, Shreveport: The results Dr. McVea has had are rather astonishing. I do not suppose any of us have had as good results as he has had, and therefore he should be congratulated. However, I believe prevention is better than cure. It seems to me, if we will examine the urine before delivery frequently, we will avoid having so many cases of eclampsia, and while I have not been practicing for more than five years I have only had two cases of eclampsia, and both of these I had not seen previous to delivery. I have observed this rule—an idea I got from some one in New Orleans—of examining the urine, as does Dr. McVea, every month during the first month of pregnancy, and later in the course of it every week or ten days.

I do not think all eclampsia is brought on by albuminuria. I believe intestinal intoxication is at the bottom of a good deal of it,

and by the time the convulsions take place we may have an acute nephritis setting in. Any woman who is profoundly constipated during pregnancy should be suspected and watched for eclampsia as closely as one who shows traces of albumen. And he mentions in some of his cases that the patients did not show eye symptoms and headaches. I believe these cases are the ones that are suffering from intestinal intoxication, which may culminate in eclampsia. In a patient in whom you suspect you have eclampsia, one showing traces of albumen in the urine, or one who has profound constipation towards the latter part of pregnancy, I always give careful instructions and leave calomel at the house, and if any eye symptoms manifest themselves, or the patient has severe headaches, she is to take a dose of calomel and send for a doctor.

I caution these patients about eating. I have no doubt that eclampsia is brought on in some instances by indiscretion in eating, in those patients in whom we suspect an eclamptic condition. The only two cases of eclampsia I have had have both lived, and I treated them both alike. I was not prepared, because I had not seen these patients before I was called, and they had convulsions when I saw them. I gave them a dose of eserine hypodermically, and half an ounce of alum in a pint of water by enema twenty minutes after. This produces a profuse evacuation of the bowels in twenty minutes. I delivered these patients quickly. One of them had twins. I saved one baby and lost the other. The keynote of the whole thing is prevention. By watching the case carefully and keeping the bowels well cleaned out, and leaving calomel at the house, with directions to take it, these patients get along very well.

A MEMBER: What is the remedy you spoke of giving by hypodermic?

DR. SANDERSON: Eserine.

A MEMBER: What dose?

DR. SANDERSON: One-fiftieth of a grain.

DR. E. L. MCGEE, Hammond: I have been very much entertained by this discussion. We hear very little or nothing said by these professors of obstetrics about the use of veratrum. Some of the textbooks simply refer to its use. Like the author of the paper, most of us are on the firing line who are doing practical work, you will find that six out of seven practitioners that have ever used veratrum still continue to use it. There are those practitioners who say that the use of this drug has a depressing influence over the

heart and that it should not be used, but those doctors who have used it still continue to use it as a rule in the class of cases under discussion. I believe veratrum is a very valuable agent in cases in which it was used by Dr. McVea.

With reference to pathology, I want to say that the pathology of this condition is about as well understood now as it was ten or fifteen years ago. There is a hyper-sensitive condition of the nerve centers which manifests itself when the arterial pressure is great, and these are two conditions that we believe precede these attacks. You cannot overcome this condition of the nerves often due to faulty kidney action that has existed for months, but you can prevent the arterial pressure.

Dr. McVea in his line of treatment has not only been observant of that point, but he has been afraid of pilocarpin. He could not have had better results if he used it in small doses and repeated them frequently, so as to cause a free diaphoresis, which will do no harm. You have got too much tension anyway.

What surprised me was the large doses of veratrum he gave, namely, 12 to 15 drops. I have used it for many years, but have never used it in such large doses. I continue to use it until I get the pulse below 90. Generally the pulse is strong and firm, and the arterial pressure tremendous, although I have never taken its measurement. When the pulse gets down to 70, patient begins to feel comfortable; if there are any more convulsions they will be slight.

Another very valuable agent is the use of chloroform, which acts in two ways. In reducing blood supply of the brain, it is also an anesthetic. Thus it relieves the pressure as well, at the same time it relaxes the parts so that turning is a simple process and dilating the cervix is comparatively easy, while the patient is under the influence of chloroform. Chloroform, veratrum viride and pilocarpin are safe agents in the hands of a careful practitioner. My observation is that the results in puerperal eclampsia in some hospitals where the most approved and advanced men do their work are not as good as they are under the old line of treatment.

DR. McVEA (closing): With reference to the use of chloroform, I believe the indiscriminate use of it causes more trouble than eclampsia itself. I think it ought to be used solely for operation and not for the control of convulsions.

My friend Dr. McGehee mentioned the use of veratrum in large doses. The first patient in which I used it was a 16-year-old negro

girl, whom I had never seen except in a convulsion. I gave her veratrum, as I thought she had a good chance to die, and administered a full dose of it, and may be she got well on account of it. I gave her three doses. I used Norwood's tincture.

I was very glad to hear Dr. Sanderson speak of eserine. If there is anything we need in these cases it is an agent which will act as a purgative when given hypodermically; it will do more than any one thing, because the alimentary canal is nearly always blocked up. Dr. Sanderson spoke of the intestinal canal being blocked up in these cases. I said in my paper that I treated these cases with calomel and with the frequent use of salts, such as sulphate of magnesium. After you see these cases you do not have time, it is too late to clean out the canal. You must devote most of your time to the other needs of the patient.

As to pilocarpin. I only mentioned it to condemn it. I am afraid of it. There have been deaths from it. Dr. Kemp has had only one of his cases recover.

With reference to blood pressure, I will say that I delivered some of these patients fifteen years before I heard of a blood pressure apparatus, or instrument. I do not wish to be understood, however, as speaking against the use of such an instrument. It should be universally used.

N. O. Medical and Surgical Journal**Editorial Department.**

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

VACATION IS OVER.

It requires some philosophy to view the passing days restfully and, apart from the active turmoil, to view the prospect and take no share. Yet there must come a time for ease and for those who may stop in the midst of things and for a while lay off the burdens of occupation, life holds a larger lease, a broader viewpoint and perhaps a lighter road to the end. Vacation is a complex of interpretations. To one it means relief from routine in some other occupation, perhaps more strenuous, but with certain variety; to another, it means dull forgetfulness of sordid livelihood, and the basking in the sunshine of doing nothing, a looker on amid the struggling multitudes. So all mark time—until the command of exigency compels renewal of effort in the total of endeavor which keeps the human race at the line of advancing civilization, each making for an ideal in his set field of labor. With the glow of ease still among us, favored by the privilege of an earned rest, the problems of the future loom large and wherever our work lies, these must be met as they come.

This is an age of unrest and there seems to be no stage of action in the world where just now human life is not at stake. While war impends at one point, disease lurks at another. Socialist ferment feeds large bodies of dissatisfied peoples, and the expression of this finds many sorts of outlet.

At home, we are at the eve of a crisis in national policy, concerning not only our dignity, our commerce, but also our economics. Moral phases, too, have taken hold and everywhere man now by large legal right has assumed the task to be his brother's keeper, and his sister's, too.

With all of this there is a strong movement towards better healthfulness. Congresses are laboring for child right, for advanced preventive medicine, for progressive surgery. Discoveries come so fast that their interpretation awaits the genius to unfold them, and meanwhile various philanthropies are opening the way for the safeguarding of human life.

Immediate problems crowd upon us in the development of civic pride and usefulness. The individual is lost in the community interest and selfishness is not so easily masked in a pretense of public concern.

Another harvest is being garnered and with the kernels of promising fruitfulness we must be ready to find most of the necessary useless chaff.

So with a fresh vigor we may lift the burden of a new day, with a renewed interest, colored by the spirit of a summer's rest, and at vacation's end, sigh sometimes for the return of it, but with the thankfulness born of the privilege of a spent surcease.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The Mississippi Valley Medical Association will meet in New Orleans on October 23, 24 and 25. The preliminary program offers an interesting program and a variety of topics. The subjects are arranged in symposia, embracing pediatrics, the kidney, social hygiene, the circulation, with provision for a variety of miscellaneous papers on many subjects. The Hotel Grunewald will be the headquarters of the association and Dr. W. W. Butterworth is the local chairman of arrangements. A good meeting is anticipated and a representative body of men make up the program.

Among other features incident to the meeting, an excursion to Panama has been planned, to leave by one of the United Fruit Company's steamers on the last day of the meeting. The New Orleans profession will, of course, be interested in the meeting, bringing as it does many old friends to the Crescent City for the scientific and social intercourse which makes such gatherings worth while. The profession of the outlying cities, however, should be equally interested, for this association is one of the largest general medical bodies in the country, and it is dignified by age, this coming meeting being the thirty-ninth annual session. While originally looked upon as a satellite of the A. M. A., and used as a sort of playground for those members of the A. M. A. who wanted less serious work to do, the association has grown into a working body of large influence and importance in the Mississippi Valley and more than any other organization of its sort brings a wider representation of states together.

We expect a successful meeting for the association, but we hope that this may be more than an expectation and that New Orleans may lend her useful grace in making the coming meeting the most successful of the association.

CANCER STUDY.

Both popular and scientific effort today is being directed at a better knowledge of cancer. Popular education is being directed at the early recognition of this disease, with a view to its cure at inception, and further, at the possibilities of prevention. Scientific investigation is being carried on in the laboratory and in the field. The incidence of cancer is now studied and recent facts have shown an appalling increase, which has occasioned even more interest. The relations of etiological factors show new phases. The contiguity of cases, the family groups, the occupational predilections, the predominance of types, the racial influence are all important in the summing up.

Meanwhile the microscopic elements possibly at fault have champions and antagonists and as the one or the other side holds the stage, the parasitic or non-parasitic origin of cancer is uppermost. As yet, however, all is theory.

There is a great need, tho, for more study and the American Association for Cancer Research has promulgated a report expressing the sentiment of the association in this regard. This applies more particularly to the association and its contingents and for no concern with the popular movement in cancer education, this having a different origin. The report referred to in substance finds that:

Instruction of medical students in cancer is deficient, and that medical colleges should arrange special instruction on the subject.

Universities should train or employ special lecturers to appear at medical societies adjacent to such universities with a view to inspiring both knowledge and interest.

Finally, a study of methods of public education in cancer should be undertaken.

The interest in cancer on the part of the public and the profession alike has been already awakened and all are keen for more knowledge—so that the next move must be in the direction of finding the cause and meeting it with some newer remedy.

CHANGES IN THE NEW ORLEANS CHARITY HOSPITAL.

The changes in the Charity Hospital have been planned and are about to become effective. Since the resolution of the State Medical Society adopted at the 1912 meeting, and presented to the Governor of the State, a considerable turmoil has arisen, gradually simmering down as the new board of administration of the hospital has undertaken each problem and has met it with action.

The status, as the *JOURNAL* understands it, at this time is about as follows: The hospital is to have an intern staff of recent graduates, appointed, after competitive examination, for a two years' service. The number at present is about thirty. Senior to these interns there will be four residents, appointed for one year, each of the four to have supervision of a division of the hospital during the year of service. One man is to be over the medical division, one over the obstetrical and gynecological division and two over the surgical division. The four residents first to serve are appointed by the board; hereafter these places will be filled by the successful competitors among the intern staff finishing their two years' service.

Residents are to have no wards assigned them as individuals; are to do no outside practice, and each of the four is to be paid \$600 a year for his services. The visiting staff is to be appointed for one year from October first of each year, and in each division the staff is to be graded with a chief who is to be responsible for the men under him. The services at the hospital are to be assigned to two teaching divisions and one non-teaching division, and the proportion in the distribution is to be determined by the necessities of service of the teaching and non-teaching staff. The direction of all services as well as other business of the hospital will be in the office of the medical superintendent, who is to have full and absolute authority under the board. The immediate supervision of medical matters will be in the hands of an advisory committee of nine members, three from each of the teaching divisions of the staff and three from the non-teaching staff. These nine members are to be appointed by the board of administrators upon the recommendation of the visiting staff. The selection of the committee is to be determined by each division of the staff, and three members are to be elected each year, one from each division. The initial committee will have three members ap-

pointed for three years, three for two years and three for one year so as to make the plan above outlined operative from October first, and so as to provide for an election of three new members in one year.

The detail of discipline, regulations and relations of staff, interns, board and medical superintendent are not yet promulgated.

There is some dissatisfaction at the general plan expressed and combatted by some of the visiting staff and by some who wish to be on the visiting staff. It was to be expected, however, that anything so radical as the proposed remodeling of the hospital could not be accomplished to the entire approval of all, particularly where the interests are not altogether common or entirely altruistic. It is hard to understand, tho, why the antagonism should develop so extraneously as to include the medical schools which have practically supplied the hospital with service for the past seventy-five years and upon which the State many years ago laid the necessitous obligation of providing attendance by their staffs.

The situation will probably straighten itself out when all the services of the hospital are placed and when the largest part of all concerned is provided with adequate facilities to aid in administering this great institution for the benefit of the sick, and incidentally with opportunities for the professional advantage of those concerned in improving themselves.

Abstracts, Extracts and Miscellany.

Department of Ear, Nose and Throat.

In Charge of DRs. A. W. DEROALDES and CLYDE LYNCH, New Orleans.

ABSTRACT OF SELECTED PAPERS READ AT THE THIRTY-FIFTH ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION, MAY 5-7, 1913, WASHINGTON, D. C.

RESULTS IN A SERIES OF CASES OF TONSILLECTOMY AT THE MASSACHUSETTS GENERAL HOSPITAL, THREE TO FOUR YEARS AFTER OPERATION.—Dr. J. Payson Clark, Boston: Postals were sent out in July, 1912, to patients who had been operated on in 1908, and 143 patients responded by presenting themselves to the

clinic in person, where they were subjected to an examination and answered a set of questions with reference to the operation and after-effects. From these results the following summary is presented: The patients, with a few exceptions, were under fifteen years of age at the time of the operation. Hemorrhage after tonsillectomy calling for special treatment was of rare occurrence. The condition for which the tonsils were removed was relieved in nearly every case, even in those in which there was some tonsillar tissue remaining. An improvement of the general health was to be expected after tonsillectomy done for such cause. Children who had had tonsillectomy certainly showed no increased tendency to illness and were probably less susceptible than before the operation. The present health of these children is excellent in the majority of cases. What is apparently tonsil tissue is found much more often than supposed after tonsillectomy. The soft palate was symmetrical and the faucial pillars and tonsil fosæ normal in the great majority of the cases. The accidental cutting off of the uvula in four cases caused no bad symptoms. Most of the cases of sore throat and tonsillitis were relieved by the operation. In many cases in which there appeared to be tonsil tissue remaining, the patients were in perfect health, and in others in which there were symptoms, those were undoubtedly due in many cases to causes other than the tonsil remnants. The ordinary voice or speech may be said to be practically unaffected by tonsillectomy. No investigation was made of the singing voice. In most of the cases in which enlarged cervical glands could be felt, there was tonsil tissue present on the same side. In nearly half the cases in which there was tonsil tissue present there were no enlarged glands. Carious teeth were apparently a direct cause of some cases of cervical adenitis.

REPORT OF A CASE OF ULCERATION OF THE LARYNX, PERICHONDRI-
TIS OF THE ARYTENOID CARTILAGES, ABSCESS AND PARTIAL
EXFOLIATION OF BOTH CARTILAGES RESULTING FROM TYPHOID
FEVER.—Dr. J. H. Bryan, Washington: This case is reported
in order to emphasize the importance of making regular and sys-
tematic examinations of the upper air passages, especially of the
larynx, in all cases of typhoid fever, in order to detect the early
changes that take place in the mucous membrane of the upper air
passages in this disease. The frequency of this complication in ty-
phoid fever in Europe, according to Landgraf, is 11 per cent. of

all fatal cases; according to Griesinger, 26 per cent.; Kanthack, 26 per cent.; Ouskow, 30 per cent. It is difficult to arrive at any conclusion as to the comparative frequency of this complication of typhoid fever in this country and abroad. The figures given by Jackson seem to show that a much larger number of cases of laryngeal involvement occur in this country than is indicated by the figures given by Thompson. The epidemic in which Jackson made his observations was, however, an unusually severe one, and the subjects were largely of a poorly nourished type, and this may account for the apparently greater frequency of this complication in this country. We cannot get at the truth in this matter until more careful observations are made, not only in the hospitals, but in private practice as well.

THYROTOMY FOR CANCER OF THE LARYNX, WITH REPORT OF ELEVEN CASES.—Dr. D. Crosby Greene, Boston: In a paper presented to this association in 1906 we reported the results of an investigation of the lymphatic drainage of the larynx by means of submucous injections of methylen blue and mercury. The results obtained are confirmatory of those reported by others in showing that the network of lymphatic vessels which extends beneath the mucous membrane throughout the interior of the larynx is richer in the number and size of the vessels in the supraglottic region, relatively poorer in the subglottic portion, while on the vocal chords the vessels are very small and widely separated. These anatomic facts account for the slow growth and late development of the disease in the cervical lymph nodes in cases of epithelioma of the chords, and furnish an argument for the possibility of cure in early cases by the operation of thyrotomy and excision of the growth with a wide margin of healthy tissue. This is supported by the result of the operation in the hands of numerous operators, both in this country and abroad, so that at the present time it is almost universally recognized as the proper procedure for the treatment of early intrinsic cancer of the larynx. Certain details of the technic have an important bearing on the immediate and after-results of the operation. The steps of the operation are: 1. Ether by inhalation, preceded an hour before by one-fourth grain of morphin and $\frac{1}{150}$ grain of atropin. 2. With the head slightly extended, a median incision is made, extending from the lower border of the hyoid bone to the lower border of the cricoid cartilage. This incision is carried down through the prethyroid muscles until the

thyroid and cricoid cartilages and cricothyroid membrane have been definitely exposed. 3. A one per cent. solution of cocain is injected through the cricothyroid membrane into the cavity of the larynx. 4. The patient is now placed in the Trendelenberg position and a thick pad placed under the shoulders to bring the larynx into prominence. 5. The cricothyroid membrane is next incised in the median line, and through this incision a swab of 10 per cent. solution of cocain is introduced and applied to the laryngeal mucous membrane. 6. The thyroid cartilage, after a pause of five minutes, is divided from below upwards. In young subjects this may be done with a knife, but in the majority of cases where the cartilage has become ossified it is best to use strong curved scissors with dull points. 7. The thyroid wings are now widely retracted and an examination of the growth made under good illumination. 8. Beginning at the free margin of the thyroid cartilage, on the affected side in front of the growth, the internal perichondrium is elevated from off the cartilage with a sharp elevator from before backwards to a line well behind the limits of the growth, as well as above and below it. All the soft structures are thus freed from the underlying cartilage. 9. Parallel horizontal incisions are now made with scissors above and below the growth. These incisions are carried about one-half inch back of the posterior limit of the growth. 10. The growth, with its surrounding tissue, is now entirely removed with a wire snare by which the posterior attachments are severed. Much depends on the proper selection of cases. When the growth is so extensive, even though confined within the cavity of the larynx, that the larynx cannot be opened without cutting into the growth, recurrence is not only possible, but probable.

DECANNULATION AND EXTUBATION AFTER TRACHEOTOMY AND INTUBATION, RESPECTIVELY.—Dr. Chevalier Jackson, Pittsburgh:—The different forms of laryngeal stenosis associated with difficult decannulation or extubation may be classified into the following types: 1. Pain. Breathing through the neck with a properly placed tracheotomy cannula is so much easier than breathing through the mouth, that once the patient becomes accustomed to it for quite a while he does not feel that he is getting air through the mouth, even though the larynx is perfectly patulous. In addition to this, there is a nervous cell habit arising from previous experience with the stenosis that terrorizes the patient the moment he feels the slightest dyspnea. 2. Spasmodic. This form of stenosis may be:

associated with panic, or may be excited by subglottic inflammation. It is usually overcome by the same means as those suggested for panic, together with the treatment of inflammatory conditions that may be present. Doubtless one of the chief causes of adductor spasm is the prolonged wearing of the intubation tube. 3. Paralysis. Bilateral ankylosis of the cricoarytenoid joints may prevent decannulation until the laryngeal stenosis is relieved. This operation is not to be advised except in such cases as have remained rigid for a period of twelve months or more, and this is not meant to include the fixation that is associated with malignant, tuberculosis or luetic infiltrations. 5. Neoplasms. Decannulation in neoplastic cases will depend upon the nature of the growth and its curability. 6. Hyperplastic. 7. Cicatricial, (a) loss of cartilage; (b) loss of muscular tissue; (c) fibrous. The hyperplastic and cicatricial types of organic stenosis preventing decannulation may be classified as follows: 1. Tuberculosis. 2. Lues. 3. Scleroma. 4. Acute infectious diseases, (a) diphtheria; (b) typhoid fever; (c) scarlatina; (d) measles; (e) whooping cough. 5. Decubitus, (a) cannular; (b) tubal. 6. Trauma, (a) tracheotomic; (b) intubational; (c) operative; (d) suicidal. Conditions outside of the paralytic and neoplastic forms are almost all the result of inflammation, often with ulceration and the secondary tissue changes. In the infective granulomata it is practically always the mixed infections from oral sepsis running that do the harm. The chief exception to this is diphtheria, which is in many cases a distinctly necrotic process. In the rare cases in which laryngeal tuberculosis of such severe type as to require tracheotomy is cured, decannulation presents little difficulty after the infiltrations are reduced. The reduction of those infiltrations by the galvanocautery through the laryngeal speculum is readily accomplished. Should cicatricial stenosis from ulceration remain, it is to be treated in the same way as cicatrices from other causes—by laryngostomy. In those older cases of luetic fibrosis little amenable to the older methods of treatment, salvarsan has accomplished wonders. Dr. Emil Mayer has recommended the use of radiotherapy in the treatment of scleroma. So far, however, the results have been so unsatisfactory that they practically constitute the only cases in which decannulation is impossible. When typhoid fever was prevalent in Pittsburgh it was found that the ulcerative lesion in the larynx was practically always the result of mixed infection, but in some instances they were due to thrombosis of a

small vessel, with subsequent necrosis. The after-treatment of these cases is chiefly by prolonged intubation, and in some cases by laryngostomy. Scarletina may be followed by acute laryngeal stenosis which is cicatricial. Occasionally foreign bodies may ulcerate through from the esophagus into the trachea. A properly fitting tube will not cause any ulceration, if it is free from roughness or sharp edges and is removed sufficiently often to be cleaned. For diphtheria and like conditions I have never seen any improvement on the original O'Dwyer apparatus. When a tracheotomized case reaches the stage when it is to be trained to breathe through the mouth, it is necessary to occlude the cannula. For the reduction of exuberant granulations, nothing has yielded better results than resorcin. As a stimulation to epithelization the German preparation "scarlet red" (Biebrich) in a sterile 20 per cent. mixture has yielded excellent results during laryngostomy. One of the most common causes is the neglect of frequent changes of dressings.

CONGENITAL OCCLUSION OF THE POSTNASAL ORIFICES, WITH REPORT OF A CASE.—Dr. Charles W. Richardson, Boston: In July, 1912, a case came under my observation in which there was complete osseous obstruction of the postnasal orifices at as early a period in the life history of the patient as any observer has noted such a condition. In search of the literature I have found only a few cases in which the obstruction was observed in infancy. While it is not possible to tabulate all the cases recorded in the literature, I judge that they do not exceed one hundred. The obstruction of the postnasal orifice may be membranous or osseous. The former are usually found posterior to the nasal cavities in the nasopharyngeal cavity, but lie in contact with the postnasal orifices so as to completely obstruct them, while the latter are usually placed within the chamber, within a millimeter or more from the free border of the posterior nasal orifice. To these two forms may be added congenital atresias, by which the bones entering into the formation of the postnasal orifice become united, thus more or less completely obstructing the postnasal orifices.

The child that came under my observation in July, 1912, had marked difficulty in breathing. The child struggled for air, and the face became suffused and slightly cyanosed, the condition being relieved when the child began to cry. Whenever it ceased to cry there would be a recurrence of the difficult breathing. Examination

demonstrated without doubt a deformity which was a complete obstruction of the postnasal orifices. By the end of the second week the child learned to maintain mouth breathing, and also learned to feed in a short time, and has developed in a normal manner. The question is: When is the proper time to operate? The marked success with this case seemed to favor the expectant surgical policy in these cases.—(Abstracted by Emil Mayer.)—LYNCH.

Medical News Items.

THE JOURNAL announces the removal of its office from the New Orleans Polyclinic, Tulane avenue and Liberty street, to the Hutchinson Memorial, 1551 Canal street.

THE UNITED STATES PUBLIC HEALTH SERVICE.—Boards of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 B street, S. E., Washington, D. C., and at the marine hospitals of Boston, Mass.; Chicago, Ill.; St. Louis, Mo.; New Orleans, La., and San Francisco, Cal., on Monday, October 20, 1913, at 10 o'clock a. m., to examine candidates for admission to the grade of assistant surgeon in the Public Health Service. Candidates must be between 23 and 32 years of age, graduates of reputable medical colleges, and must furnish testimonials from two responsible persons as to their character. Service in hospitals for the insane will be considered, and credit given in the examination. Candidates must have had one year's hospital experience or two years' professional work; they must be not less than five feet four inches, nor more than six feet two inches in height. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate, and that they will serve wherever assigned to duty. The examinations are chiefly in writing, and consist of a short autobiography of the candidate, and examination in the various branches of medicine, surgery and hygiene. The oral examination includes subjects of preliminary education. The clinical examination is conducted at a hospital. Successful candidates will be numbered according to their attainments on examination, and will receive early appointments. Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400,

surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon generals \$4,000 a year. All grades receive longevity pay, 10 per cent. in addition to the regular salary for every five years' service up to 40 per cent. Officers traveling under orders are allowed expenses. For invitation to appear before the Board of Examiners, address Surgeon General, Public Health Service, Washington, D. C.

MEDICAL SOCIETY MEETS.—The regular quarterly meeting of the Newton-Neshoba-Winston Medical Society was held August 12. Several clinics were held and matters of interest to the profession were discussed. Two or three new members were added to the association.

SOUTHERN PHYSICIANS MEET.—A conference of Southern physicians was held in Spartanburg, S. C., on September 3, and pellagra, its chief agencies of dissemination and possible preventives, formed the chief subject for discussion. It was announced that, after two years of research by a corps of twenty scientists, the Thompson-McFadden Pellagra Commission is still ignorant of the cause of the disease.

PRESBYTERIAN HOSPITAL.—The Board of Managers of the Presbyterian Hospital held their regular quarterly meeting last month. Reports from the superintendent, treasurer, druggist, radiologist and the various committees were received and were found to be most gratifying. The physicians of the medical advisory committee and the medical staff of the free clinic for the poor were thanked for their kindness and attention to the poor in the free clinic and in the charity wards of the hospital. The donations during June were \$49.66, and for July, \$46.66.

LARGE BEQUEST TO WASHINGTON AND LEE UNIVERSITY.—Nearly two million dollars, from the estate of Robert Parker Doremus, of New York, will be received by Washington and Lee University. Mr. Doremus died leaving a net estate of \$1,985,802. His widow will receive a life interest in the principal, which will revert on her death to the university.

MRS. MILLIKEN GIVES MORE AID TO THE SICK.—Big balconies have just been erected by Mrs. Milliken on the uptown side of the Richard Milliken Memorial building, connected with the Charity Hospital. Arrangements are being made to have hammocks strung

on these balconies for tubercular patients. Balconies on the first two floors are for convalescing children and on the third floor for mothers. There has also been a workroom provided, which has been a great help. No visitors are permitted in these wards, but an ante-chamber is provided for patients able to leave their beds, where they may entertain their friends during visiting hours.

PATIENTS SET BACK BY TURTLE VACCIN.—In a report to the Rhode Island Medical Society, it was declared that the 120 sufferers from pulmonary tuberculosis treated by Dr. Friedrich Friedmann last April with his turtle vaccin have shown none of the wonderful results reported by Friedmann before the Berlin Medical Society. "On the contrary," says the report, "about 17 per cent. of the cases have shown an increased activity of the disease, which would not have been expected under ordinary sanitarium treatment."

GOLD MEDAL AWARDED.—Messrs. Rebman, publishers, take pleasure in informing the profession that the International Medical Congress, held during the first week in August, 1913, has awarded to them the gold medal for the best medical publications.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open competitive examination for chief bacteriologist, for men only. From the register of the eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Bacteriological Laboratory of the Bureau of Chemistry, Department of Agriculture, Washington, D. C., at \$3,500 a year, and vacancies as they may occur in positions requiring similar qualifications. The duties of this position will be to direct all bacteriological and a portion of the fermentation work of the Bureau of Chemistry, to carry on all investigations of a bacteriological nature connected with the enforcement of the Food and Drug Act, and to carry on other investigations connected with the agricultural chemical work carried on by the Bureau of Chemistry. Competitors will not be assembled for examination, but will be rated upon the following subjects: (1) General education and scientific training; (2) practical experience and fitness; (3) publications along bacteriological or pathological lines. An educational training equivalent to that required for an M. D. or Ph. D. degree from a college or university of recognized standing, and at least seven years' practical experience in bacteriological and pathological work involving original investi-

gations, since receiving such degree, are prerequisites for consideration for this position. Applicants must have reached their thirtieth, but not their fiftieth, birthday on the date of the examination. This examination is open to all men who are citizens of the United States and who meet the requirements. Persons who desire this examination should at once apply for Form 304 and special form to the United States Civil Service Commission, Washington, D. C., or to the secretary of the Board of Examiners.

HOSPITAL BOOK STATION.—A receptacle has recently been installed at the Louisville and Nashville depot for books and periodicals. The hurrying passenger deposits an old magazine in the box, which is locked, and the book finds its way into the Charity Hospital. Some patient is cheered, and at no cost to any one, as the traveling man or woman buys many a magazine to while away the tiresome hours. Already a plan is on foot to have a box placed at the Union Station and one at the Terminal. The Board of Administration of the Charity Hospital thinks it has solved the problem of supplying reading material for the patients in that institution.

FUNDS RAISED FOR SALEM HOSPITAL.—Ten thousand dollars was raised towards a fund to endow Salem Hospital, Ohio, through the dispensing of woman's kisses at \$1 each. Twenty thousand men kissed six fair members of ordinarily well-to-do and locally prominent families. Men, young and old, stood in line to enjoy the osculatory performance.

WILL STUDY PELLAGRA IN INDIES.—Dr. Sambon, of the London School of Tropical Medicine, recently departed for West Indies to investigate outbreaks of pellagra there. Dr. Sambon made the famous malarial mosquito experiments in the Roman Campagna. He has made a study of pellagra, and about a year ago advanced the theory that it was transmitted by the buffalo gnat. One of the chief results of Dr. Sambon's investigations has been to disprove the former belief that pellagra was caused by eating spoiled corn.

NEW YORK DENTIST WILLS TO TULANE.—Through the bequest of Dr. Watson D. Woodward, a prominent dentist of New York, the Tulane Dental School will receive between \$30,000 and \$40,000. In addition, Dr. Woodward left Tulane a fund for the establishment of nine prizes of \$50 each for students in the dental course.

PERSONALS.—Dr. Seale Harris, physician-in-chief at the City Hospital and professor of medicine at the University of Alabama Medical College, has tendered his resignation to Dr. E. D. Bondurant, dean of the Medical College.

Dr. R. C. Kemp, physician and surgeon of the Louisiana State University, has been elected to succeed Dr. Chas. McVea, who resigned.

Dr. Isadore Dyer has returned from Canada, after a summer's vacation spent in that country.

Dr. Paul Reiss has returned from a summer's sojourn in the East, and will spend the month of September at Pass Christian.

Dr. Chas. Chassignac, who spent the month of August in Mississippi City with his family, has returned.

Dr. C. Jeff Miller returned a few weeks ago from a two months' stay on the Massachusetts coast.

Other summer absentees who have returned are Drs. I. I. Lemann, Jno. B. Elliott, Jr., W. W. Butterworth, A. G. Friedrichs.

REMOVALS.—Dr. L. M. Provosty, from 708 Audubon Building to 729 Maison Blanche Building.

Dr. T. J. Dimitry, from 714 Audubon Building to 729 Maison Blanche Building.

Dr. J. T. Halsey, from 724 Baronne street to 1232 Maison Blanche Building.

Dr. H. L. Sanders, from Westlake, La., to Orange, Texas.

Dr. E. M. Dupaquier, from 406 Medical Building to 511 Medical Building.

Dr. H. W. E. Walther, from 509 to 410 Macheca Building.

Dr. J. S. Gardner, from Montrose, La., to Robeline, La.

Dr. E. D. Friedrichs, from 1712 Valmont street to 408 Medical Building.

Dr. P. C. De Verges, from 1215 Maison Blanche Building to 317 Macheca Building.

Dr. M. Newhauser, from 3034 Canal street to Louisiana State Board of Health.

Dr. C. A. Weiss, from 728 Audubon Building to 311 Macheca Building.

Dr. E. L. Leckert, from 215 Macheca Building to 311 Macheca Building.

Dr. C. A. Wallbillich, from 215 Macheca Building to 311 Macheca Building.

MARRIED.—On September 9, 1913, at Scott Farm, Lexington, Mass., Dr. Wm. D. Phillips, of this city, to Miss Mary Scott, of Lexington, Mass.

DIED.—On August 21, 1913, at Lake Charles, La., Dr. George H. Collins, aged 65 years.

On August 16, 1913, at Florence, Ala., Dr. James K. Powers, aged 62 years.

On August 14, 1913, at Syracuse, N. Y., Prof. Wellesley Perry Coddington, for forty years one of the most widely known educators connected with the Syracuse University.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

Ionic Medication: The Principles of the Method and An Account of the Clinical Results Obtained. By H. Lewis Jones, M. D. P. Blakiston's Son & Co., Philadelphia, 1913.

By ionic medication is meant the introduction into the cells of the body of various anions and cations through the application of the continuous electric current. The subtitle of this work indicates sufficiently its general scope and the author has succeeded well in concisely and clearly expounding the theoretical basis of this method. The clinical portion of the book consists of numerous descriptions of the various methods employed in the treatment of a large number of different conditions, in many of which strikingly beneficial or curative results are reported. At the same time the author does not hesitate to cite instances where the results have been unsatisfactory or entirely unsuccessful.

It is probable that in the hands of one sufficiently familiar with the method, it is one of value in the treatment of many local conditions, which at times are difficult or impossible to heal by the more commonly used methods. The evidence of its value in such systemic diseases as gout are less convincing and the theoretical considerations advanced to explain the claimed curative action are to the reviewer not even plausible. It is also hard to offer any probable explanation for the curative effect of quinin introduced in this fashion in cases of trigeminal neuralgia in which the lesion appears to be a deep seated one. The same doubt must also arise in connection with the value of this method in sciatica, spondylitis, and various forms of otological diseases.

J. T. H.

Diet Lists of the Presbyterian Hospital, New York City. Compiled, with notes, by Hebert S. Carter, M. D. W. B. Saunders Company, Philadelphia and London, 1913.

This booklet "fills a long felt want," containing, as it does, a lot of information which up to the present has been obtainable only at the expense of more labor and time than most busy physicians or students have been able to expend. We have here in concise but complete form those facts about diet and food which are to-day essential to the correct practice of medicine. In addition to this collection of food facts conveniently arranged, the author has made his own comments and criticisms so as to assist the reader to a successful application of the dietetic measures. A small but well selected group of receipts is only one of the features which renders this book of especial practical value. The reviewer unhesitatingly recommends this work to every doctor who is trying to get the full benefit of dietetic treatment for his patients and who is anxious to do this with more ease for himself and greater benefit to his patients.

J. T. H.

The Difficulties and Emergencies of Obstetric Practice. By Comyns Berkeley and Victor Bonney. P. Blakiston's Sons & Co., Philadelphia, 1913.

This splendid work of 800 pages, by two of the most widely known obstetric surgeons in England, will no doubt become a popular book with the profession in America. It is not a text-book, but is intended to afford a practical guidance to practitioners when called upon to deal with the difficulties and emergencies of obstetric practice. The physiology and management of normal pregnancy, labor and puerperia are omitted, not being germane to the purpose of the authors. The views expressed and methods advised are chiefly founded on personal experience in the well-known obstetric services of Middlesex and Chelsea Hospitals of London.

The arrangement of the text is excellent. The disorders of each organ are discussed in detail in separate chapters, thus adding immensely to the value of the book as a ready reference. The obstetric operations are described in full and the indications for operation discussed at length. The illustrations are well selected and executed.

The practitioner who seeks the latest views on obstetric practice and desires the opinions of authorities of ripe experience and mature judgment, will find both in this book.

MILLER.

Diseases of the Stomach and Upper Alimentary Tract. By Anthony Bassler, M. D. F. A. Davis & Co., Philadelphia.

That the anamnesis occupies an important place in diseases of the alimentary tract is well-recognized, and Dr. Bassler accentuates this fact.

The chapter on Roentgen rays is well put forward, and is plentifully illustrated. Gastric and duodenal ulcer come in for their share of attention. The newer methods of diagnosis are given the space that their importance demands. The article on gastric syphilis is well done, bringing the subject abreast of our present day knowledge.

Under the chapter on congenital defects of the stomach, splanchnoptosis is well rendered. The passage of this book to its second edition is deserved. We like Dr. Bassler's book.

STORCK.

Diagnostic Methods, Chemical, Bacteriological, and Microscopic. By Ralph Webster, M. D., Ph. D. P. Blakiston's Son & Co., Philadelphia, 1913.

This, the third edition of this work follows its predecessor after an interval of but one year, testifies strongly to the popularity of the

previous editions and the general excellence of the work. The new edition contains considerable new matter and many sections have been largely rewritten. The high general level of the work makes it difficult to pick out any section for special commendation, but if there be a best part, it would appear to be that dealing with the newer blood methods, especially those sections dealing with the theory, practice and diagnostic significance of the Wassermann reaction and its various modifications, even though the author has omitted any mention of the Tschernogubow modification.

In the section dealing with urine examinations, most of the valuable newer aids to diagnosis have received proper recognition, but we note the failure to do full justice to the section on renal functional tests, which are at present so much in the lime light and which, apparently, are proving of distinct value to the surgeon and the internist. Of the newer of these only the phenolsulphonephthalein test of Rowntree is given, and although most of us believe that this is the one of most value we also believe that information of value is often to be obtained by others, such as the lactose test or the KI test.

The typographical work is excellent and the plates are among the best we have seen in any work of this character. J. T. H.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1913.

"Progressive Medicine," edited by Hobart Amory Hare, M. D.; assisted by Leighton F. Appleman, M. D. September 1, 1913.

"Anatomy," by Henry Gray, F. R. S. Thoroughly revised and re-edited by Edward Anthony Spitzka, M. D.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1913.

"The Surgical Clinics of John B. Murphy." February, April, June and August, 1913.

P. BLAKISTON'S SONS & CO., Philadelphia, 1913.

"Manual of Operative Surgery," by John Fairbairne Binnie, A. M., C. M. Sixth edition, revised and enlarged.

"Handbook of Physiology," by W. D. Halliburton, M. D., LL. D. Eleventh edition.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1913.

"Syphilis and the Nervous System," by Dr. Max Nonne. Authorized translation from the second bound and enlarged German edition, by Chas. P. Ball, B. A.

C. V. MOSBY COMPANY, St. Louis, 1913.

"Malaria, Etiology, Pathology, Diagnosis, Prophylaxis and Treatment," by Graham E. Henson, M. D., with an introduction by Chas. E. Bass, M. D.

THE GALTON PRESS, Cincinnati, 1913.

"Marriage and Genetics—Laws of Human Breeding and Applied Eugenics," by Chas. A. L. Reed, M. D., F. C. S.

MISCELLANEOUS.

"Public Health Reports," Volume XVIII, Nos. 33, 34, 35 and 36. (Washington Government Printing Office, 1913.)

"Descriptive Catalog—Medical, Surgical and Dental Books." (C. V. Mosby Co., St. Louis, 1913.)

"Quarterly Bulletin of the Louisiana State Board of Health." (New Orleans, August 1, 1913.)

"Ophthalmic Literature." (Published by Edward Jackson, Denver, Colo.)

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans,
FOR AUGUST, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....	8	5	13
Intermittent Fever (Malarial Cachexia).....	2	2	4
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....		1	1
Diphtheria and Croup.....	5	5	10
Influenza.....			
Cholera Nostras.....			
Pyemia and Septicemia.....	1		1
Tuberculosis.....	28	47	75
Cancer.....	23	10	33
Rheumatism and Gout.....			
Diabetes.....		1	1
Alcoholism.....	1		1
Encephalitis and Meningitis.....	2		2
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	17	6	23
Paralysis.....	5		5
Convulsions of Infancy.....	1		1
Other Diseases of Infancy.....	12	7	19
Tetanus.....	3	4	7
Other Nervous Diseases.....	7		7
Heart Diseases.....	50	39	89
Bronchitis.....	2	1	3
Pneumonia and Broncho Pneumonia.....	14	22	36
Other Respiratory Diseases.....	1	2	3
Ulcer of Stomach.....		3	3
Other Diseases of the Stomach.....	7	8	15
Diarrhea, Dysentery and Enteritis.....	27	8	35
Hernia, Intestinal Obstruction.....	5	1	6
Cirrhosis of Liver.....	5	2	7
Other Diseases of the Liver.....	4	2	6
Simple Peritonitis.....		2	2
Appendicitis.....	4		4
Bright's Disease.....	31	17	48
Other Genito-Urinary Diseases.....	6	4	10
Puerperal Diseases.....	5	1	6
Senile Debility.....	3		3
Suicide.....	5		5
Injuries.....	20	25	45
All Other Causes.....	31	16	47
TOTAL	335	241	576

Still-born Children—White, 29; colored, 20; Total, 49.

Population of City (estimated)—White, 272,000; colored, 101,000.

Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 14.78; colored, 28.63; Total, 18.53.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....30.00
 Mean temperature.....83.
 Total precipitation.....5.29 inches
 Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

VOL. LXVI.

NOVEMBER, 1913.

No. 5

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

THE SURGERY OF EXOPHTHALMIC GOITRE.*

By J. M. BATCHELOR, M. D., New Orleans.

It will be found in the history of modern medicine that at various times concentrated scrutiny and study have been directed toward some special organ or group of organs. At the present time the thyroid gland shares this attention with the hypophysis cerebri. After much labor many facts concerning the physiology and pathology of the thyroid gland have been discovered and collaborated, but much yet remains unknown. The final chapter has not been written. We are concerned in this discussion with that phase of thyroid pathogeny relating to what is variously known as exophthalmic goitre, thyrotoxicosis, hyperthyroidism or Graves', or Basedow's disease. In 1835 Graves and, later, 1840, Basedow, clearly described this disease, erroneously attributing it to a disorder of the nervous system. But to Moebius we are indebted for establishing the entity of hyperthyroidism and thereby contributing the most important element for the surgical treatment of exophthalmic

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

goitre. He proved by logical and convincing studies that the syndrome described by Graves and Basedow was due to an excessive secretion and absorption of a substance elaborated by the thyroid gland; in other words, a thyrotoxicosis. The thyroid gland is situated beneath the superficial muscles of the neck, the platysma, sterno-cleido mastoids, sterno-hyoids, sterno-thyroids and omo-thyroids, and is in close relationship on its median and posterior aspect with the larynx and trachea and recurrent laryngeal nerve. It is possessed of two capsules, the external derived from the deep cervical fascia by which it is bound to the trachea and larynx, and an internal or capsula propria which dips into the gland by means of septa dividing the gland into lobules, which in turn are divided into primary lobules. These capsules are important to the surgeon, inasmuch as the external capsule is crossed in front by the venæ accessoræ (Kocher), and posteriorly it embraces the recurrent laryngeal nerve. The thyroid gland has a very liberal blood supply, being supplied ordinarily by four arteries, rarely by a fifth. The arteries enter the gland at the poles, the superior thyroid going to the upper pole, while the inferior enters the lower. Both vessels divide into two, rarely more, branches on the surface of the gland before entering its substance. Veins and nerves accompany the arteries. At the lower pole the large venæ thyroïdæ imæ are given off to the innominate veins. At the upper and lower border of the isthmus the two sides of the gland are connected by large veins—the superior and inferior communicating veins. These numerous blood vessels break up in the interior of the gland and form more branches which ultimately surround each tube as a capillary network and come in direct contact with the gland cells. The lymph vessels and clefts form similar plexuses and unite to form small trunks on the surfaces of the glands. Histologically the thyroid gland is a compound alveolar structure without an excretory duct. The histological unit is a closed follicle lined with a single layer of cuboidal cells which when hypertrophied become columnar, when atrophied flat. It is in the follicle that the chemism of the gland is carried on, and changes in the epithelium are quite characteristic of the varying stages of exophthalmic goitre. Stuart McGuire, in his oration before the Southern Medical Society at Jacksonville, Florida, November, 1912, says “the difference in histological structure of a normal thyroid and the thyroid of exophthalmic goitre is about the same as the difference observed in

the resting and lactating breast." The change is best represented by the term "hypertrophic parenchymatous thyroid." In the hyperactive gland there is an increase in the number of cells in the follicles or an increase in the number of follicles, or both. It is here that we seek for an explanation of the symptoms of hyperthyroidism.

L. B. Wilson has shown that there is a definite relationship between the symptoms in a given case and in the quantity of functioning tissue and absorbable secretion. The parallelism between the clinical symptoms present and the laboratory findings are so definite that the pathologist may write accurately the history and stage of 80 per cent. of cases. Wilson says that if a careful inquiry be made the history of many cases of simple goitre will reveal symptoms of hyperthyroidism at some time during its progress, and "that every case of exophthalmic goitre is hypothetically destined, in the course of pathological degeneration, to become a case of simple goitre." So hyperthyroidism may result from a simple goitre by an increased function of the thyroid gland or on the other hand continued hyper-function of the exophthalmic gland may result in retention of secretion, blocking of lymphatic drainage and resultant degenerative changes in the epithelium with a return to simple or colloid goitre. A. J. Ochsner and R. L. Thompson in their work on the "Thyroid and Para-thyroid Glands" remark "that if the patient lives long enough a case of hyperthyroidism can return to a simple goitre." They further caution "in such cases, however, the heart and nervous symptoms may persist as a result of the previous over-action of the gland after the thyroid has become quiescent." Such cases are not for the surgeon; the thyroid has accomplished its destructive changes; the lesions are beyond the hope of surgical repair and the gland must be left untouched. There is then in the exophthalmic gland a stage of progression and one of regression. The latter may halt at a return to a simple goitre or further atrophic retrogressive changes may occur, resulting in hypothyroidism and myxedema. This has an important bearing on the decision of the surgeon relative to the operative procedure to be adopted, whether ligation, excision or resection.

The thyroid gland is one of a concatenated system of glands that depend for their function upon the production of a specific material or internal secretion. This secretion passes into the blood

and influences the cells of the body after its own peculiar way. The first acceptable hypothesis concerning the internal secretions was presented by Brown-Sequard: "All glands provided or not with secretory ducts give to the blood useful principles, whose absence is felt after their extirpation or destruction by disease." Hanselman says "there exists between the single cell groups an altruistic relation in such a manner that each cell group undertakes a definite duty for the other remaining cell groups, even so as all the remaining for one." Eppinger, Falta and Rudinger in their brilliant research work on the reciprocal action of glands with an internal secretion have shown there is exerted a mutual inhibitory influence between the pancreas and thyroid and the pancreas and adrenals; that between the thyroid and adrenals there is a mutual stimulative influence. A posteriori reasoning will establish the close relationship of the thyroid with the sexual organs. There is congestion of the thyroid at puberty and the menopause and after coitus, during menstruation, pregnancy and lactation. When the sexual powers begin to wane the gland tends to atrophy, in myxedema there is sexual blight.

Under the exact research of the present time increasing interest is being attracted to the interdependence of the thyroid and the pituitary body. Acromegaly is frequently associated with hypertrophy of the thyroid, while in hypothyroidism the pituitary undergoes hypertrophy.

At the present time our knowledge of the means by which the physiologic balance and correlation of the functions of the ductless glands is maintained is incomplete. To the future belongs this interesting problem.

Accumulating evidence indicates that among other products elaborated these glands put forth chemical stimuli known as "Hormones," and that it is through the interchange of these silent messengers that harmonious concert of action is maintained.

Whatever the nature, and by whatever means exerted, the influence of the thyroid gland is vital. The thyroid gland is necessary to life. According to Kocher, after extirpation of the thyroid a person may live seven years.

Baumann, in 1896, isolated an active principle composed of iodine and a globulin which he called iodothyron. The compound has been demonstrated in the blood, is not found elsewhere and possesses the physiological characteristics of thyroid extract. De-

rangement of the thyroid function whether manifested as hypo- or hyperthyroidism leaves a profound and unmistakable impress upon the individual. On the one hand there is suggested an arrest of body metabolism, the vital forces are depressed, tissue change is incomplete, the body temperature low. In the young the infantile type persists, there is deficient mentality, the osseous system is dwarfed. The skin and connective tissue is myxomatous, the hair, the teeth, the nails, all present evidences of deficient nutrition.

Excessive thyroid secretion, on the other hand, suggests unusual molecular waste. The katabolic forces are at work. There is rapid heat production and gaseous interchange. The tissues are stimulated to prodigal waste. Muscular tremors, sweating, tachycardia, a puny strength, loss of weight, great mental irritability and general unrest complete the picture of the exophthalmic.

Of the various hypotheses put forward as to the etiology of thyrotoxicosis none have been wholly acceptable. The theory of (a) auto-intoxication, (b) the infectious, (c) the nervous and (d) the thyroid hypothesis, each fails of full explanation. Crile in his kinetic theory of hyperthyroidism ascribes the disease to emotional causes. He points out that nearly all the structural changes caused by thyroid excess may be produced by the emotions. He says "in protracted fear the brain cells show marked physical changes." In illustration he cites the marked degenerative changes found in the cells of the cerebral cortex of rabbits that have been experimentally subjected to prolonged fright. He believes that the emotions, fear and worry so diminish the normal brain control of the thyroid as to leave it easily susceptible to abnormal stimulation, and that to this diminished control is due hyperthyroidism. My belief is that each theory possesses some element of truth and that the etiology of thyroidism is complex.

Ordinarily the diagnosis of exophthalmic goitre is a matter of no difficulty. But let it be said at the outset there is no disease in which experience, gained through contact with a large number of cases, is of more assistance in making a diagnosis than in exophthalmic goitre. The earlier observers laid great stress upon the presence of goitre and exophthalmus. Enlargement of the thyroid gland is, however, often so insignificant as to escape the attention of the examiner or the pathological area may occupy the extremity of a lower pole, and develop downward and be hidden behind the

sternum. Often the toxicosis is out of all proportion to the observed enlargement. Exophthalmus may be absent in 20 per cent. of the cases and frequently comes on at a late stage of the disease. Tachycardia is the earliest and most constant symptom. It is generally agreed amongst experienced clinicians that the presence of tachycardia with either one of the above symptoms—goitre or exophthalmus—forces a diagnosis of hyperthyroidism. Among the earlier symptoms will be found a great and otherwise unexplainable mental irritability. A cheerful and pleasing disposition gives place to moroseness, the patient is prone to tantrums and sudden changes of mind. In the acute stage fever is often present, there is rapid emaciation. Sweating is characteristic. The skin is relaxed. Alimentary disturbances are common. Muscular weakness and tremors are pronounced. The patient complains of lassitude, fatigue and exhaustion. There is everywhere evidence of rapid dissipation of the body forces.

At some time in the progress of the disease arise symptoms referable to the ocular-motor apparatus. Widening of the palpebral slit (Stellwag's sign), lagging of the upper lid (Von Graefe's) in-co-ordination of the muscles of convergence (Moebius' sign). One or all will be found in a single patient and should be sought for as corroborative evidence of the disease. Many patients will date the appearance of their symptoms back to a time immediately following the reception of a sudden shock, either of grief or fear. Moebius explains this as due to the fact that many glands are but slightly pathological so that the over-production of secretion is but slight and the absorption of this excess produces no appreciable effect upon the tissues of the body. The sudden depression of severe shock is all that had been needed to allow the thyroid excess to produce definite symptoms. Kocher has observed a constant alteration in the blood picture. There is a leucopœnia, and a relative lymphocytosis, though the total lymphocytes are slightly decreased. The neutrophiles are reduced one-half. Other observers have verified his findings, but these changes are to be accepted merely as corroborative evidence.

The course of the disease is characterized by periods of remission and of acute exacerbations. Clinically there are four stages: first, the incipient. In the incipient stage diagnosis is most to be desired and most difficult. Early diagnosis affords best opportunity for treatment and is productive of best results. In this stage the

symptomatology is vague and often misleading. But the diagnosis can and should be made. Many cases never develop beyond this stage. A spontaneous cure is often accomplished. For this reason there is opposition to the contention of a number of surgeons that all cases of goitre should be subjected to operation. In the second or acute stage of acute hyperthyroidism the disease boldly declares itself, the symptomatology is abundant, the classic triad—tachycardia, goitre and exophthalmus—are often found, and the diagnosis is ready-made. Upon the second stage is engrafted the third or chronic stage. The violence of symptoms abates and there are periods of remission. The gland may harden and the vascularity appears less. Exacerbations due to unusual stimuli are readily excited and are quite characteristic. The disease may now revert to simple goitre or atrophic and degenerative changes may progress to the myxomatous or fourth stage. The goitre remains but the symptoms undergo a change. Weakness is progressive, the pulse is slowed, the skin pale, the mind torpid and a massive edema invades the tissues. Such are the protean manifestations of this malady which has now passed into the category of surgical diseases.

TREATMENT: It is obvious from the above considerations that the means to be adopted in the management of each case is a perplexing problem. Each separate case requires that it shall receive individual consideration and the method to be pursued in treatment must conform to the requirements of that particular case. The stage of the disease, the intensity of the thyroid poisoning, the amount of gland tissue involved and the extent of general visceral degeneration must be accurately estimated and duly considered before surgical intervention is attempted.

The medical treatment of hyperthyroidism will be discussed in another paper to be read before you today. Reference is now made to it only that we may insist the surgeon cannot afford to deny himself the valuable assistance to be derived from a preparatory course of medical treatment prior to operation. Some patients may be brought to the table after a few days of observation. Others require weeks of preparatory treatment. C. H. Mayo says operation for hyperthyroidism is not an emergency procedure. The first consideration, then, is to increase what has been termed the patient's "margin of safety." First and foremost among remedial measures must be placed the agency of rest—absolute rest of mind

and body. Rest for the fatigued muscular system and the overtaxed heart, and peaceful repose and quiet for the irritated brain. With this forced feeding of a carefully selected dietary, the bulk of which should be of albumin and fat. Different authorities have advocated various drugs; each has a favorite, but there is not a unanimous preference for any single one. The drug selected must then depend upon individual experience and preference. For myself, I have too often observed the immediate beneficial effect of the neutral hydro-bromate of quinin, both in my own hands and in the hands of others, to doubt its superior value. I employ it through preference. Mayo still uses the X-ray in preparatory treatment, though there has been some objection to its use on the grounds that sclerosis of that portion of the gland left behind after operation may continue with resulting hypothyroidism.

I know of no better designation of that period of time elapsing between the reception of the patient and the hour of operation, than to call it the "interval of preparation." It is in this interval that the patient's "margin of safety" must be increased to the maximum and a final analysis of the case be made. The full responsibility of the final outcome of the case is now thrust upon the surgeon into whose hands the patient has been submitted. The question now arises as to the nature and extent of the operation best suited to the case, whether to ligate vessels, excise gland, enucleate nodules or to resect. If to ligate, whether one or more vessels should be included, or whether to do the graduated operation. Ligation, it is generally agreed, should be resorted to in the very mild and in the very late or aggravated cases, when other and harsher methods would not be tolerated. Often the operation is done in steps, allowing a few days to a few weeks' interval between. There is no guide other than judgment based upon the condition of the patient. Excision of gland substance is applicable first to those cases of the second and third stage in which cure has not been effected by ligation, or that have been sufficiently improved to permit of the more radical operation. Second, in those cases where it is apparent that visceral degeneration is not extreme. The amount of gland to be removed cannot be measured by any rule that is applicable to every case. What will suffice for one may be too much for another and still too little for a third. There may follow a compensatory hypertrophy of that portion of the gland left behind with relapse, or, on the other hand, there there may

ensue atrophy and myxedema. C. H. Mayo states that the thyroid gland has a "factor of safety" of six; that is, one sixth of the normal gland is adequate for the patient's needs. Plummer believes one-fourth of the gland should be preserved.

Removal of one lobe and the isthmus usually meets the necessities of a case, and this is regarded as a thyroidectomy, as practiced by most surgeons.

The dangers of thyroid surgery relating to anesthesia, infection, hemorrhage and shock have been reduced to a parity with those connected with any other major surgical operation. Discussions concerning anesthesia reveal the fact that in the great goitre clinics of this country and Europe the mortality rate is about the same whether the anesthesia be local or general. These are dangers incident to any major surgical procedure and not peculiar to thyroid surgery.

The one intrinsic danger of exophthalmic surgery is acute hyperthyroidism. The belief formerly held that acute post operative hyperthyroidism was due to rough handling of the gland with escape and absorption of the juices expressed into the wound is now discredited. Kocher believed that even the blood was toxic and urged the necessity for thorough hemostasis to prevent blood contact with the wound. Crile believes post operative hyperthyroidism is due to excessive secretion produced in part by emotional stimuli imparted to the brain during the hours preceding operation. To eliminate the emotional element he advised that the patient be kept in ignorance of the day fixed for operation and that at the last the anesthetic should be administered without the patient's knowledge.

The final causative factor, he thinks, is traumatic stimulation of the brain, imparted by nerve impulses that originate in the field of operation. He recommends blockage of nerve impulse by the use of a local anesthetic. He states that, observing these two precautions, ligation or excision can be done in the most severe cases without fear of hyperthyroidism.

This method is based upon the scientific principles of anoci-association and should be employed always in the graver types of the disease.

In this connection it is significant that the highest mortality will be found in the first series of cases of all surgeons. It is logical to conclude, then, that the first result is, after all, dependent upon the experience, skill and perfection of technic exhibited

by the individual operator. In the hands of the master craftsmen, like Kocher, Crile, Mayo, Ochsner, Halsted and others, the mortality of operations for hyperthyroidism is from 2 to 5 per cent. and there is a symptomatic cure of 85 per cent.

The technic of the various operations on the thyroid gland has been too often described to require a detailed repetition here. The salient features of the operation of excision are: First, free exposure of the gland by an ample incision—if necessary division of the overlying muscles; second, perfect hemostasis to permit of quick identification of the parts concerned in the operation; third, preservation of the external capsule on the posterior surface of the lobe. The preservation of the posterior external capsule insures the protection of the recurrent laryngeal nerve and the preservation of the parathyroid glandules.

A successful operation is usually followed by prompt and marked improvement of the patient. However, improvement is sometimes deferred several weeks. After operation a period of rest should be advised. The patient should not be permitted to immediately resume the routine of social or business life. Time is required for the accomplishment of regeneration.

MEDICAL ASPECTS OF EXOPHTHALMIC GOITRE.*

By HAMILTON P. JONES, M. D., New Orleans.

My attention was first seriously drawn to the study of exophthalmic goitre about thirteen years ago, when I was called upon to treat an incipient case in the person of one of my dearest friends. The groping in the darkness for a diagnosis of this case was distressing. There were futile examinations of all kinds, blood counts, consultations with professional friends here and away, specialists, neurologists and the others, until finally the years of nervousness, insomnia, weakness and mental anguish on the part of the patient forced me by a complete process of elimination to finally make a diagnosis of exophthalmic goitre, fortunately before any permanent changes had taken place, although careful inspection now showed a slight enlargement of the thyroid. I had never before recognized an early case of exophthalmic goitre.

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I made an effort to have Dr. Halsted of Baltimore operate on this case, but owing to his then ill health this was not possible, so I undertook the medical treatment of it with a final cure in about a year.

When you have nervousness, unwillingness to enjoy the ordinary amusements or work that require muscular exertion, especially if the circumstances and auspices be pleasant, tachycardia, sleeplessness, fine tremors, muscular weakness or easy fatigue, unwillingness to be left alone, all without any assignable cause, be on your guard, for you are most probably dealing with a case of incipient exophthalmic goitre.

The major symptoms of exophthalmic goitre in the order of their importance are tachycardia, exophthalmus and goitre. The minor signs may or may not be present and, following the classification of Ochsner and Thompson, "Thyroid and Parathyroid Glands" (page 45), are as follows: Tremor, muscular weakness, nervous excitability, mental deficiency, vertigo, Graefe's sign, Stellwag's sign, Moebius' sign, paroxysmal dyspnea, intermittent vomiting, diarrhea, sweating and mental depression, all without apparent cause, increased gravity of symptoms upon psychic excitation, mental fatigue, physical fatigue, administrations of thyroid extract and of iodine or its compounds, emaciation in advanced cases, also anemia, increased lymphocytosis, decreased polymorphonuclear leucocytosis, edema of upper and lower eyelids, later of feet, visible pulsations of the tumor, discoloration of skin, especially about nipples and orifices.

The following symptoms are important and are gone into more fully:

Muscular weakness (quoting from Ochsner and Thompson, *Thyroid and Parathyroid Glands*, page 50, under this heading): "This weakness seems to be due to a condition of the muscle tissue itself caused by the poisoning of the tissue by the thyroid secretion in the blood."

Although this symptom is usually present quite late in the course of the disease, still it has occasionally been the first to attract the attention of the physician.

It is likely that the same condition affecting the muscles of the orbit has much to do with producing the symptoms of exophthalmus as well as the symptoms to be described later as Graefe's, Stellwag's and Moebius' symptoms. Since Landström has given us more

perfect knowledge of the muscles of the orbit, it seems certain that the exophthalmus is due especially to the weakness of an unstriped cylinder formed muscle which had formerly been overlooked by both anatomists and clinicians, as well as by pathologists.

This muscle is under the control of the cervical sympathetic plexus. The weakness may be uniform throughout the muscles of the body or it may be selective, affecting only certain muscles, those of the orbit being affected more often than any of the others.

While the effects of the thyroid poison can be more satisfactorily demonstrated in the muscular system, there is nothing to indicate that all the other structures of the body are not equally seriously affected. It would, therefore, be unwarranted to attribute all of the digestive and sweating symptoms, for instance, solely to the effects of muscular weakness.

Under the general heading of muscular weakness I will briefly describe the three signs, which, while not necessary to a diagnosis of exophthalmic goitre, are valuable in confirmation of it.

Graefe's Sign, 1864.—When the patient is made to move the eye from up downward the lower margin of the upper eyelid does not follow the line of vision normally, but lags behind, or follows in an irregular, spastic or jerky manner. This symptom is best elicited by drawing the end of a pencil, say, in front of the patient from above downward, at the same time watching the action of the upper lids.

Stellwag's Sign, 1869.—Consists in a retraction of the upper lid, which is much more stationary than normal, and that winking is much less frequent. This sign is most frequently seen in cases presenting marked exophthalmus.

Moebius' Sign, 1895.—Many cases of exophthalmic goitre present an insufficiency of convergence; in fact, there may be an actual divergence of 5 or more degrees. Doubtless some of these cases have been operated on for external squint, the true causative factor either being overlooked or not being given the necessary consideration, with, I presume, in many instances, rather unsatisfactory results.

If the patient is directed to look at the ceiling and then suddenly at his own nose, it will be found that only one eye will be directed toward the nose, while the other may take any other direction, though usually maintaining its axis parallel with that of the eye directed to the nose.

Again, if the patient be directed to fix the eyes on an object several yards away, which is gradually brought to the face, a point will be reached at which only one eye will fix the object, the other one ceasing to see it.

This accounts for the absence of severe evidences of eye strain. There is no double vision in these cases, as a rule the patient simply using one eye or the other in fine or near work.

As a general rule sufferers from this disease, women particularly, are well formed and developed until late in the disease, and tuberculosis of any description is very rarely found.

Frequency.—I do not know but what my closer interest in this disease may have obscured my true sense of perspective, yet it seems to me that this disease is more commonly met with than formerly; certainly I am seeing a great many cases.

Causes.—Exophthalmic goitre is generally conceded to be due to an increased production of the thyroid secretion, which may or may not be normal in character. What factors cause the gland to increase in size and output are at present unknown.

Treatment: The plans of treatment are based on two radically different methods of procedure, each having in view the same end.

The “surgical” by reducing the actual size of the gland, by partial removal, or ligation of the blood supply, mechanically diminishes the thyroid secretion to that extent. This procedure is generally beneficial and is frequently curative, but is not, from its limitations and very nature, able to prevent subsequent proliferation of gland parenchyma and return of the disease, which frequently happens.

The “medical” attempts to neutralize the thyroid secretion and render it inert by the administration of some medicinal substance, and in my plan, favors the elimination of toxic substances associated with indican, amino acids and kindred products of bacterial action and metabolism. To give some aid to the patient in the form of a safe sedative, and to regulate the rest and diet in a sane manner.

Many cases of exophthalmic goitre get well spontaneously.

Many apparently get well, but recur.

Many cases of exophthalmic goitre are seen too late to be cured, either medically or surgically, the changes produced being permanent in character.

I do not think that any more recur after a medical cure than

after a surgical cure. In equal numbers of cases of equal gravity and condition, case for case, the results will compare most favorably. I have a number of medical cases that have remained cured over five years.

Since September 1, 1912, at my clinics at the Presbyterian Hospital, the Charity Hospital and in my private practice, I have medically treated over ninety cases of exophthalmic goitre, of which about forty are still under treatment. I expect most of these to gradually go to recovery as the others have done, and expect to have to resort to operative assistance in less than 10 per cent. of the whole number treated. In these I do not expect a cure, because they were of too long standing when I first saw them, and the damage done to the heart and other organs is permanent.

I am confident that all of these cases have been benefited and also that none of them have in any manner been injured by the delay incident to a fair trial of it.

It seems to me that in urgent cases no more than two or three weeks ought to be allotted to the medical treatment trial; then, if no improvement is noted, the patient should be operated on without further delay; however, in all of my cases, improvement has been noted in from forty-eight hours to a week. The improvement is striking and most gratifying, particularly to the patient. They happily say they feel better, and give real evidence of the fact by bringing in other cases for treatment.

I have used no new remedies; they have all been used in the treatment of this disease before, as have thousands of others, with more or less success. I have made new combinations of them and have based a most important part of my treatment and dietetic control upon a new fundamental basis of control in this disease, namely, strict attention to elimination and subsequent keeping out of indican and its evil associates from the urine. This, too, is only our simple duty in any other disease we may treat.

The remedies used and their manner of prescribing are as follows:

Quinin neutral hydrobromate, first highly recommended by Forscheimer, given if the patient can stand it in five grain capsuled doses, four times a day; less if necessary. Patients soon acquire a tolerance, and if indicated I may give more. Any of the quinin salts have the power to neutralize the thyroid secretion,

the neutral hydrobromate being the salt of choice, simply because it is better tolerated.

The salicylates, aspirin and drugs of this class all have the power of neutralizing the thyroid secretion and may with almost equal chance of success be used, your choice being based on your own judgment and indications of the particular case.

Bromids or cannabis indica to control excessive nervousness and control physiological action of quinin. Bromid of sodium 20 grs., three or four times a day. Cannabis indica in increasing doses from 3 drops up, three times a day.

Trianol, veronal, neuronidia, etc., may have to be used for the insomnia.

The purgative capsule is a little old fashioned, but efficient; it removes the indican.

℞	Resin podophilin.....	gr.	i
	Ext. cascara sagrada.....	aa grs.	xii
	Oil black pepper.....	gtts.	xii

Mix. F.Caps. No. xii. Sig.: One capsule t. i. d. until bowels move well.

Another most excellent purgative is:

℞	Potassium bitartrate	ʒi
	Sodium sulphate	ʒii

M. f. pulv. Sig.: Teaspoonful in a half glass of water, night and morning.

Proteins are added to or taken from the diet as may be indicated, both by the urine and the weight of the patient.

The Bulgarian lactic acid bacteria are always of great value.

Cases 1 and 2. Mrs. W. M., age 39 years, married, three living children. Had goitre two years when operated on in spring of 1909. Judging by scars, a bilateral ligation; remained in bed seven weeks after operation, and seemed to have completely recovered at the end of six months, when she resumed her ordinary duties.

Previous to operation neck was very large, patient very nervous, sleepless, tachycardia marked; was unable to attend to ordinary household duties. Gained weight after the operation, at the end of the year weighing 132 pounds.

Patient attributed development of disease to excitement incident to sickness and accidents at home. Among them a son broke his arm and had his eye shot out. Never had any domestic trouble; happy home and

devoted husband, who does not drink. Patient was well up to the present illness, which began Good Friday, March 21. There was unusual fatigue on that day, incident to religious duties performed.

Condition one of extreme nervousness all that day, all the symptoms mentioned below becoming rapidly worse. Patient first presented herself at the Presbyterian Hospital April 2, 1913, about twelve days after onset of present illness, with the following symptoms: Very nervous, easily excited, fine tremors, involving the entire musculature, especially of extremities; profuse sweats about neck, diarrhea, marked insomnia, apprehensive of impending disaster, shortness of breath and palpitation of heart. Has lost 101 pounds since November.

Present weight, 121 pounds 10 ounces; pulse, 140; respiration, 28; blood pressure, 120. Some exophthalmus; eyes divergent five degrees. Goitre seems confined to isthmus, and measured two inches by four inches horizontally; pulsates visibly, and a loud murmur is heard over entire gland. Neck, $13\frac{1}{2}$ inches in circumference. Heart enlarged one-half inch to the right.

Lungs and all other organs apparently normal; menstruation normal; urine normal in all respects, except for presence of considerable amount of indican.

Treatment.—Purgative capsule three times a day until indican disappeared from the urine, and administered thereafter at intervals as the condition of the urine and bowels indicated. Five grains of the neutral hydrobromate of quinin and twenty grains of sodium bromid were given four times a day.

Patient began to improve almost at once upon the institution of this treatment. The condition when last seen, April 20, eighteen days after institution of treatment, as follows:

Patient feels well and comfortable. Insomnia and sense of impending evil entirely disappeared. Dyspnea and palpitation very much less. Nervousness, also tremors, almost entirely confined to the upper extremities. Has gained six pounds. Pulse, 90; respiration, 22; blood pressure, 120; goitre apparently one-half in size; pulsations less marked, and murmur in gland distinctly less loud; neck, $12\frac{1}{2}$ inches in circumference.

This is a relapse case after operation, and it would be difficult to imagine just what could have been done for her surgically.

Cases 3 and 4. Mrs. N. M., age 27 years, married ten years, no children. Exophthalmic goitre.

Neck began to enlarge about four years ago. Patient continued at work in a bag factory, running a power sewing machine up to two weeks before presenting herself at the clinic of the Presbyterian Hospital.

Condition when first seen, January 15, 1913: Patient reports loss of weight, eleven pounds, in previous five weeks. Present weight, 122 pounds. Domestic life very unhappy, resulting in separation from husband several years ago. Patient a pitiable-looking object.

Neck, 19 inches in circumference. The right lobe of the thyroid smaller than the left. Entire gland pulsating, visible at a distance of ten or more feet. Loud bruit audible to unaided ear five or six inches distant from the gland. Pulse, 135 to 170; blood pressure, 130; respiration, 28; temperature, normal. Heart enlarged $1\frac{3}{4}$ inches to the left of the mammary line. Lungs normal, as all other organs apparently. Menstruation regular; no pain.

Urine contains an excessive amount of indican. Exophthalmus marked; eye divergent; Graefe's, Moebius' and Stellwag's signs well marked. Tremor of muscles of the extremities marked and distressing to observe. Bowels regular. Patient complains of irregular sweats, extreme nervousness, sleeplessness and apprehension.

Appetite variable. Family history for goitre negative. Patient drank cistern and river water. While this patient has been separated from her husband, she has never been submitted to any harsh treatment or fright



Left Top, Case 3.—Right Top, Case 4.
Left Middle, Case 6.—Right Middle, Case 7.
Lower, Case 9.

ILLUSTRATING ARTICLE OF DR. HAMILTON P. JONES.

in her life. All the symptoms complained of have come on since the development of the goitre. Blood-counts indicate nothing abnormal. Blood cultures negative.

Treatment.—The diet of the patient was regulated as follows: Red meats were allowed twice a week, six raw eggs, with Wyeth's extract of malt, were given in addition, with the ordinary meals each day. Three of the purgative capsules were given each day until indican had disappeared from the urine, and were continued from time to time after that, as the condition of the bowels and urine indicated.

Five grains of the neutral hydrobromate of quinin were administered four times a day, together with twenty grains of sodium bromid, three times a day. Patient returned two days later, stating that she felt better.

The patient has continually reported feeling better, although weight fell to 119 pounds on the 22nd of February. About this time, as some symptoms of bromidism presented themselves, five drops cannabis indica five times a day were substituted for the bromid of soda.

Thereafter these two were used alternately. The condition of this patient March 20 was as follows: Blood pressure, 140; pulse, 110; respiration, 22; still nervous; sleep, good; not apprehensive; appetite fine; bowels and menstruation regular; not very weak; no sweats; feels much better and stronger; pulsations and tumor less marked; circumference of neck, 14 inches. This result is very remarkable and must be considered, because, all during the period of this treatment, this patient has been walking two miles each way to and from work, and has been sewing on a heavy power-driven machine an average of nine thousand bags a day.

Mrs. R., age 35, married, baby eight weeks old. Thyroid began to enlarge about third month of pregnancy. Had a most uncomfortable time, with nervousness, dyspnea, apprehension and unreasonable irritability during latter months of pregnancy.

October 23, 1912: Neck, 15 inches in circumference; thyroid symmetrically enlarged; very nervous; marked tremor; no exophthalmus or other eye symptoms; tachycardia on slightest exertion or mental disturbance; sleep good; no sweats; at times unaccountable diarrhea, lasting a few hours; pulse, 84; respiration, 20; temperature, normal; blood pressure, 115; heart, slow, enlarged; lungs, etc., normal; slight indicanuria.

Treatment.—As baby was thriving on breast, nursing it there was continued. The diet of the mother was not changed.

Purgative capsules, five grains neutral quinin hydrobromate four times a day, and sodium bromid 20 grains three times a day. This was continued as indicated until patient was discharged cured, the end of January, 1913, after having remained absolutely normal for one month without any treatment whatsoever. Neck, 11 $\frac{3}{4}$ inches; blood pressure, 120; pulse, 72; respiration, 17; temperature, normal.

Mrs. S., age 33. October 17, 1912: Complains of nervousness following an accidental dose of one-third grain of strychnin sulphate three years ago.

Height, 5 feet 7 inches; weight, 98 pounds; no cough; lungs, heart and other organs normal. Menstruation normal every twenty-four days. Appetite fine; sleep restless; some tremor; very nervous and apprehensive. Makes husband very unhappy by constantly picking on him while he is around, and, on account of her fearfulness of impending danger to herself, has crying spells and creates most unhappy situations whenever he wishes to leave her.

Some exophthalmus, and slight eye symptoms. Thyroid enlarged. Circumference of neck, 13 $\frac{1}{2}$ inches; pulse, 110; respiration, 20; temperature, normal; blood pressure, 108.

Usual treatment given for two months. Stopped for one month, at the end of which time patient, remaining normal in every particular, was discharged cured.

Condition on January 20, 1913, date of discharge, as follows: Weight,

103 pounds; circumference of neck, $11\frac{1}{2}$ inches; pulse, 80; respiration, 18; temperature, normal; blood pressure, 116.

Case 7. Miss K. L., age 17, single. Enlarged tonsils and thyroid. Referred to me by Dr. Wilbert at the Presbyterian Hospital for the purpose of determining her fitness to safely, so far as that can be predetermined, to withstand a general anesthetic necessary for the proposed removal of her tonsils. I may interpose here that all cases from this clinic are submitted to me for this examination before being submitted to a general anesthetic.

October 16, 1912: Nervous; sleep poor; no tremor; eyes seemingly normal; bowels regular; menstruation regular; appetite good; pulse, 88; respiration, 18; temperature, normal; blood pressure, 120; all organs normal; no indicanuria. Passed for anesthetic. Circumference of neck, 13 inches.

November 1: Patient returned, tonsils having been removed. Condition not improved. Pulse, 120; neck, $13\frac{1}{2}$ inches. Neutral quinin hydrobromid, 20 grains per day, with eggs and malt ordered.

November 23: Patient returned decidedly worse; more or less constant headache; very nervous; dyspnea; tachycardia; pulse, 140; respiration, 22; temperature, normal; blood pressure, 120; no eye symptoms; intense insomnia; slight attacks of diarrhea; neck, $13\frac{3}{4}$ inches; marked indicanuria; constipation.

Quinin continued; eggs and malt stopped; bromid of soda, 20 grains t. i. d., and purgative capsules to meet bowel and urinary indications added. From this time on improvement has been fairly satisfactory. Relapses have occurred, owing to neglect of the treatment by the patient.

Condition April 20, 1913, as follows: Insomnia and nervousness much improved; pulse, 82; respiration, 19; temperature, normal; blood pressure, 120; neck, 12 inches.

It would appear that the removal of the tonsils in this case had precipitated or favored the immediate conversion of a comparatively simple goitre into an exophthalmic one; however, without the exophthalmus.

Cases 8 and 9. Mr. C. P., age 31, single. November 5, 1912: Thin, small, nervous man; foundry worker; labor very severe. Came in complaining of great nervousness; is unwilling to go out alone, on account of fear of some accident; has stopped work on that account. Knows that there is no foundation in fact for this, but the mere thought of going out alone brings on most violent heart-beating and distress.

Examination shows slight enlargement of right wing of thyroid. Circumference of neck, $12\frac{1}{4}$ inches. Very nervous; tremors marked; slight evidences of exophthalmus and signs of muscular weakness. Says these symptoms have been growing gradually worse for about a year. Lungs normal; heart enlarged one-half inch to left of mammary line; pulse, 130; respiration, 23; temperature, normal; blood pressure, 112; bowels constipated; indicanuria.

Treatment.—Purgative capsules, quinin and bromid. Later, cannabis indica had to be substituted from time to time for the bromid. Improvement was immediate and continuous until now; patient has resumed his vocation; goes all over the city at will alone and feels that he is well.

Last examination, April 4, while still under medication. Pulse, 76; respiration, 16; temperature, normal; blood pressure, 118; neck, $11\frac{1}{2}$ inches. Tumor not observable.

Mrs. G., married, mother of several children, age about 37. Had what was considered simple goitre for about twelve years; never suffered much discomfort from it, except at times, particularly during periods of domestic unhappiness, until three years ago, when two beautiful, nearly-grown daughters of hers, were drowned in the excursion boat catastrophe at Mandeville. From that day she has been a constant invalid and sufferer from exophthalmic goitre in all of its severest and most distressing forms. This patient has been under the care of any number of

physicians, and has, I presume, taken a great variety of treatments. On examination April 1, 1913: Neck, $15\frac{1}{4}$ inches; thyroid, symmetrically enlarged, both wings and isthmus; great muscular weakness; lassitude; all eye symptoms marked; tachycardia; insomnia; violent headaches; attacks of nausea; vomiting; sweating; diarrhea; no loss of weight; indicanuria; pulse, 120 to 170; blood pressure, 122; heart enlarged one inch to left of mammary line.

Patient was placed on the usual treatment, with indifferent result in forty-eight hours. Then one gr. ergotin was added to each dose of quinin, with seeming good effect on the nervousness, insomnia and muscular weakness.

Owing to the fact that this patient had already an iodine eruption of rather a severe character when she first came to me, and finding that the bromide made this very much worse, I discontinued the bromide and hydrobromate of quinin, and substituted fifteen grains of an equally valuable neutralizer of the thyroid secretion—sodium salicylate—four times a day, using that best of all vehicles for it—the simple elixir of the Pharmacopeia. This has been well borne, and the patient telephoned me April 21 that she was feeling, if anything, better than she had since she had been so sick.

This is, in some respects, even a more severe case than that of Mrs. M., because of the superior mentality of this patient rendering symptom and influence more potent in its psychic effect for harm.

I think that this, and perhaps several other cases, four or five, would be much benefited by an operation for partial removal of the gland, or at least ligation. While I am sure that the changes produced by the disease in these cases already are permanent, and perhaps, in the main, incurable, even with operation, yet the help derived from the operation, plus the undoubtable benefit to be derived from a carefully-devised and conscientiously followed-out plan of treatment, ought to give these most distressingly ill people many years of comparatively comfortable and useful life.

Indeed, I think that such a plan of treatment ought to be pursued in all cases wherever possible, both before and after operation. It has been conclusively shown that many cases recur, even after having gone through the hands of some of our most skilled and successful surgeons in this line, and as they do not return to them for further care and attention, as a rule, but fall back, as so many other post-surgical cases do, to the care of the internists and general practitioners, it is with satisfaction, indeed, that we can feel that we are still in a position to be of some service to these unfortunates, even though they have been operated on.

HYSTERIA.

By F. C. BENNETT, M. D., Monroe, La.

DEFINITION: Hysteria is supposed to be a functional psychoneurosis due to a morbid condition of the cerebral, spinal and sympathetic nerve apparatus, but apparently involving primarily the cerebral cortex and is characterized by mental, motor, sensory, vasomotor and visceral disorders.

The above definition is a sample of many, no two writers give the same definition. Hysteria is as hard to define as insanity. The above might apply to almost any type of mental disorder. I have presumed to formulate a definition. It is not above criticism. Hysteria is a condition in which the emotions predominate or dominate over the will power. This definition is defective because in children the emotions dominate the will power, yet children are rarely hysterical. Again, we cannot say that the hysteric is lacking in will power; she is even wilful to stubbornness, as you well know. Let us see, then, if we can devise a definition free from the above defects.

Hysteria is a functional neurosis, not insanity, characterized by emotional outbursts not controlled by the patient's will, and manifesting various functional phenomena and a morbid craving for sympathy or notoriety.

Hysteria, then, is a psychoneurosis, in which the psychic element predominates. The hysteric must of necessity be somewhat deficient mentally. The hysteric, in spite of the definition, does not necessarily have more powerful emotions than others. She simply allows these emotions to run riot and she uses them for her selfish ends.

Sarah Bernhardt is a great emotional actress. She is not a hysteric, because she controls these emotions, at least for a consideration. Caesar and Napoleon were epileptics; Nero was a maniac; Caligula and Henry VIII were perverts, yet these men were powerful mentally and helped to make history, not always wholesome history, to be sure, still, their mentality was strong and they left their impress on the times in which they lived.

On the other hand, no hysteric has ever led a great movement, if we except Mother Eddy, who was a hysteric, her appeal is to the hysteric and she leads the cohorts of hysteria to the sublime heights of supreme absurdity. Her appeal is to the hysteric and her cures are effected among that class for obvious reasons.

ETIOLOGY: As suggested before, the main etiological factor is a mental quirk of weakness, if you please. The hysteric may pass through life without being a very great source of humiliation to her family, but if we examine carefully we will find the mentality more or less below par.

HEREDITY: This factor is another of great importance. The hysterical mother and father reproduce their kind. Some writers go so far as to say that hysteria never arises without the element of defective heredity. The question is, would not any of us become hysterical if the provocation were sufficiently severe and prolonged. The man who goes on a periodic spree does so, not for the love of whisky, but for lack of control.

HOME TRAINING, OR LACK OF IT: In the very nature of things, the hysterical parent is unfit to train a child with the same tendencies.

A child with a good heredity, even should his training be bad, has a much better show than the child with the neurotic tendency. The neurotic child that is permitted to lie on the floor, bump his head, kick the floor and scream because he cannot have his own way is in a fair way to become a confirmed hysteric, especially if he have a neurotic parentage. Given a phlegmatic parentage, he may as he grows older realize the absurdity of his actions, and behave because he is ashamed of himself.

SCHOOL INFLUENCES: We frequently hear of some child overworking at school. This must be an extremely rare occurrence. These cases when probed to the bottom generally prove to be social affairs, dances, puppy love affairs, jealousies on account of social distinctions, etc. If our girls of the high school age were made to understand that no social affairs would be tolerated, during the school session, our girls would be better morally, mentally and physically.

SUGGESTION: This is such a common cause of an hysterical outbreak that it is universally recognized as a causative factor.

A child in school will cough; two-thirds of the children must cough. This is a simple illustration of the power of suggestion. We see the same thing in religious revivals where the fanatics go into trances, see visions, etc.

TRAUMA AND ORGANIC DISEASE: Given a hysterical picture, do not forget to look for an organic background. If after the organic lesion or the effect of the trauma has disappeared, the hysterical

manifestations disappear, this should not be called a true hysteria.

RACE: No race is exempt. Travelers tell us that savages have it. We know that the negro has it, both male and female. The Latin branches of the white race are especially prone to the disease, as all know who have practiced among the Italians or French. The Germanic branch, embracing the Germans, Swedes, Danes and Norwegians, are not nearly so susceptible.

SYMPTOMS: These are divided into two general classes, the paroxysmal and the interparoxysmal. Under the interparoxysmal we find the patient fickle, emotional, ready to cry at the slightest provocation, self-conscious or perhaps depressed and melancholic. There is a tendency to unduly exaggerate. By suggestion to the patient we may have him feign almost any disease. The manifestations are so numerous and varied that it would be impossible to go into extended detail. A few only will be mentioned. Under sensory symptoms we have anesthesia, hyperesthesia, paresthesia.

Anesthesia may take any form, glove, stocking, girdle or in isolated areas. May be from crown of head to sole of foot. Reflexes remain practically normal. Pupils dilate when the skin on the anaesthetic side of the neck is irritated. Anaesthetic area varies from day to day. There is considerable confusion between the use of the terms hysteria and neurasthenia. The different points are:

Neurasthenia.

Hysteria.

Good heredity	Neurotic heredity
Active mentality	Below par
Due to overwork and worry.....	Due to anger, being restrained, etc.
Heads of families, society leaders, etc ..	School girls; others with probably few burdens
Gradual onset	Paroxysmal
Age: generally in middle aged.....	Generally in young adults
Cured by rest and change of scene..	Cured, if cured at all, by suggestion
Not paroxysmal	Paroxysmal, may be

HYPERESTHESIA: May manifest itself in painful joints; pain in the ovarion region; on top of the head; on either side of the spine.

PARESTHESIA: Under paresthesia we find crawling sensations, pricking sensations. The point to be remembered is that organic lesion never produces the multitude of varying symptoms complained of by the patient.

THE SPECIAL SENSES: We may have amblyopia, or partial blindness, generally in one eye—abnormalities in the field of vision. The point in the examination of the visual field is that the

hysterical manifests a concentric contraction of the field of vision. No organic lesion produces such field changes. Perception of color is frequently perverted. Congenital color blindness consists almost invariably in a confusion of the reds and greens. In hysterical color blindness this is seldom so, and the patient may call all colors gray or any other perversion of the color sense.

There may also be found hysterical perversions of smell, taste and hearing. These may be distinguished from organic trouble by shifting from side to side or by other symptoms of hysteria.

MOTOR SYMPTOMS: Paralysis in almost any form may be simulated. Aphonia or loss of voice is rather common. Paralysis of any muscle or group may be present. In hysterical aphonia patient may talk in her sleep. In muscles the electrical contractions are normal, contrary to organic paralysis. Ataxia may be seen, but is grossly exaggerated. Hysterical tremor differs from tremor of multiple sclerosis in that the hysterical tremor does not prevent the patient from touching an object aimed at, but when finger is held in contact for a period the tremor develops. In sclerosis the patient experiences great difficulty in touching the object, but his hand becomes perfectly quiet and remains so when he has accomplished his purpose.

In hysterical paralysis of one leg a good differential point is this: The patient lying on his back, legs extended; place one hand under each heel; ask the patient to lift the sound leg. As he does so there will be downward pressure on the so-called paralyzed heel.

Visceral and vasomotor symptoms may occur. Patient may not be able to swallow. Vomiting may be persistent. Esophagismus may occur and be very troublesome. Phantom tumors are sometimes seen. Irregular and rapid pulses are frequently seen. Anginal attacks may occur, but pseudo angina may be distinguished from true angina from the fact that in true angina the face is pale and anxious, patient absolutely motionless; in pseudo angina the face is flushed and convulsion and irregular movements occur.

Retention of urine may occur, and will be aggravated by the injudicious use of the catheter.

PAROXYSMAL SYMPTOMS: The hysterical convulsion is not nearly so common as the other symptoms; at least, among the Anglo-Saxon or Germanic people.

There is considerable similarity between the hysterical and the epileptic convulsion. The hysterical convulsion generally follows

emotional strain, such as lovers' quarrels, dancing all night or shock, mental or physical. The convulsion is preceded by fits of temper, silly laughter, alternating with crying. These prodromal symptoms may continue for periods varying from a few hours to two or three days. Patient shows signs of depression, loss of appetite, constipation, coated tongue, vomiting, etc.; in some cases, spasm of the glottis, globus, etc. The aura may be ovarian, in the throat, or in the head. The paroxysm may assume the form of chorea major or delirium with destructive tendencies. Patient may hold his breath, stiffen out, with fine tremor over whole body.

The typical hysterical convulsion with four stages as described by French writers must be very rare in this country. These stages are: (1) Epileptoid, (2) period of grand movements, (3) period of passionate attitudes, (4) period of delirium. I have seen the first two stages, but never the third and fourth.

American writers give three periods: Preconvulsive, convulsive, post-convulsive, which seems a better classification for our purpose. Instead of the convulsions we may see condition of ecstasy, somnambulism, catalepsy, trance.

TREATMENT: From what has been said it will be apparent that the treatment of hysteria resolves itself into a question of eugenics. The race must be improved. Defectives and degenerates not allowed to reproduce. Don't ask me how this is to be done. The castration of criminals and hopeless degenerates only touches the edge of the question. We in America are fast becoming a nation of neurotics, bringing into the world another crop of neurotics. We are unfit for parentage or for training the nervous children we have begotten. What, then, is the most hopeful feature of this phase of the question? The sociologist bewails the fact that the Anglo-Saxon in America has ceased to have large families. Be not deceived; nature is not making a mistake here. History is simply repeating. We teach our boys and girls to look for the soft places. They must be professional men or counter-jumpers. Under no circumstances must they soil their hands. We are being eliminated to give place to a more virile race. The barbarians conquered the highly civilized and esthetic Roman. We are even now seeing the invasion of the barbarians from Germany, Bohemia, Sweden, Italy and Hungary. They will in a few generations control this country financially, politically and socially.

But all this is rather far-fetched from the medical standpoint.

To be more specific, the neurotic child needs to be controlled, to learn that others have rights. His selfish propensities must be curbed. He should be required to live regularly. Social gatherings should be absolutely forbidden during the school term. The girl of 16 or under should be in bed by 10 p. m. Pastries and rich foods should be forbidden. Plenty of outdoor exercise should be ordered.

As indicated before, suggestion plays an important role both in the causation and treatment of this neurosis. This does not mean that abnormal states of the system should not be treated. The hysteric is generally below par physically and should be treated accordingly.

The hysterical paroxysm may be cut short by an emetic of apomorphin. Some advise dashing a bucket of cold water on the spine. These heroic measures are frequently successful, but you must incur the lasting enmity of the patient and risk the displeasure of the family. I believe, however, that the doctor who sympathizes with these patients and really encourages them to continue in their tantrums is remiss in his duty. It may be true that if you do not take money some one else will. That fact does not excuse you or any one for obtaining money under false pretenses.

The Christian Scientist has recognized the value of suggestion as a therapeutic agent. It were much wiser for us to use the same means than to conduct a campaign of opposition. Nothing so delights the hysteric as the pose of the martyr. Anything like opposition they construe into persecution. Fight the devil with fire; use suggestion. It can be used honestly, stripped of Mother Eddy's flubdub and religious disguise. How can you acquire or use this power successfully? I cannot tell you. Many books have been written on the subject, but after all it resolves itself into a question of personality. Why do some men of very limited ability succeed in medicine, while others of more ability fail? It is the same old thing, personality, a matter of putting up a front. If you have no confidence in your own suggestions, don't make them. If you cannot inspire confidence, you cannot succeed in treating hysterical patients.

EPIDEMIOLOGIC PHILOSOPHIES.

By HOWARD D. KING, M. D., New Orleans.

The term "epidemiology," of Greek origin, is usually defined as the science of epidemics. The subject is a very broad one. As a study it offers not only many points of interest, but is essential to the solution of problems which the often obscure etiology of certain diseases present. The subject of epidemiology is confessedly an obscure one, and the investigations of all physicians, from Hippocrates to Sydenham, and even those of the present day, have not completely comprehended its wide scope. The study, if properly pursued, is fascinating, and eventually prolific of value.

Formerly widespread outbreaks of disease were attributed to the "epidemic constitution of the air," a phrase, we believe now, expressive of ignorance. The first mention of atmospheric origin in connection with epidemic disease is found in the writings of Hippocrates, who insists much on what he terms the hidden constitution of the atmosphere, and its influence in producing epidemic diseases. To seek for the causation of specific diseases in the air—that is to say, to search for the first cause of a specific disease literally in the air—is, of course, a futile task, but to study on the other hand, the condition of the atmosphere, or the temperature, or of the natural conditions which form the environment of the organisms of the specific diseases which occasionally burst out in aggravated form—often the reason of this can be recognized, as witness the outbreaks of smallpox, where vaccination has been discredited—will indeed repay the investigator. The study of epidemiology should include, besides the characteristics of the various specific bacteria and micro-organisms, the influence of temperature and humidity on their growth; the methods by which they are brought into the human organism, and the personal condition determining the spread or decline of epidemics. Epidemiology is essentially that branch of natural history which treats of the micro-organism to which the microbes of epidemic diseases belong. This definition emphasizes the distinction between the old unreasoning aspect of epidemiology that, of the "epidemic constitution of the air," and the more enlightened modern view which, recognizing the prime essential force of the micro-organisms as the originators of disease, seeks to determine the nature of the external environments influencing these organisms.

Before any intelligent discussion on the subject of epidemiology can be entered into it will be necessary to consider several questions more or less directly related thereto. First, it is necessary to form a complete collection of all observed occurrences of epidemic diseases; and, second, from all these observed occurrences, to deduce the law which will apply to them all in a general way. Is it possible to devise any theory which will embrace the phenomena of epidemic disease? Is there any cause regulating their occurrence? Are there any laws which will account for their periodic visitation?

In discussing the epidemiology of disease there must be taken into consideration the cause, if known, and, if not known, the suspected cause. Then must be considered those forces which may be termed favorable or predisposing to the propagation of the disease. The peculiarities of the disease, from a standpoint of seasonal, racial, sexual, age and geographical relations, must also be dealt with. All features of the disease should be noted—such as irregular appearance, periodicity, recrudescence, sporadicity, endemicity, and the tendencies to epidemicity and pandemicity. All epidemic visitations possess regular periods of invasion, increment, acme, decline and cessation.

In preventive, as in curative medicine, knowledge of causation is essential. It is obvious that any rational system of proceeding must have this for its basis. A certain empirical knowledge may be useful as a guide, but no real advance can be expected without the exactitude which results from careful scientific observation and induction; the spirit of experimental research, however, is now dominant, and progress is inevitable. How much we owe to it is already well known, whilst, under its guidance, the reproach of uncertainty which attaches to medicine as a science is disappearing.

It is impossible to exaggerate the value of scientific researches which have lifted the veil of etiologic mystery from many diseases. Bacteriology, which is of such remarkable pre-eminence at the present time, is opening out sources from which may flow results of incalculable importance to all mankind. However, we should not permit scientific zeal to outrun discretion. At this juncture the utterance of Dante strikes one with great force:

*“Immagini di ben seguendo false
Che nulla promission rendono intera.”*

Sight should not be lost of the fact that, in the enthusiasm of research, which is rewarded by such brilliant results, early generalization has too often been followed by disappointment.

It must be remembered that, important as are the researches into microbiology, there are other factors to reckon with before we can hope to gain a knowledge of the ultimate causation of disease. It is not by any one path, however closely or carefully it may be followed, that we shall arrive at a full comprehension of all that is concerned in its etiology and prevention.

In no department of medicine has knowledge advanced more rapidly than in etiology; but not so in epidemiology—though curiously enough the one is dependent on the other. The revelations of the microscope; the latter-day developments of the science of bacteriology; the constantly increasing list of parasitic infections; the increased knowledge of the relation of disease to surrounding conditions; the carriage of disease by such media as air, milk and dust; the rôle played by the “bacilli carrier,” and, finally, the wealth of recent observations essayed by insects and certain of the lower animals in disseminating infection, have played no small part in the solution of etiological problems. While there is naturally a great deal of elation over the accomplishments of the comparatively new science of bacteriology, we must rejoice with trembling. Twenty years—nay, ten years—will shed a far different light on both etiological and epidemiological problems.

In the discussion of the epidemiological features or phases of diseases there arises an unconscious, so to speak, association of the geographical distribution of that disease and the factors which influence its spread or localization at a definite point. In speaking of the uncertain factors in the spread of disease there are those the extent of whose influence remains doubtful and undefined, such as (1) pathogenic evolution and (2) abnormal objective receptivity, both of which will be discussed in their proper place. Contagion and infection, in view of the researches of the bacteriologist, can no longer be termed doubtful causes, and can only be considered in their relation to the foregoing.

In the light of our present knowledge, there is reason to believe that the parasites which are the known or suspected causes of many diseases may and do exist outside the human body for long periods of time, and that there are uninhabited or sparsely inhabited tracts of the earth's surface where these parasites remain

in the soil or in water, or in the bodies of the lower animals, and where the human disease generally associated with them is only set up when man visits these tracts.

The ancient belief in the possibility of a spontaneous generation in the organic world has long since died a natural death, and has been followed by a belief that every organism is produced by one like itself in every particular, or at least by one of the same species. This view, however, has been shown by the researches of Charles Darwin to be true only in part. It is now generally admitted that generation is progressive and that the more complex organisms have been generally evolved from the simple ones. Probably all parasites were once upon a time independent organisms, but, having become parasitic, they underwent a process of specialization which, as in the limbless females of the *strepsiptera*, might be one of adaptation by degradation. Every animal and plant had its fauna and flora, and each parasite its host, one, or less often two, in succession. When animals and plants were supposed to have originated in *loco quo* climate was regarded as the determinant force, where as we now know it to be rather antagonism or adventitious aids, as the presence or absence of enemies, or, in the case of plants, of friendly insects or algæ. Even if evolution is not a complete solution of organic life, but is subject to exceptions and reversions, it is still a force with which to be reckoned. Whatever may have been the original source of the pathogenic parasites of man, it is certain that those which have a wide distribution at the present time were much more restricted originally. The extension of many of them has occurred in former and, of some, even in recent times. The process of diffusion still continues assisted, doubtless, by the vastly increased rapidity and frequency of modern travel, and by the breaking down in recent years of social, political and physical barriers which formerly isolated many communities, some of which had been from time immemorial the sole repositories of particular disease germs.

The area of distribution of some disease parasites, however, may be wider than the area of distribution of the human disease caused by them. In these instances the disease has a wider distribution potentially than actually. In others the reverse may be the case, and the area of distribution of the disease may at any given moment be actually wider than that of the parasites which gave rise to it. This, however, is exceptional, and can occur in the case of certain affections of long duration—such, for example, as *elephantiasis*

Arabum, where the symptoms remain long after the filaria or other parasites which first caused them have disappeared from the tissues. In connection with the transmissibility of disease, two factors must always be taken into account—man and the insect carrier.

The distribution of any disease must be looked upon as the resultant of a large number of forces. Certain of these forces may be regarded as extrinsic, or more purely geographical forces—such as nearness to or distance from the equator, altitude above the sea level, temperature, humidity, nature of the soil, racial influences and the like. It will be convenient first to consider the intrinsic forces connected with the etiology and mode of spread of the disease itself.

For the purposes of epidemiological study, diseases may most conveniently be divided into those which are caused by the action of parasites and those which are not. The word parasite as here used includes not only the macro-parasites, such as the guinea worm, the intestinal “worms” and the like, but also such micro-parasites as the bacilli, cocci, amebae, hematozoa, and the trypanosomes, which are the proved or suspected causes of the vast group of infective diseases. This division into parasitic and non-parasitic diseases is important from a geographical point of view, because, in the former, the factors concerned in the geographical distribution act in a manner different from, and more complex, than the latter. Thus, in a case of a disease not of parasitic origin, the geographical forces mentioned above must be presumed to act only or mainly upon the individual suffering from the disease. But in the case of a parasitic disease it is clear that these forces may act, not only on the individuals who are the human hosts of the disease, but also upon the parasite itself.

The parasitic group of diseases may be further classified into two sub-groups: those in which the parasite must spend part of its life history in an extra-human host, and those in which the parasite is either unknown or believed not to require such extra-human host.

To the first sub-group belong the various filariases, malaria and yellow fever, in each of which the mosquito is essential to the life history of the parasite; the guinea worm disease, in which the parasite requires a certain fresh-water cyclops to complete its life cycle; sleeping sickness, which appears to be associated in the same way with the tse-tse fly; trichinosis, associated with the pig;

hydatids, with the dog and other animals; and the affections caused by the *tænia solium*, *tænia mediocanellata*, and *bothriocephalatus*, which require, respectively, the pig, bovines, or fish, for the extra-human phases of the associated parasite.

To the second sub-group belong the preponderance of the infective disorders, proved or believed to be caused by micro-organisms which seem to spend all or most of their existence in the tissues of a human being, and to pass from one person to another without any intermediate host. It is clear that in this sub-group the physical and geographical forces mentioned above will act only on the human host and the parasite, while in the former they will act, not on the human host and parasite, but also on the extra-human host. This third factor will often prove to be the determining element in the distribution of such diseases. A single example will suffice to show the accuracy of this statement: The complete absence of yellow fever in high altitudes is almost certainly due, not so much to the bare effect of the altitude and all that it implies upon the human subject or the parasite of the disease, as to the effect upon the mosquito host, which cannot live there; and the absence or rarity of the mosquito determines the absence or rarity of the disease.

In case of those human-disease parasites which do not require another animal host to complete their life cycle, much remains to be ascertained as to their behavior outside of the human body. In regard to many, such as the hypothetical parasites of measles, typhus and the like, it would appear that they have only the briefest, if any, extra-corporeal existence. They seem to pass directly from person to person, and, in the absence of susceptible subjects, they die out. If they exist, such parasites are never exposed directly to geographical or physical influences; they can be affected only indirectly by the action which such influences exert on the human host. The fluctuating prevalence of such diseases must be attributed to varying degrees of resisting powers in the tissues of the persons exposed to them.

There is another, but less directly acting, set of conditions influencing the distribution of disease. Disease germs, their transmitting agencies, or their immediate hosts, being living organisms, are, during their extra-corporeal phase, necessarily competing organisms and, therefore, liable to be preyed upon or otherwise crushed out by other organisms in the struggle for existence. The micro-parasites of disease are an integral part of organic creation.

Like all other living creatures, they are subject to the laws of evolution under the rule of struggle for existence and the survival of the fittest. The malarial parasite, as an illustration, is absent in many places in which apparently all the conditions favorable to its existence should be found complete. Why, then, is it not found there, inasmuch as it must certainly have been frequently introduced? It is not, and, thus, it appears that this and other disease germs, or the organs subtending them, are kept under by natural enemies which prey on them, just as fishes prey on and keep down water-haunting insects, or as mice do bumble bees. This antagonism between different disease germs has often been suspected, though it has never been proved. From early periods, however, it has been repeatedly noted that an epidemic of one disease has been accompanied by a lessening or disappearance of some other disease. But the results of one epidemic along this line have been contradicted by those of another outbreak elsewhere; and no proof of a constant essential antagonism between any two diseases or the parasites that caused them is at hand. In this connection it is interesting to note that the study of the disease germs may in the future become a most profitable field of research.

The geographical range of disease germs, therefore, depends, not only on the presence of favorable conditions, but also on the absence of unfavorable conditions.

While the recognition of a parasitic origin of a large number of diseases has thrown a flood of light, not solely upon their etiology, but upon their mode of spread and upon their relation to surrounding conditions, it has not yet explained all that is obscure in the natural history of disease. Even where the parasite has been found to be constantly associated with a certain disease, and may within certain limits be referred to as its cause, there is still a number of phenomena in the behavior of disease which require explanation. These phenomena are particularly found in connection with epidemic infections, the great variations in prevalence and intensity of a score of maladies, the appearance of a disease in one country and its disappearance from another, all suggest interesting speculations. It has been suggested that these phenomena find analogies in the insect world; the idea is not a recent one. The close resemblance between the behavior of epidemic diseases and the flights and disappearances of insects was clearly recognized and discussed by many writers in the eighteenth century. One of the most inter-

esting of the famous Sir Henry Holland's essays treated the subject at length. The knowledge gained subsequently by the actual proof of micro-parasites as the cause of disease—only suspected then—has scarcely altered the problem, though it has changed its terms. In Holland's period the microscope had already shown the occurrence in nature of animals still lower than insects—of infusoria, and similarly minute lowly organisms—and it was to these that the causation of disease was tentatively ascribed; though the probability that other still lowlier organisms existed and would be found ultimately was recognized.

The still lowlier organisms have now been found, at least in regard to many diseases. And, with their discovery, the terms of the problem, as previously observed, have changed. It is now known that many diseases are not due to insects, but to forms of life infinitely lower—almost, it would seem, at the end of the scale of creation. It is now known that if the general behavior of these diseases presents an analogy to that of insects it remains merely an analogy. The resemblance, it is true, is often very striking. Some insects, like diseases, have permanent breeding grounds in special and relatively limited areas. They are numerous here in some years, rare in others. They may change their breeding grounds. They may migrate in certain years to other areas; they fly in swarms or in small numbers; they take long flights over thousands of miles and appear in countries where they were before unknown; they disappear almost as suddenly as they came, or they break up into patches, remain more or less permanently in the newly-invaded territory, or gradually die out. In all these respects, their behavior shows fairly complete analogy to the behavior of such diseases as cholera or plague, or influenza or dengue.

But, if the analogy is pushed too far, it breaks down. Insects are highly organized creatures; they are adapted to a highly developed form of social existence; they are sentient; many of them have extraordinary powers of intelligence; and finally they are endowed with power of locomotion enabling them to pass over distances which in some instances may be measured by thousands of miles. But the lowly micro-organisms believed to be the cause of plague or cholera or diphtheria possess none of these characteristics. More especially in their power of locomotion do they differ from insects. Alone and unaided they have, comparatively speaking, no locomotive power. The most that an individual microparasite can do in this

respect is to wriggle over short distances in a liquid medium, and the most that the mass of microparasites can do is to spread in a saprophytic state by multiplication at the edge, as a patch of ring-worm spreads. To pass from one region of the earth's surface to another they are dependent upon the movements of other things. They must be carried in the water of a running stream; in the tissues of a human, a rat, or an insect; in a bundle of infected goods; perhaps, by the wind. Their power of movement is involuntary. They cannot, as insects appear to do, choose when and where they will emigrate. They cannot, when their breeding grounds become unsuited to them, or when their supply of food seems failing, take wing and fly in a body, as insects do, with an almost conscious, intelligent, ordered movement, in a definite line to other and more favorable lands.

Nevertheless, in the natural history of many epidemic diseases, there are phenomena which it seems more difficult to explain on the theory of a mere accidental carriage of a microparasite. Much has been written upon the "cyclical" character of many diseases. Many diseases show a tendency to years of special prevalence, with intervals of comparative inactivity. These cycles are of no definite length; the average for any given disease in subsequent years is often widely departed from by that disease. But they exist, and to ascribe them to a mere chapter of accidents is not only unscientific, but absurd. Still less satisfactory is our knowledge in regard to those diseases which remain for long periods of time confined to certain limited areas, and at irregular intervals spread, without apparent reason, to a large portion or the whole of the inhabited world. No doubt in some instances the accidental carriage of the microparasite plays some part; probably of more importance are the wide variations which may be supposed to take place from year to year in the vitality and powers of multiplication of the microparasite.

The wide fluctuations from year to year in the numbers and activity of a given disease germ may perhaps depend not only upon fluctuations in its own vitality and powers of multiplication, but also upon fluctuations in the particular creature of which it is the normal prey. Should this prove to be the case, then it may be supposed that when the latter are numerous and active the former will be destroyed or kept within normal limits, and that when the reverse

is the case the disease germs will flourish uncontrolled, and the disease associated with it will become epidemic.

It may be presumed that this is the only reasonable explanation of the "cyclical" variations of many epidemic diseases. This belief also carries with it the presumption that a large portion, or even a principal portion, of the life of a disease germ is spent in a saprophytic state, outside the human body, where it alone could fall a prey to the other supposed living organisms. In the application of this explanation to such morbid processes as the infective fevers, in which the causative organism appears to pass the whole, or almost the whole, of its existence in the tissues of persons actually suffering from the disease, it would appear that the cyclic changes are dependent alone, or in a great measure, upon the human subject. In regard to such diseases, if their wide fluctuations from year to year are to be explained by fluctuations in the number and activity of external forces, it seems almost necessary to assume that these forces exist within the human body. In short, while it is necessary to suppose that the virulence and powers of multiplication of disease parasites differ widely in different years, it is almost equally necessary to admit that the receptivity of their human host, or his powers to withstand their attacks, may also differ widely.

When one pauses to consider the variations of epidemic disease from century to century, or those of a single great epidemic from week to week, or from month to month, or those which occur in the course of an attack of zymotic disease in the individual patient from day to day, retrogression appears to be the rule, and evolution, contrary to the general order of organic nature, the exception. However, sight must not be lost of the fact that the later generations of microparasitic life have a greater functional activity than the earlier ones; and functional activity is in organic nature generally the prelude to structural development. "It is manifest," says Herbert Spencer, "that there can be no variation of structure but what is directly or indirectly consequent on variation of function. Function is, from beginning to end, the determining cause of structure." Accordingly, it would appear that microparasitic life passes throughout the ages in a series of advancing and receding cycles of short duration or, in other words, it has an earlier and later history, one preceding its least virulent and the other succeeding its most virulent stage.

The explanation of the varying severity of epidemics is in great

part explained by a progressive intensification and attenuation of the virus with a subsequent diminution of its pathogenic proclivities.

Reverting to the subject of variational receptivity of the human host to disease, many questions have to be taken into consideration. The first question confronting us is whether the receptivity is a normal or abnormal condition. Is the human body the natural habitat of pathogenic organisms or is it only certain exceptional individuals, certain exceptional morbid conditions, which furnish the necessary pabula upon which these micro-organisms may grow and thrive? Is it possible that, after all, organisms may not display any special affinity for animal tissues, but may commence their career on other soils? In plain language, is it the animal tissue exclusively, or is it the animal tissue plus some pathological disturbance which forms a nidus for the reception of the pathogenic organism?

We appeal to-day to the history of past epidemics for an answer, but to no avail. These questions remain unanswered, despite the great advance in knowledge. There are, however, certain broad facts to be obtained from the history of past epidemics which will clear and are clearing the ground for further inquiry. First, it may be stated that the pathological state is an exceptional one. Only once or twice in the history of the world has epidemic disease appeared to threaten a universal prevalence. Is not the constant association of famine with pestilence an indication that the pathological effects of starvation are, in many instances, the determining causes of the extensive incidence of epidemic diseases? A like pathological state of affairs, but originating in the nerve centers instead of the blood, is brought about by licentiousness, while the auto-intoxication caused by sloth and gluttony has been definitely demonstrated to be an equally important factor in the incidence of zymotic disease. Both these factors have been in evidence during the time of pestilential outbreaks. The earlier part of the fourteenth century, just antedating the Black Plague, was a period of luxury and unrestrained debauchery. Boccaccio, in his 'Decameron,' paints a glowing picture of the condition, and attributes the enormous mortality of Florence to the above-mentioned causes. May not this also explain, in a measure, the greater susceptibility of the Eastern nations, generally in contrast to those of Europe to plague and cholera?

Coming to more recent records, the remarkable fact already men-

tioned, that most of the greater epidemics of the last five centuries have been preceded by influenza, a malady the origin of which we have not yet been able to trace, points again to the conclusion that some preliminary cultivation is necessary before the human host falls a victim to the onslaughts of pathogenic bacteria. We are in possession of certain definite facts. We know the prevalence of epidemic disease after the depressing effects of influenza, measles and other diseases. Excluding the possibility of pathogenetic evolution, which will be discussed later, it is common knowledge that pneumonia constantly attacks those whose system is abnormally depressed by influenza, measles and similar maladies; and, further, this may be the case in those whose normal habits of life have suffered interference by enforced inactivity from accident.

Heredity is another important factor in determining the incidence of disease. The susceptibility of some families to attacks of zymotic disease is truly striking. Such hereditary tendencies must have had an abnormal origin somewhere. In many cases it is not far to seek. There are many known instances of hereditary deviations from the normal standard. In some cases the tendency is seen, but the origin is lost in obscurity.

The question of evolutionary changes in the microparasitic world is of great importance and cannot be passed over. It has been suggested that rhythmical evolutionary changes in the life history of micro-organisms may prove explanatory of waves of disease, but is the rhythm manifested in the micro-organism or in that epiphenomenon—disease—the interaction between germs and tissues? If the latter, we at once dispose of a difficulty, despite that disease is constantly alluded to as a material tangible entity, when in point of fact it is no such thing. It is only a morbid phenomenon or, rather, a group of processes, in the tissues of a particular animal organism. Logically speaking, it is not a phenomenon, but an epiphenomenon. In an endeavor to explain the cycle of disease, one necessarily runs afoul of the older ideas concerning evolution. The fossils in the strata do not recur cyclically; a species once extinguished never reappears. Does this same fact apply with equal force to disease organisms? It is quite clear that instituting comparisons between the behavior of diseases and the more or less gradual evolutions of specific types in animals and man due consideration must be given various differences. The organisms associated with disease are simple and lowly organisms; their transmutation may be more rapid

than those of more complicated forms. Darwin observes: "The time needed for a change of types in atoms and molecules may be measured by millionths of a second, while in the history of the stars changes occupy millions of years. Notwithstanding this gigantic contrast in speed, yet the process involved seems to be essentially the same."

Weisman remarks: "In a certain sense, we may say that the simpler, more lowly organisms, are more capable of adaptation than those which are highly differentiated and adapted to specialized conditions in all parts of their bodies, since, from the former, much that is new may arise in the course of time, while very little and nothing very novel can spring from the latter."

On the other hand, it has been pointed out by Darwin "that a very simple form fitted for the very simple conditions of life might remain for indefinite ages unaltered or unimproved." The same observer questions, "What would it profit an infusorial animalcule, for instance, an intestinal worm, to become highly organized?" It may be noted further that very little is known concerning the reproduction of disease organisms, and the questioning of the occurrence or non-occurrence of amphimixis may be of importance. At the present time, then, nothing certain can be said as to the influence exerted by amphimixis, though the question naturally arises whether we may not be merely concerned with the evolution of one species, but with the interaction between species and species?

It is natural that when we come upon a comparatively new branch of biological study, like that of bacteriology, we should ask ourselves what, if any, part is played by evolution in the history and progress of disease? Have the microphytes of all the disease to which flesh is heir come down in an unbroken line of descent, or are they traceable to some simple germ of prehistoric age, when man's only diseases were the wounds received in battle with the extinct monsters he finally exterminated? And what relation in the biological scale do these organisms bear to one another? Are those most destructive to life to be considered higher or lower in the scale than those which cause only inconvenience? It is amongst the records of past epidemics that we must first look for evidence of evolution in disease, for there only can we trace it over sufficiently long periods of time. The oldest known disease is plague. There is no doubt that plague has existed in the world for more than 5,000 years, and it is still endemic in the Far East, and within

recent times has invaded the New World. We, therefore, appear to have been dealing with the same disease for probably five thousand years. If evolution were the law of pathological life we should expect, considering the short life history and rapid generation of micro-organisms, to see some change of type in disease after so long a period. The history of plague does not seem to favor this view. The only difference appears to be that it is less fatal than in the third, sixth and fourteenth centuries, when it is said to have carried off one-fourth of the population. The lowering mortality is clearly the result of improved sanitation and advance in medical knowledge of later years.

The fact that disease is an epiphenomenon again confronts us.

It would seem at first glance that in turning to epidemiological records for information as regards persistence or variability of type we are engaging in a hopeless quest. The epidemiologist, therefore, is justified in assuming enhanced reproductiveness, with its natural sequence, attenuation, together with increased power of receptivity or diminished resistance on part of the human host to be the determining factors concerned in the seasonal or cyclic prevalence of disease.

If an analytical study of epidemic curves was made it would in many cases show in general a loss of infectivity on the part of the organism approximating per unit of time to a geometrical progression. Epidemics, in general, die out much more commonly from loss of infecting power on the part of the organism than from any other cause. The main agent in an epidemic, in the great majority of cases, is the infectivity of the organism, and not the susceptibility of persons affected. While this is not a hard and fast rule, an example may be cited of what is really the case. Influenza epidemics frequently run a practically similar course, whether occurring in the summer or winter—a fact that would be difficult to prove on the ground of temporary susceptibility on the part of the population.

In olden days great epidemics were attributed to such improbable causes as eclipses of the sun or moon, combinations of the stars or planets, the appearance of a comet, or any impressive celestial event; or to such possible causes as great and unusual incidents upon the globe itself—earthquakes, openings of cracks and chasms in the earth's crust, inundations and overflows of great rivers, the pestilential emanations from unburied bodies of persons overwhelmed by war, by famine or by some great cataclysm. There is

nothing scientifically authentic, however, to show that any one of these particular events had been the cause of the great historical epidemics of disease. Famine and war bring many diseases in their train, but none of the historical pandemics of disease, however, have been traced to such causes. Epidemic disease, both among human beings and animals, has always followed in the wake of war. It is not that pestilence is a necessary sequence, but that favorable conditions are brought about for the spread of any epidemic disease which may be latent.

Yet, in regard to these earth changes and terrestrial spasms and their relation to disease, it may be well, perhaps, to guard against over-scepticism and admit the possibility that such explanations of epidemics, though never absolutely proved in any individual instance, may contain a germ of truth. The analogy between the behavior of disease and certain earth changes is at least as striking as the analogy (previously discussed at length) between the behavior of many epidemic diseases and that of insect swarms. Attention was drawn, it will be remembered, to this latter analogy long before the causation of such disease was known, although the suggestion that the diseases were actually caused by insects was later shown to be wrong, yet it went strikingly near the truth, in that it presupposed an animate instead of an inanimate cause for them. May not the suggestion that earth changes or terrestrial shocks share in the causation of epidemics go equally near to some other, yet undiscovered truth—the sought-for, but yet unknown something which seems to be needed to explain all the phenomena of epidemic disease?

A MECHANICAL DEVICE FOR BLOOD-VESSEL ANASTOMOSIS.

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Mechanical devices, as a rule, are undesirable in surgery. And more especially so when the device is to remain in the tissues as a foreign body. But there are procedures in which accuracy of approximation, rigid fixation or conservation of time make their use justifiable. In the anastomosis of blood vessels all three of these elements are of vital importance; hence our excuse for offering this little appliance.

A set consists of two metal rings and a holder. The thickness of the rings varies with their diameter, but even the largest size is not thicker than the lead in an ordinary pencil. The inside diameter of the rings corresponds to the outside diameter of the vessel being operated upon.

From one lateral surface of each ring project five or six very small bearded points, not longer than one-sixteenth to one-eighth of an inch. Short pieces of a dentist's brooch make admirable points. Two pieces of small, pliable wire one-fourth inch long project out from opposite sides of the convex border.

The holder is an instrument similar to a small dressing forcep, with the simplest pin-lock, so that two parts may be attached or detached at any degree of opening of the blades.

The tip of each half of the holder is made with a clip and slip-cuff, so that a ring of any size may be held firmly, the ring being held edgewise.

Technic: Using a holder, pass the ring over the cut end of the vessel, which is then everted and pinned to the ring by the use of a dissecting forcep or the finger tip; the little bearded points hold it nicely. The other cut end is likewise everted and pinned to the other ring. The two parts of the holder are now fitted together and closed and locked, which brings the rings into perfect apposition and with any degree of pressure desired. A twist of the soft wire binders completes the anastomosis and the holders are removed.

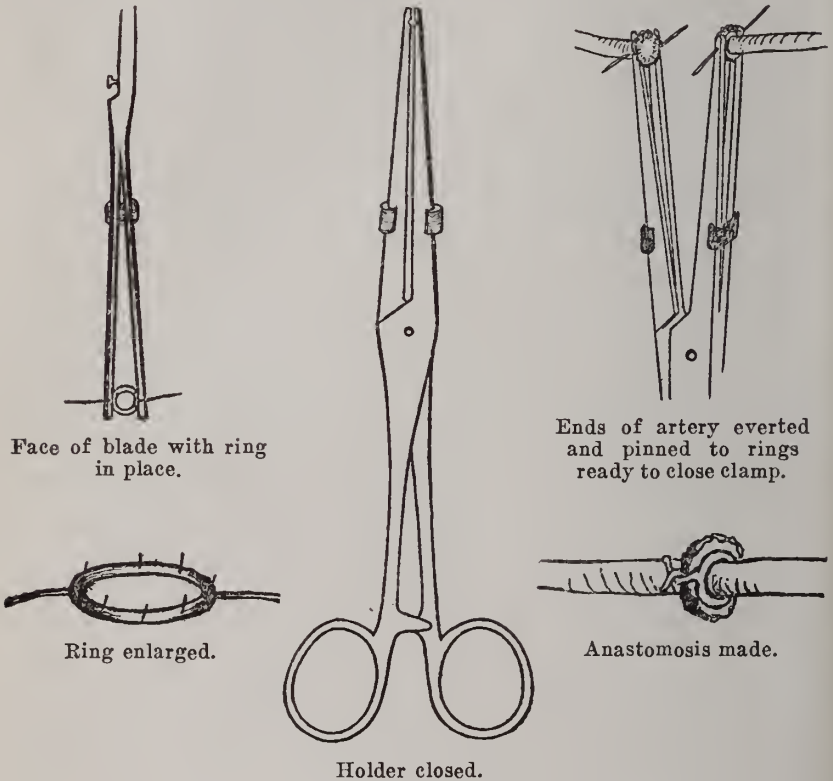
In a paper read before the last Louisiana State Medical Society we emphasized the importance of rapidity in blood vascular surgery. As we stated then, we were never able to transplant vessels from one dog to another by the Carrel suture method with success; clotting was the rule and death the result. We did succeed by using tubes in the vessel while suturing, which necessitated the stoppage of the circulation for not more than one to two minutes, instead of fifteen to thirty, by the other method.

But even the intubation procedure has serious faults. The intima is more or less irritated by its presence, and the extra wound necessary for its removal, together with the manipulation of its introduction, etc., make it, while evidently more practical than the three-guide suture method, very unsatisfactory.

The device described above seems to simplify blood-vessel anastomosis to the last degree. An anastomosis can easily be made in one minute, without the slightest injury to the intima, and giving

accuracy of approximation hardly possible by any other method; in fact, it is mechanically correct and surgically so, except for the one question of the ultimate result of the presence of the rings left round the vessel. We see no reason why these small rings imbedded in fibrous tissue should weaken the vessel wall more than its passage through one of the foramina of the skull.

For direct transfusion it should also be ideal.



We will give a report on its practicability a little later, when the weather is more favorable to animal experimentation here. We hope the method will appeal to other surgeons who will try it out also. For, before surgery can make another great stride—the achievement all of us hope to see in our time—the practical and safe transplantation of glands, organs and members, the anastomosis of vessels must become as simple at least, and attended with less danger, than the joining of a gut.

THE TRANSMISSION OF PELLAGRA FROM MAN TO MONKEY.*

By WILLIAM H. HARRIS, M. D.

(From the Laboratories of Pathology and Bacteriology, College of Medicine, Tulane University.)

As no experiments conducted along the zeistic theory of the etiology of pellagra have been capable of running the scientific gauntlet, although numerous efforts have been made in this line, it was hoped that work based upon the hypothesis that the disease was due to a living organism might yield more encouraging results. It was reasoned that the etiological factor would be present in the diseased areas, and hence would be located either in the several tissues diseased or remain in one, and there elaborate a toxin capable of affecting the other structures.

In order to bear out such a conception, the first step was to attempt the reproduction of the disease by this means in the lower animals. The monkey of the *Macacus Rhesus* type was chosen as being probably the most desirable species for the work.

The first experiments were conducted in July of 1910, when a typical, fatal case of pellagra presented itself for autopsy. The autopsy showed only lesions consistent with pellagra, and no other evidences of concomitant disease were present. Portions of the brain and cord, and the lesions of the gastro-intestinal tract and skin were collected.

As such contaminated materials could not be inoculated in the manner desired without infection, and probable death of the animal, and again with the possibility of the causative factor being a member of the rapidly increasing number of "filter passers," emulsions were prepared and Berkefeld filtrates derived therefrom. These were inoculated in large quantities subcutaneously, intravenously and intracranially. After an unexpectedly long period of incubation this animal developed clinical signs and symptoms in accord with those of pellagra, and finally died. At autopsy no other causative factor for death, aside from the lesions found in fatal pellagra, was present. Microscopical study corroborated the gross findings, and the skin especially presented the hyperkeratosis and pigmentation identical with that found in the skin in human pellagra.

The experiment was not repeated until a similar typical, fatal

* Read before the Orleans Parish Medical Society, July 14, 1913.

human case became available. In this instance the ileum showed especially clear-cut lesions, presenting marked hyperemia, a mucous exudate and miliary ulcerations. These areas especially were selected and formed the greater part of the emulsion. Injections were given subcutaneously, intravenously and intracranially of a filtrate of this mixture procured through a Berkefeld No. N. Two months later this monkey was reinoculated in a similar manner and with similar materials. After two months of observation he developed a diarrhea, inflammation of the tongue, loss of appetite and presented erythematous skin lesions over the bridge of the nose, which spread in wing-like manner over the cheeks and under the eyes. He became emaciated and listless. Lesions, characterized especially by their symmetry of location and shape, developed upon the chonchæ of both ears, the shoulders, arms and dorsal surfaces of the hands. These gradually became pigmented, assuming a deep brown color, and desquamation in scales and placques finally occurred. Across the neck, just on a line with the clavicles, a band-like lesion developed similar to those already described, and gradually merged into the lesions on the shoulders. These are the skin lesions that we will project with the lantern.

The fact that the intestine formed the greater part of the filtrate used in this last experiment suggests the possibility that the stools may play some part in the transmission of the disease.

In conclusion, it would seem that pellagra may be transmitted to the monkey (*Macacus Rhesus*) by means of a Berkefeld filtrate derived from the tissues of the human case; at least, the animals develop all the essential clinical signs and symptoms, together with the pathological picture present in the disease in man. They further suggest that the etiological factor of pellagra may be a member of the large group of Berkefeld filter passers, such as fowl-plague, vaccinia, foot and mouth disease, molluscum contagiosum, poliomyelitis, etc.

Louisiana State Medical Society Proceedings.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

DISCUSSION ON THE PAPERS ON GOITRE OF DRs. BATCHELOR, JONES AND HARRIS.*

DR. L. J. GENELLA, New Orleans: Such an extremely important subject as this I would like to hear discussed very freely. I would like to introduce one point in this great question of goitre—are we not justified in making a diagnosis of “thyro-toxic condition” in cases that do not exhibit goitre at all, but do show a suggestion of tremor, slight tachycardia, and some gastro-intestinal derangements? The thyroid gland itself is tender on one side. It is palpable, but not enlarged. Now, does this negatate the diagnosis of thyrotoxicosis simply because we do not have goitre? In treatment, whatever method you have faith in, or trying to cultivate faith in, the best plan is to stick to it until it has worked itself out one way or the other.

Be sure of your diagnosis. Remember that many clinical conditions simulate goitre, and true goitre is rich in protein manifestations. If you believe drugs do good, use them in the only rational way you can. Remember, nine times out of ten you are dealing with a drug that it is impossible to standardize. The best advice, then, is to get a large quantity of it and attempt to make an empirical standard for the individual patient you are going to treat. If you are going to use quinin, anti-morbius serum, thyroid extract, swamp-root or peruna, or any other drug—for one is as efficacious as the other—get a large quantity of it. Tell the patient to get fifty bottles of anti-morbius serum, or thyroid extract, or peruna. (Laughter.) The idea is mainly that you will learn the specific action of that particular drug on that individual patient. If you intend to use thyroid extract, get 4,000 tablets of 2½ grains each, mix them, again divide them. Now you can find a standard. If your patient can eat sixteen tablets a day of your mixture without developing toxic symptoms, don't class him as a patient that takes thyroid extract well, but just figure out that you have been dealing with an inert drug and your patient has not had any thyroid extract at all.

Now change to another series of tablets from another source,

* Paper by Dr. Harris not handed to Publication Committee.

until you get a preparation that is dependable for that particular patient. Now, while you are at it, it would not be a bad idea to put a surgeon's scalpel in the bottom of the box and cover it with the pills of your favorite prescription, and mark on the box, "When finished taking enclosed 4,000 pills at rate of one four times a day, if still able kindly take enclosed scalpel to nearest surgeon and have goitre removed."

DR. F. W. PARHAM, New Orleans: A thing that impresses me so much in cases of exophthalmic goitre is the combination of symptoms and peculiar emotional disturbance and difficulty of saying in any particular case when you see it whether any particular line of treatment is going to cure that patient permanently or not. Many of these cases show very little enlargement of the thyroid gland. They show no exophthalmus, yet they are just as much cases of Graves' disease as those that show symptoms permanently. It is a question, in many of these cases, whether a simple removal of a portion of the thyroid gland is going to bring about a permanent cure. I believe we will be frequently mistaken and we will be misled, or we will mislead our patients if we say to them, when we begin treatment of this condition, "You ought to be operated on, because operation is the only thing, and will certainly cure you." I believe, just as I do in the treatment of gastric ulcer, that frequently the shortest way to cure is by surgical operation, and in those cases that can be cured by surgical operation it seems to me the sooner you undertake the surgical treatment the better it will be for the patient, because you will save much time and misery.

I do not think that we should lose sight of the fact that some of these cases, where we expect a favorable result from our operation, do not recover for a long time afterwards. I think it is always well for us to hedge somewhat in these cases. It is not well for us to speak with too great positiveness about a cure in certain of these advanced cases. I believe Crile is right: that the disease is not simply a disease of the thyroid gland, but it is, notwithstanding the investigations following Graves' announcement of this disease, which bears his name, the thyroid was the principal factor in the production of the disease. It undoubtedly remains that there is a large nervous element that is to be accounted for in these cases, and unless we fail to consider this properly we are going to be frequently very much disappointed in our results. I believe that Crile is right in saying, therefore, that the disease is not one simply of

the thyroid gland, although that may have been its beginning, or it may be at the time its principal factor, but still there are other conditions to be considered.

I remember very well the case of an old lady, over sixty years of age. For many years she had been suffering with the symptoms of tachycardia and other signs of hyperthyroidism. I took this old lady under treatment and removed a portion of the thyroid gland. She was very much benefited for a long time. She has now got into a condition which resembles paroxysmal tachycardia, and although at times she seems well, at other times she seems to be as bad as she was before. There is no use in contemplating a further removal of the gland, because I do not think it will be of benefit. She is in that condition where she requires medical treatment, such as will be directed towards the disturbance of the nervous system. I believe further in these cases we should not undertake the operation without some preliminary preparation. Dr. Batchelor has called attention to that, and Dr. Jones has also, and I believe it is extremely important.

I have had cases that I can contrast with one another, where I operated with or without this preparation, and the results were decidedly in favor of preparatory treatment.

I remember the case of a trained nurse who came to me very insistent upon having an operation done as soon as possible. She had been in the hands of some of my internist friends, and they impressed upon her that there was nothing further to be accomplished by medical treatment. This medical treatment was carried on while she was going on with her occupation of nursing. If there is anything that is not calculated to prepare a patient for an operation for exophthalmic goitre, it seems to me the profession of nursing is one of those. She came to me, as I have said, insisting on being operated on the next morning. I took her into the hospital and operated on her. She remained after operation about a month before she undertook to resume her work again. She was practically no better for a long time. Finally she realized the necessity of taking a prolonged rest, and she was very much benefited, but this improvement did not show itself until after a lapse of one year. This experience should impress upon us very properly the necessity of preparation by a sufficiently prolonged rest in these cases before operation.

Another thing I think is this: I believe that we have in many

cases to carry out, and we can carry out, with advantage, the suggestion of Dr. Crile, to steal away the gland, as it were—that is to say, do the operation without the patient knowing it until it is done. It is a simple matter to do that, because you can tell the patient, in giving an anesthetic every day, that you are preparing for the operation. You can do that for several days preceding the operation, and on the last day you take her up and continue the anesthetic and remove the gland. I did that in the case of this old lady, and she thanked me very much because I operated on her without knowing she was going to be operated on. This is another way by which the nervous system may be quieted.

When I spent several days with Dr. Crile in Cleveland last September he judged very much as to what should be done as to immediate or postponed operation by the condition of the patient. If a patient came in very much excited, and the hospital surroundings seemed to increase that excitement, or if the patient came in in a good condition and fearing the hospital surroundings might excite the patient, he operated at once in these cases, or as soon as he could get rest from the fatigue of travel. In other cases, where he felt it was possible to get the patient and prepare her for operation without having her excited by the hospital surroundings, he would go on with the preparatory treatment of rest and cardiac tonics, or whatever else might be indicated in a medical way.

With regard to the medical treatment, it is right for us to think of these cases being largely medical in many of the features, and we ought to subject them to a medical course of treatment, especially when we know from the statistics given us by a gentleman in Boston, who reported eighty cases treated with a quinin salt, with excellent results in nearly all of them, and permanent cures in some, it is well to give them a preliminary medical treatment, provided they do not keep the treatment up too long.

I remember one young lady whom I treated for some months. She got much better, and then had a relapse. With the relapse I operated and put her under some medical treatment, and she has made apparently a permanent recovery.

DR. E. DENEGRE MARTIN, New Orleans: Most of the important points have been touched upon. This is a disease we are beginning to get some satisfactory information about. I do not know of any subject which has been more discussed in the literature in the last

few years than exophthalmic goitre, and yet very little definite information is given.

Recently, in the reports from the Mayo clinics, Dr. Wilson states that 98 per cent. of the specimens examined gave definite symptoms of the disease, which means an advance in this work. There is no doubt that we are yet in the dark as to the etiology. I agree heartily with Dr. Parham and with Dr. Jones as to preliminary treatment. That should be tried.

We know that the pathologic reports of a great many cases are not reports of true pathologic conditions, but rather abnormal conditions which often yield to treatment; others seem to yield to no treatment, and patients recover of their own accord. Where we have patients under observation, and they are not yielding to treatment, and we are not getting results, the treatment is useless. So far as the medical treatment is concerned, hundreds of different methods are suggested. Unless you add rest to the treatment, and make the surroundings as agreeable and pleasant as possible, the simple medication will be of little benefit.

I operated on a case six months ago. If the patient could have been sent off to some quiet place the symptoms would have disappeared before this time. It is not wise to let them go too long without operation. Many patients have been cured where relapses have occurred; those are the cases that have a permanent pathologic condition, and that condition is absolutely surgical, as Mayo states. The time in some of our cases has not been long enough to judge whether the improvement is permanent or not. Four have been cured; one not improved, but I believe in that case the patient will get better. He is taking medical treatment, which seems to benefit him.

There is another class of cases of goitre in which there are no nervous symptoms—cases of large goitre, especially where you have a substernal thyroid, where pressure is being exerted upon the trachea and causing reflex symptoms. These cases are surgical, and no medical treatment will do them good.

DR. W. S. RUTLEDGE, Baton Rouge: I think it is a mistake in some ways to tell a patient that operation is a cure for exophthalmic goitre, and I think it is a common mistake over the country, and I do not think we are justified in telling patients or promising them cure by an operation. I have seen a good many of these cases; I have a little sanitarium, and patients are brought there by physi-

cians who tell them that nothing will do them any good but an operation.

I would like to call attention especially to the case of a nurse. We had a case in our sanitarium. The patient wanted an operation at once, and some of the doctors informed her an operation was the only thing that would cure her. We went ahead and operated on her, and in several months she felt better. Several months later some of the symptoms returned, and now she is in a worse condition than before. She submitted to operation because she says the doctors had promised to cure her by it. I think we ought to be very careful in asking or urging a patient to submit to an operation, or be very careful in telling them that it is going to be a radical cure for the trouble. That point ought to be impressed upon every physician. He should not make too many rash promises in the cure of this trouble.

DR. ESPY M. WILLIAMS, Patterson: In regard to making promises of cure to patients with exophthalmic goitre, it is my opinion that a complete cure should be promised in every case, with the reservation only that cure may not immediately ensue; and that too rapid a cure not be expected. Considering the state of mind of the patient in these cases, and the necessity of doing all that we can to preserve their equanimity, everything possible should be done to send them on the operating table with as little doubt as to the possible outcome as we can.

The family, of course, must know the exact conditions present.

In regard to the nomenclature of the disease, I think that it is unfortunate that it bears its present name of exophthalmic goitre. This fact leads the majority of practitioners to look for enlargement of the thyroid gland; whereas a very large percentage of these cases do not develop goitre until late in the disease; and in waiting for this a term is necessarily passed over wherein the best operative results may be obtained. If we consider it merely as a toxemia and look upon mild symptoms as an index to the disease, we would find very many more such cases.

DR. F. W. PARHAM, New Orleans: I think what has been said is to be seriously considered, but disappointment resulting from the early failure of the fulfillment of promises in surgical operations is going to do a great deal of harm to the patients.

A young woman consulted me in regard to a case of Graves' disease, and I said to her: "The operation is going to benefit you, I

believe, very much, but you must understand that the operation is not the only treatment; if you simply expect this operation itself to cure you, and you are going about your business without any fear of further trouble, you will be much mistaken. I am unwilling to operate on you unless you understand that treatment is to be pursued for some time following operation." It seems to me if we take that attitude towards patients we will put them and ourselves into a position not to be so grievously disappointed.

DR. J. M. BATCHELOR, New Orleans (closing the discussion on his part): Dr. Williams mentioned one point that I think is worthy of repetition, and that is the fact that it is unfortunate from a diagnostic standpoint that the term exophthalmic goitre has not been abandoned. Exophthalmus is absent in 20 per cent. of the cases and comes on late in the disease. In this connection it is very important that an early diagnosis be made, and there are other symptoms that arise earlier in the disease that permit of early diagnosis. The most constant prominent early symptom is tachycardia. Where it is impossible to account for tachycardia by any other reason attention should be directed to the possibility of hyperthyroidism.

With regard to the mortality following operations for hyperthyroidism, it is significant that the high mortality in all reported cases will be found among the early series of every operator. There is but one logical conclusion; that after all the final results in the mortality rate will depend largely upon the technique of the operator and his experience and skill. In his first 40 cases Mayo had a mortality of 25 per cent., and Koehler 40 per cent. This has been reduced to 1 per cent. and 3 per cent. I believe all of these patients should be cautioned that a period of rest and after treatment is absolutely essential; that it requires just as long a time to recuperate from the effects of hyperthyroidism as it does to recuperate from any other nervous breakdown, and these patients should not be allowed to take up the ordinary activities of life until they are put upon this post-operative treatment.

DR. JONES (closing): I have very little to say in closing except to impress upon you the fact that the medical treatment of exophthalmic goitre is not exactly an indefinite procedure. The treatment both surgical and medical, it is most important to produce a condition of peace in your patients, not promising too much, but giving them hope in many instances. It is unnecessary to discuss the prognosis with a patient, but you must tell the patient, as he surely

knows, it is a serious disease, most distressing in character, and one that will take a long time to get over, if ever. All you can promise to do is to help these patients and their mental attitude will be largely influenced by the degree of confidence you are capable of inspiring in them. Their personal attitude towards the physician or the surgeon has a good deal to do with it. If kindly treated, they are more considerate than any class of patients I know of. They respond more promptly to a little human sympathy than any other patient you ever saw. They are fearful, and they must depend upon some arm for rest and comfort.

Sleep is most essential, as is rest, and I wish to warn you with reference to the patient trying to get rest. The ordinary rest cure, as practiced almost anywhere in the world, is absolutely harmful to thyroid cases in my experience, because these patients are kept away from their friends; they are not allowed to communicate with anyone, and their imaginations are allowed to run riot. Other plans of rest cure have been tried, and the patients have certainly come out in a much more distressing condition than before. Absolute rest in bed, under cheerful surroundings, is often enjoined, and many are of the opinion that the rest enforced in the operative cases is almost as important as the surgical procedure itself.

DR. HARRIS (closing the discussion): I do think that the simple test of Fehleissen in the diagnosis of these conditions is an adjunct to the surgeon and medical men, and that the test I mentioned should be tried further for its usefulness or for its remedial effect. He can diagnose exophthalmic goitre with the serum of these patients almost in the incipiency of the disease, and I would submit that test to the men who are concerned for further consideration.

Orleans Parish Medical Society Proceedings.

MEETING OF JULY 14, 1913.

DISCUSSION ON DR. HARRIS' PAPER.

DR. HOWARD D. KING: Nineteen thirteen will prove to be epochal in the annals of the Orleans Parish Medical Society, as we had two men, Bass and Harris, to make notable discoveries. We

know that all previous experimenters have failed to produce pellagra in the lower animals. In the *Mississippi Medical Monthly* Dr. Dearman claims to have produced pellagra in a Honduran monkey.

Dr. Harris has produced the disease by injecting the macerated tissues from a human pellagrin. Has Koch's postulate been fulfilled? The Thompson-McFadden Commission has been carrying on work in the Carolinas, but their work has so far been limited. I think Dr. Harris has done the work, and that pellagra is due to an organism.

DR. GENELLA: I would like to ask about the dosage and the points of injection? Were there any injections into the retroperitoneal space or any portion of the chromaffin system?

DR. C. C. BASS: The pictures shown by Dr. Harris do not do his work justice. I saw one of these monkeys, and having seen three or four hundred cases of pellagra, I feel that I can express an opinion and can say that I have no doubt that this monkey had pellagra. The organism or causative agent is not demonstrated by Dr. Harris' work, but it does indicate as strongly as one experiment can indicate that it is due to a living organism or virus. To my mind Dr. Harris' does not absolutely prove that the toxin of the disease was not carried over into the filtrate, but this is a remote possibility. This work is the best work so far done throughout the world in pellagra and is revolutionary. Many observers, Lombroso and others, have claimed to have produced pellagra in animals. Some workers in Kansas thought they were successful working along Sambon's sand fly theory, but the results were not conclusive. The most important work before this work of Dr. Harris was by Dr. W. A. Dearman, who read a paper at Gulfport, Mississippi, at a meeting of the Harrison County Medical Society, and presented a monkey which he claimed to have infected with pellagra, but gave no details. A little later, at the meeting of the Mississippi State Medical Association last April, he read a paper, gave all details and presented autopsy material. This paper was published in the Transactions of the Society. The animal was brought to New Orleans before its death and shown to Dr. Dyer and myself. We were not sure that the disease from which it was suffering was pellagra, but it resembled it. An autopsy was performed two or three days later by Dr. Couret. I think there was no explanation for the death of the animal, except probable pellagra.

Dr. Harris says that the skin lesions of the first monkey were typical of human pellagra. In this connection I would call attention to the classical publication of Gurd on histo-pathology of the skin lesions of pellagra. It was clearly shown that the changes in the skin cannot be differentiated from those produced in otherwise normal individuals by such physical forces, especially as sun rays, X rays, etc. Therefore one cannot prove the existence of pellagra by the histo-pathology of skin lesions.

DR. WELLMAN: While not strictly discussing Dr. Harris' paper, I wish to call attention of the Society to correspondence and visits which I have received regarding some work on the treatment of pellagra which has been done by Dr. Jean Nicolai, of France, using sero-therapy. (Correspondence read.) I have many of his publications and pictures of his patients and have been urged by the French Consul to invite Dr. Nicolai here to perform experiments and present his work to the Society. Dr. Nicolai has not published his formula and method of preparation of his serum, hence I feel that it is not ethical for us to endorse his work. He reserves the commercial rights, which does not look ethical. I received a letter from Dr. G. W. Stiles and wish to be recorded as opposing Dr. Nicolai's coming unless he accedes to all the ethical demands of the American profession. (Letter from Dr. Stiles read.) At the last International Congress of Hygiene and Demography at Washington a paper was read on the serum and the serum exhibited.

DR. H. P. JONES: Dr. Harris informed me of his technic and I saw the monkeys. It seems to me that they certainly had pellagra. We know that some diseases, such as yellow fever, are carried by insects, the organisms of which are not known. We should fulfill Koch's Law with regard to pellagra, and try to discover the insect carrier, if there be such.

DR. HARRIS (in closing): In answer to Dr. Genella I would say that no intra-peritoneal or retro-peritoneal injections were made.

Communications.

THE INTERN SYSTEM IN PARIS.

The interns in the hospitals of Paris are appointed for four years by competitive examination. Every year there are sixty-seven vacancies, in some fifty hospitals, and for these places there are some six hundred candidates.

The examining board is selected by lot and consists of ten members, all official physicians or surgeons in the several hospitals.

The interns usually select the desired service and hospital when they apply for examination and as soon as appointed they become chiefs of the respective services. Their duties obligate direct charge of the wards, the responsibility of the preliminary examination of all patients admitted to their wards, and they must be fully posted upon the status of each case. A daily detailed report is made to the chief of the division, from whom direct instructions are received, including examinations and laboratory study of the cases in the service.

Such externs as may be related to these services are supervised by the intern, and are trained by him in the detail of the clerical and laboratory technic applying to the ward.

Between the visits of the chief the intern makes regular rounds. The services of interns rotate in 24-hour periods, and in the larger hospitals there are enough to provide for several corollating interns.

The interns pass upon the admission of patients, assigning them to their proper divisions.

In emergency the official chiefs are called by the intern on duty. Interns assist at operations, and may operate in the presence and with the direction of the chief. The intern is relieved of legal responsibility as he does not obtain the license to practice until his time has been completed; in other words, graduation in medicine is not effected until the hospital term has been served and a thesis presented and accepted.

Besides the interns the hospitals have another corps of chiefs of clinic, graduates appointed also after competitive examination. This corps is related to the Faculty of Medicine of Paris; they are appointed for two years, and may be continued for another year at the discretion of the chief. The chief of clinic is an instructor,

teaching as adjunct to the professor, or takes his place in case of absence. He prepares the clinical material for his superior.

The interns are associated with the chiefs of clinic in so far as providing material for teaching is concerned and in aiding the bedside instruction.

There is a systematic code of discipline which requires regular reports of the chiefs of clinic, regarding students and their service, and so far as the interns are concerned they are subject to a court of discipline in case of breach of rule or conduct, and may be punished by suspension.

There is ample experience and plenty of opportunity and those who have gone through the service of the Paris hospital are enthusiastic over the methods in vogue.

(The above is abstracted from a letter to Dr. E. M. Dupaquier from Dr. Rene Ganducheau.—Eds.)

ON EMETINE HYDROCHLORIDE.

Editors New Orleans Medical and Surgical Journal:

GENTLEMEN—Let me say a few words in favor of Dr. Lyon's paper on "Emetine Hydrochloride in the Treatment of Amebic Dysentery." I have been using emetine hydrochloride, both by needle and mouth, lately with marked success. It is certainly a pleasure to be able to treat a case without turning your patient "wrong side out," as the saying goes. I have occasion to treat quite a number of cases of amebic dysentery, having charge of two state convict farms with about a total of 300 men constantly. The "bugbear" of the ipecac treatment was to induce the stomach to retain the dose. My experience with the salol-coated pills has been very little better than the old method of giving 20 drops of laudanum or tincture opium deodorated 20 minutes before each dose of ipecac. No matter how carefully the druggist prepared the pills very often they would be vomited. Now, with the emetine treatment by needle you can charge the blood with the drug and reach the amebae through the circulation without any disagreeable effects. I have also used the tablets of emetine hydrochloride with very little nausea. The reason for this is that ipecac contains two alkaloids, the acid emetic cephaline and the milder chalogague emetine on which the specific effect of the plant in dysentery depend. By

giving emetine the emetic properties of the drug is eliminated. Of course there is some nausea in administering emetine hydrochloride by mouth, but this can be avoided by directing the patient to swallow the tablets whole, without chewing, or liquid and have him lie quiet for fifteen minutes after each dose. Two or three $\frac{1}{8}$ -grain tablets can be given as above or in a capsule of bismuth subnitrate every 3 hours. These $\frac{1}{8}$ gr. tablets are put up by the Abbott Alkaloidal Co. and are very reliable. Emetine will destroy amebae in as high as 1/100,000 as Vedder says. Now I have found that a solution of emetine 1 to 5,000 or 10,000 has a magical effect on the cause of the disease, by rectum. First irrigate the bowel with hot saline solution to cleanse mucus, etc., so as to allow the medicated solution free access to the amebae. Then give a pint to a quart of emetine solution 1-5,000 or 10,000, and have patient to retain as long as possible. Use morning and night. I have never read of this being used, but it strikes me that by putting the poison in direct contact with the amebae will more easily destroy them than by either mouth or needle route. Now having used both together I am not prepared to say which did the work faster. I had no trouble at all in obtaining the ampoules from P. D. & Co. The product that I used was a clear, colorless liquid which must have been the London preparation of which Dr. Lyons speaks. Hoping these few remarks will be given space in your journal.

Yours,

B. O. LEBLANC, M. D.,
St. Gabriel, La.

NEWS AND COMMENT.

A recent issue of the *Outlook* editorially makes announcement of the Department of Tropical Medicine at Harvard, just established, with the comment that this is the first thing of the sort in the confines of this country. Both the University of Pennsylvania and Tulane will be somewhat surprised at the discernment of the *Outlook* in discovering Harvard some years after these two schools had successfully established such departments.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

HEAD LICE AND SCHOOL CHILDREN.

In the October 4, 1913, number of the *New York Medical Journal*, J. Sobel covers a most interesting review of the status of pediculosis capitis among school children in New York. His deductions point to a better condition following inspection and instruction in the homes, but the tables and figures argue for a more radical procedure than that followed. An interesting annotation is that which shows the infrequency of head lice among negro children (0.5 per cent.) as compared with white children (16.5 per cent.), a difference attributed by the author to more cleanliness among the negro population. We conjecture a different opinion after a long acquaintance with the practice of negroes everywhere of rubbing the hair with oily substances, usually of odoriferous sorts. The pediculi may be frequent enough but they do not hatch out as many nits for the reason that the excessive oil on the hair of most negroes prevents the adhesion of the nit, even if the odor (also mentioned by the author) were not in itself a deterrent.

The paper is altogether timely and in these days of sanitation it would be well to help the crusade against the pediculus.

Pediculosis is a traditional condition of school days and the fine comb is a *vade mecum* of a large proportion of school children, addicted as they are to exchanging head dress, not to mention the household habit of community toilet utensils. Even the shops purveying to the hair dressing trade are not above suspicion.

Dr. Sobel states that the practice in the New York schools is to exclude only those heads with live vermin, which suggests that live nits are not considered. As these hatch rather rapidly, it would seem that both the riddance of nits and pediculi would be better served by a segregation of all children showing either lice or nits.

Asylums often are lice infested and it is not difficult to effect a perfect relief by isolating all cases of nits and lice, treating them until cured and restoring them to community privileges only when free of the vermin or their eggs, live or dead.

Sobel mentions the likely evils arising from a state of pthiriasis, the various pus infections, adenitis, toxemias, etc., being enumerated. In tramps or jail inmates profound infection occasionally comes as a sequel of long harboring of pediculi and now and then the toxemia kills the victim of lousiness.

The literature has been unusually meager in the discussion of pediculosis from the hygienic standpoint, and Sobel's paper is all the more timely and important as opening up a new interest in an old subject.

THE NEW ORLEANS ITEM JOINS THE RANKS.

Beginning October 1, 1913, the New Orleans *Item*, one of the afternoon papers of that city, promulgated a comprehensive set of rules governing its advertising copy, principally relating to medicines and appliances and proposals to heal disease. Most of the decent medical journals have for many years arraigned the press for the flagrant offense in advertising nostrums and fake cure-alls, but with the exception of a few weekly and monthly periodicals no serious notice has been taken. Latterly a few leading newspapers have seen the error of their ways and have joined the ranks of respectability in purveying to the public. New Orleans has been no exception in the matter of having newspapers contain nasty and offensive medical advertising, but the *Item* has lifted some part of the burden by putting at least one daily newspaper on a proper plane, and we hope that other papers may follow the example.

The quack medicine promoter has depended in large part upon the newspaper in the exploitation of the public and with this source of advertisement removed, the quack concerns and patent medicine purveyors will have to fall upon some other means of reaching their victims.

Legislation, however, is gradually growing more and more paternal in this regard, and the *Item* has shown considerable foresight in anticipating a logical and apparently clean practice and action which may be enforced a few years from now by law.

Already some legislatures have agitated the idea of legislating all such advertising, and the public itself is reaching the point where it will demand clean newspapers in the home.

The medical profession has been powerless in reaching the advertising fakes. Much has been done in eliminating the individual

who could be convicted of practicing medicine illegally, but there has been no law which can reach the widely disseminated evil of newspaper advertisements of means and medicines known to be harmful or fraudulent.

The graft has been so great for so many years that the great number of evil concerns engaged in gulling the public will die hard, but there will be a better household and a healthier one when the patent medicine is ruled out.

THE IMPORTATION OF COCAIN.

It looks as though an important step has been taken in the direction of stopping the illegitimate and nefarious use of cocain and preparations containing it. What is specially encouraging is that the measure is to be carried out by the United States Government.

Under a recent decision of the Treasury, the United States Department of Agriculture has issued a declaration form which must be subscribed to by all importers and dealers in coca and cocain products, on the ground that these things are dangerous to the health of the people. The entry of these drug products is permitted for legitimate use in medicine.

This declaration requires the importer to state under oath that the import is designed for use in a manner not dangerous to health, and that he will secure from every person or firm to whom the import is sent the same declaration as to the use the recipient will make of that portion sold or sent to him.

It has been easy, apparently, up to now, to violate local and State laws regarding the sale of cocain, but now that Uncle Sam steps in, and that his inspectors must be allowed to go over statements from persons buying the imports, it is evident that the evil will at last be restricted considerably.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

ANESTHESIA AND ANOCI-ASSOCIATION.—Crile (*Surgery, Gynecology and Obstetrics*, June, 1913) summarizes his theories upon operative and post-operative "shock," and the relation this has to

anesthesia, in a paper read before the Clinical Congress of Surgeons of North America at New York on November 12, 1912. He observes that the technic of surgery the world over is now well standardized; but one of the greatest of outstanding problems is the elimination of the harmful effects of the necessary procedures, including the anesthetic. These effects are due to the exhaustion of the brain cells from psychic and traumatic stimulation. Under inhalation anesthesia these traumatic stimuli reach the highest centers and cause a discharge of brain cell energy by a process of oxidation. Nitrous oxide, by interfering with the use of oxygen by the brain cells, protects the latter during a surgical operation. By so doing it prevents the destruction of the chemical compounds in which is stored the energy of the brain cell. This explains its great value as an anesthetic. Crile also draws attention to the fact that powerful stimuli, whether psychic or traumatic, and whether received by the brain while awake or under inhalation anesthesia, cause a lowering of the threshold to stimuli. This "lowering of the threshold" is the source of the nervousness, irritability and altered personality which so frequently follow operation. To the principle of the exclusion of all harmful stimuli during operation the author has applied the term "anoci." Its successful practice requires careful personal management, united with the use of such chemical agents as will exclude from the brain all harmful stimuli. The technic employed by Crile is briefly as follows: One hour before operation $1/6$ grain of morphin and $1/150$ grain of scopolamin are administered. Nitrous oxide, either alone or with ether, added as required, is then given until the patient is unconscious. Infiltration of the skin and subcutaneous tissue with $1/100$ grain of novocain is next made, and in order to spread the latter immediate local pressure with the hand is applied. Anesthesia is immediate and the incision may be made at once. The fascia, muscle and peritoneum are infiltrated in turn and divided. The latter is also everted and injected with $1/2$ per cent. solution of quinin and urea hydrochlorid, completely surrounding the line of proposed sutures. If "Blocking" has been complete, upon opening the abdomen no increased intro-abdominal pressure will be found. There is no tendency to expulsion of the intestines and no muscular rigidity is present. During the past year Crile and his associate, Lower, performed 629 abdominal sections under anoci-association, with a mortality rate of only 1.7 per cent.

MILLER.

CYSTIC DEGENERATION OF THE KIDNEYS AND LIVER: PREGNANCY.—Heinsius (*Zentralb. f. Gynak*, August 16, 1913) reported at the Obstetrical Society of Berlin an instance of a woman, aged 32, who since her first confinement, four years previously, had been under treatment for floating kidney. She became pregnant once more, and went on satisfactorily until the eighth month, when she had a sudden attack of vomiting, headache, extreme dyspnea and disturbances of vision with temporary blindness. There was a high degree of anasarca and scanty secretion of albuminous urine, but no loss of consciousness. The extremities were cold, the pulse 140. Colpo-hysterotomia, anterior, was performed and the child delivered by the forceps. The patient's condition at once improved. There was a tumor, like an ovarian cyst, on the right of the uterus, which was slightly taken for a cystic kidney. It diminished in size during the puerperium and the patient seemed convalescent. A few days later the tumor increased in size again and the right lower extremity became swollen; the urine contained blood and pus. Rigors set in and the integuments over the right loin became swollen, red and shiny. Infected hydronephritis, pyelonephritis and perinephritic abscess were diagnosed and the tumor was removed. It proved to be an enormous suppurating small cystic degenerated kidney. The patient died. The left kidney and the liver were found to be in a similar condition. There was hypertrophy of the left ventricle. Heinsius concluded that pregnancy was gravely compromised by the presence of bilateral small systic degeneration of the kidneys, but the complication was fortunately rare.—*British Medical Journal*.
MILLER.

DIABETES AND PREGNANCY.—Fruhinsholz (*Ann. de. gynec, et d'obstet.*, August, 1913) analyzes in full three cases which have recently come under his care since Le Follit and Parisot published their experiences in 1911 and 1912. In the first, diabetes developed during gestation in a patient aged 35, a primapara, whose father died of diabetes. The fetus was big and died during delivery; the forceps was used on account of uterine inertia and there was difficulty in delivering the shoulders. The placenta was very large and had to be extracted manually. The perineum was slightly torn and was sutured. The child was a male, nearly 10½ pounds in weight. The patient did well and the perineal wound healed. The second case was attended to by Fruhinsholz during the patient's third pregnancy; she was 35 and had given birth within a year of her mar-

riage to a male child weighing 7 pounds six weeks before term; it was cyanosed and died in 48 hours. Hydramnion was marked and was also present in the second pregnancy, where a macerated male fetus weighing 8 pounds was delivered in the eighth month. Fruhinsholz found that the patient was given to drinking water freely and complained of pruritis vulvae, and he discovered that she was diabetic. There was hydramnion as before. The patient was put on iodo-mercurial treatment. Labor set in during the eighth month; $2\frac{1}{2}$ pints of liquor amnii came away and a male child weighing nearly 11 pounds was delivered asphyxiated. It was revived but died on the next day; the mother did well. The third case was a remarkable instance of diabetes and syphilis combined. The patient was 35 years old; her grandmother died of diabetes, her father appears to have been syphilitic, and the mother whose only child she was, succumbed to tuberculous phthisis at the age of 33. The husband seemed free from syphilis. She married at 24 and had three abortions between the ages of 25 and 29; she suffered at the same time from intolerable thirst, polyuria and bulimia, and later from neuralgia, intercostal and radial, in both arms. Then diabetes was detected by a physician. At 31 there was abortion in the fourth month, and the next year pregnancy again occurred. A macerated fetus, dead about ten days, yet weighing $8\frac{1}{2}$ pounds, was delivered at term. All traces of sugar disappeared during this pregnancy, but septic symptoms developed in the puerperium, with rheumatic pains, scarlatiniform erythema, otitis, cystitis and albuminuria, yet the patient recovered, while the diabetic symptoms, on the other hand, reappeared. Once more, and this time when under Fruhinsholz's care, she became pregnant. At first the urine held much glucose, yet it disappeared and no sugar could be detected down to her spontaneous delivery at term. She was kept under treatment from the fifth month, Deret's elixir biode being given. On this occasion the child weighed only 5 pounds and as it was being reared the appearance of hereditary syphilis developed. The mother recovered speedily, yet directly after delivery the glucose reappeared (September, 1911), and when the report was published the patient's urine contained a high proportion of sugar. Fruhinsholz notes how diabetes resembles syphilis in respect to the big fetuses and placentae, the frequency of hydramnion, and the low vitality of the fetus. But while specific treatment is most beneficial to mother and child in case of syphilis, no method of treatment

seems of any avail to the child when the mother is diabetic. Her malady undergoes a kind of eclipse during gestation, only to reappear in the puerperium. Thus it is highly inadvisable for a diabetic woman to become pregnant.—*British Medical Journal*.

MILLER.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

THE TREATMENT OF PERNICIOUS ANEMIA.—Bramwell (*British Med. Jour.*, 1913, 2734, 1093) reports the results in 11 cases of undoubted pernicious anemia and in 1 doubtful case treated by salvarsan. Of the 11 undoubted cases 4 have been apparently completely cured, but it is impossible to say whether a relapse will occur later or not. In 2 cases there was very striking temporary improvement, but ultimately they relapsed and death resulted. In 1 case there was slight improvement at first, but the patient died from bronchopneumonia while under treatment. In 2 cases there was no improvement, and in 1 case still under treatment there is slight improvement. Bramwell has had nearly 40 years' experience with the ordinary arsenical method of treatment of pernicious anemia, and he believes that the salvarsan treatment is superior to the ordinary arsenical treatment. Further experience is necessary, however, before one can say whether the beneficial effects, which it undoubtedly produces in many cases, will be lasting or merely temporary. Bramwell has always given the salvarsan intramuscularly, the dose used being 0.3 gram, which is half the dose usually employed in syphilis. In view of the fact that pain and inflammation often follow intramuscular injections of salvarsan, he advises neo-salvarsan, which does not produce such marked local reactions.

J. A. S.

THE THERAPEUTIC USE OF STROPHANTHIN.—Thorspecken (*Deutsch. Arch. f. klin. Med.*, 1913, ex. 319) advises the intravenous injection of strophanthin in chronic cardiac insufficiency where other remedies are ineffectual or when gastro-intestinal disturbances prevent the use of the ordinary cardiac stimulants. Strophanthin is especially indicated in failure of cardiac compensation

associated with congestion of liver and in contracted kidneys associated with dyspnea or edema of the lungs. Thorspecken advises the use of an initial dose of one-half of a milligram and 24 hours later a second dose of three-fourths of a milligram. J. A. S.

THE EXCRETION OF FORMALIN IN THE URINE AFTER HEXAMETHYLENANIM (Urotropin).—Making use of the test for formaldehyde reported by Burnam, Talbot and Sisson (*Boston Med. and Surg. Jour.*, 1913, clxviii, 485) examined 400 specimens of urine from 44 children. Practically all the acid urines contained formaldehyde, and the alkaline urines were negative. This was after hexamethylenamin by mouth. All of the 44 children tested showed formaldehyde in the urine at some time while under observation. Hexamethylenamin is often excreted as such by children in alkaline or neutral urine, and is almost never broken down into formaldehyde, except in an acid urine. In some cases the dose had to be increased before formaldehyde appeared. Relatively large doses are frequently necessary. Inasmuch as the antiseptic power of urotropin depends upon the presence of free formaldehyde, urotropin should not be given with drugs that cause the urine to turn alkaline. J. A. S.

PSEUDOTUBERCULOSIS IN MAN.—Saisawa, of Tokio (*Zeitsch. f. Hyg. und Infektionskrankheiten*, 1913, lxxiii, Heft 3), describes a well-observed case of pseudotuberculosis which happened in a soldier, was carefully noted throughout its course, and yielded complete bacteriological material. Before giving any particulars of Saisawa's case, it may be said that bacillary pseudotuberculosis is an infrequent disease, and few of the hitherto described cases have been given with sufficient fullness. Pseudotuberculosis is a disease most frequently of rodents, but it has been observed in mankind under the name of Zooglic tuberculosis, and is not a clinical entity. It is caused by non-bacterial parasites, such as blastomyces, actinomyces, the aspergillus group, certain protozoa, and even more highly developed organisms. Saisawa's case was caused by bacilli which were not acid fast, and correspond to the so-called "Pfeiffer pseudotuberculosis bacillus of rodents." The illness consisted of a fever with marked prostration, ending in death after 10 days. There were icterus, enlargement of the liver and spleen, albumin and bile pigments in the urine, a moderate leukocytosis, in fine, a course not

unlike that of typhoid fever. Blood cultures the day before death gave growths of the organisms referred to above. At autopsy the most marked changes were observed in the intestines where the mucosa was swollen, slimy and showed marked catarrhal places; there were hemorrhagic spots, Peyer's patches and the solitary follicles were greatly enlarged, and in one place there was an ulceration on the surface which lacked the appearances so characteristic of advanced tuberculous ulceration. The anatomical diagnosis gave follicular enteritis, tubercle formation in the liver and the spleen, edema of the lungs, nephritis, serous exudate in the peritoneum, pleura and pericardium. The tubercles described in the liver and the spleen answer the description of the ordinary tubercle, each having a necrotic altered centre at the periphery of which small clumps of bacilli could sometimes be seen, but the bacillus tuberculosis could not be demonstrated in it. Briefly the bacilli obtained from the autopsy were the same as those obtained by blood cultures during life, and conformed to the organism above mentioned, which bears Pfeiffer's name. Saisawa carried out a very full set of observations upon various rodents as well as upon the morphology of the organism. There has been much discussion as to the mode of infection in such cases, and Saisawa's offers arguments in favor of infection through the alimentary canal. Following this paper, Saisawa has carried out a series of experiments upon the bacillus pseudotuberculosis, he having obtained bacilli from four different sources in Europe. The five forms showed no important differences in morphology or cultivation; all are intensely pathogenic for rodents, causing a disease of an acute course with marked swelling and hyperemia of spleen, liver and mesenteric glands, and the formation of tubercles in most of the organs. The serum reaction, agglutination, precipitation and complement fixation gave unreliable results, so that these reactions offered little assistance in the identification of the different strains. One of the five strains, however, did give undoubted immunity against subsequent infections by the same, and the other forms. These bacilli are pleomorphic, usually bacillary, but sometimes coccial in form, often in diploform as well as in chains; they are non-motile, negative to Gram, stained with Loeffler's blue or carbolfuchsin show polar staining, and they grow at both room and body temperature.

J. A. S.

Department of Nervous and Mental Diseases.

In Charge of DR. R. M. VAN WART, New Orleans.

TABETIC FRACTURE OF THE CALCANEUM AND PATELLA.—Two rare cases of spontaneous fracture of small bones due to tabes are recorded by J. Schleinzer (*Wein. med. Woch.*, May 17, 1913). A man aged 48 had contracted syphilis ten years earlier. During the past seven years he had suffered from pain in the legs, which were worst in bad weather and troublesome at night. After prolonged and tiring exertion one day he suddenly noticed slight pains in both legs and the left foot, and a few days later the left heel was considerably swollen. But this caused little discomfort, and he could walk without much difficulty. Three months later the following conditions were observed: Myosis, the left pupil being smaller than the right. Reaction to accommodation, but no reaction to light by the left pupil, and slight reaction by the right. Outward movement of the right eye on convergence. Diminution of the corneal reflex, and optic atrophy. There was marked hyperesthesia in the pre-mammillary region, and at the same level behind on the right side. The right cremasteric reflex, the patellar and Achilles reflexes were absent, but there was no ataxia, and the patient's gait was normal. From the junction of the middle with the lower third of the tibia downwards the left leg was much thickened and the skin pigmented. The swelling was greatest at the attachment of the tendo Achilles, and there was a moderate degree of flat-foot. A skiagram showed detachment of the tuberosity of the calcaneum from the body of the bone. The detached portion was about 1 cm. wide, and was displaced upwards and backwards. The contour of the bones was sharply outlined, but along the tendo Achillis, for a distance of 6 cm., were several ill-defined shadows of bony tissue. Similar shadows indicating irregular ossification were seen between the two portions of the calcaneum. A plaster-of-Paris bandage was applied and the patient was able to walk with a slight limp. During the following observation period there was little change in the local condition apart from progressive ossification in the tendo Achilles.

The author can find no other record of isolated tabetic right foot, which remained swollen, from the ankle almost to the knee, for about one year. The foot remained weak and his gait

was impaired for two years, during which he occasionally felt a grating sensation in the knee-joint. After stooping down to pick up an object he suddenly felt something snap and could not raise himself again. His pupils were unequal, and there was but a slight reaction to light, while reaction to accommodation was prompt. Both optic nerves were pale. The reflexes were present with the exception of the patellar reflexes and there was no ataxie of the upper limbs. The lower limbs showed slight ataxia, and Romberg's sign was present. The muscles of the right leg were flabby and slightly atrophied, so that the swelling of the right knee as compared with the left was prominent. The right patella was transversely fractured, and there was a gap of 2 em. between the fragments. This displacement and the extensive swelling of the extensor of the knee-joint showed that the lateral attachments must have also given away. The skin of the fracture was normal. On account of the tabes, no operation was attempted, and a plaster-of-Paris splint was applied. Two months later the swelling had subsided, but there was otherwise no change. The author can find records of only three other cases of tabetic fracture of the patella. VAN W.

ARSENICAL NEURITIS.—E. Lindstrom (*Wien. Klin. Woch.*, May 1, 1913) gives an account of his own sufferings from neuritis, which was ultimately traced to arsenic present in large quantities in the wall paint. He moved with his son aged 11 years into a newly painted house early in January, 1911. In April he began to suffer from severe neuralgia in the right nervus axillaris and sacralis. The pain ceased as soon as he rested completely, recurred when he got up, and was aggravated by any movement. It was less troublesome in summer, but in the middle of December it again caused much discomfort, and extended into the right radial nerve. He found washing his hands very painful, and in January, 1912 he could scarcely do anything with his right hand. The area over the triceps was swollen and tender and was suggestive of early phlegmon. From this point the pain radiated to the back of the forearm and hand, and to the shoulder, back and neck. Muscular rigidity prevented his walking upright, and the pain which was at first stabbing, became later dull and numb. Aspirin and quinin gave no relief. In the autumn and spring of 1911 his son developed conjunctivitis, although he suffered from no errors of refraction and had previously been healthy. As the conjunctivitis persisted in spite of treatment, arsenic was suspected and found in large quantities

in the urine of both father and son. The Dutch sinz-white with which the patients' bedroom had been painted contained 2.8 mg. of the arsenic in every 200 c.cm., and the air of the room leading to the bedroom contained 0.02 to 0.06 mg. of arsenic in every 25,000 litres. The author now took hot-air baths and a course of cold-water treatment, but without much improvement. In the spring and summer of 1912 brown pigmented areas appeared on the back of the right hand for a short time. There was considerable improvement in June, when he began to operate again, but after three days' work the numb sensation and then the pain recurred and necessitated a three to four weeks' rest. Operating in September again caused a relapse, which required a few days' rest in bed and partial abstinence from work for several weeks. The author was more than usually right-handed, as his left hand had been tuberculous in childhood. The extra work thrown on the right hand and arm is, therefore, probably responsible for the distribution of the neuritis, which was so violent in this case that nerve-stretching, and even amputation of the arm, was contemplated. VAN W.

OCCUPATIONAL BRASS POISONING.—Hayhurst (*Amer. Journ. of Med. Sciences*, May, 1913) discusses occupational brass poisoning, or brassfounder's ague. The brass manufacturing, or non-ferruginous metal-working trade necessitates the handling of large quantities of copper, zinc and tin, white lead, antimony, nickel, phosphorus, arsenic and cyanid compounds sometimes enter in, as well as the fumes of muriatic, sulphuric, nitric and hydrofluoric acids. Investigations among 2,000 brass-polishers failed to discover any affections peculiar to brass dust itself, which does not appear to be any more inherently harmful than iron dust to iron workers, or stone dust to masons. The dust from alloys rich in copper generally produce green-stained hair, a greenish deposit on the gums, and a green tint in the perspiration, without directly affecting the general health. Brass poisoning only occurs in those exposed to the inhalations of fumes from molten brass, and temperature short of that of the recent vaporous state of its components does not produce any intoxication peculiar to itself. The symptom-complex of brass-founder's ague is peculiar to human beings and consists in an acute malaria-like syndrome of chill, fever, and sweating occurring a short time after inhalation of vapors arising from molten brass or pure sinz. The newer workmen, or those who have been away on a holiday for a time, are most susceptible, and it is usually after

leaving work that the symptoms develop. In addition to the ague there is an increased tendency to respiratory and gastro-intestinal diseases, anaemia and malnutrition, while the mortality from phthisis is in excess of that of occupied males by 50 per cent. Of 1,200 casters in Birmingham not more than ten were over 60, and practically only young men are found to be employed in Chicago, employers stating that when over 40 the men become slow and un-dependable, while the workmen complain of gradual incapacity from inhalation of the fumes, combined with the strain of piece-work, and it is significant that no such conditions prevail among ironworkers engaged on identical processes. In the volatilization process a white smoke arises above the metals, out of which small snow-like flames sublime and it is this smoke and this sublimation product which cause the ague. Of 89 brass foundries in Chicago, in only 6 were the furnaces separate from the moulding and casting quarters, and practically everywhere merely natural ventilation by means of roof apertures, windows and doors were relied upon to free the quarters from noxious vapors; only 9 attempting artificial ventilation by means of fans, etc. Other deleterious influences to which workmen were exposed were carbon monoxide, gas and nauseating vapors of burnt oil. Of 2,212 men and women in brass foundries 450 were engaged in processes not necessarily exposing them to the foundry atmosphere, and of the remainder 85 per cent. were under 40 years of age. There is no known antidote for the ague attack, but prevention should aim at restriction from certain persons from entering the trade, the prevention of inhalation of fumes by limiting them to certain quarters, insuring rapid ventilation, and co-operation on the part of the workmen to avoid risks. Acting upon the report of a Commission, the Illinois Legislature has adopted a special occupational disease law effectively covering the hygiene of this and kindred trades, and by similar means Germany has in recent years materially increased the age limit in this industry.

VAN W.

Department of Surgery.

In Charge of DR. F. A. LARUE, New Orleans.

SUPRACLAVICULAR ANESTHETIZATION OF THE BRACHIAL PLEXUS.
—(Neil and Crooks, *British Medical Journal*, 1913, 1, 338.) The area into which the solution is injected is bounded internally by

the subclavian artery, externally by the clavicle and below by the first rib. The position of the subclavian artery is made out by palpation, and the puncture made just external to the artery. The site of the puncture is usually just internal to the point at which the external jugular vein joins the clavicle, except in those cases in which the artery lies further out than usual, in which the puncture must be made external to this point. The needle is inserted backward, downward and inward in a direction to strike the upper surface of the first rib, and the plexus is encountered just before the rib is reached. Paresthesia in the arm and hand is the signal that the nerve is properly reached, and thereupon the syringe is attached and 20 c. c. of a 2 per cent. solution of novocain with adrenalin is injected. Until paresthesia is definitely obtained, the solution should not be injected, and it is important to remember that when the rib is touched by the needle it is too far in to reach the plexus and should be withdrawn. There is no pain except for the skin puncture, the paresthesia not being severe, and alterations in the positions of the needle not being accompanied by pain.

The following points must be strictly adhered to:

(1) Paresthesia must be obtained before injection is made.

(2) Injection is of a 2 per cent. novocain solution, 20 C. C. in amount. Any solution injected *near* the plexus before parasthesia is obtained is likely to interfere with obtaining this paresthesia, and so prevent localization of the plexus.

(3) Sufficient time must be allowed for anesthesia to take place. Usually five to fifteen minutes, but thirty minutes may be required.

This form of blocking is free from danger, but the following objections have been raised to it:

(1) The risk of injuring the subclavian artery: This should be avoided, as the artery is easily palpable. Puncture of the artery by a fine needle produces no ill effects.

(2) Injury to the pleura, and injection of solution into the pleural cavity: This is avoided if the needle be not carried deeper than the first rib.

(3) Possibility of paralysis of the nerve trunks of the arm as a result of the injection: There is only one case of this on record. In this there was paresis of the musculo-spiral, ulnar and median nerves, which lasted a few weeks.

Conditions for which this method of analgesia is indicated may be said to be practically all lesions, mechanical and infectious, to

which the hand, forearm and that part of the arm supplied by the plexus below the point of injection is subject. Fractures, cellulitis, sequestrotomy, plating of bones of forearm, reduction of dislocation of shoulder. The authors enumerate 40 cases, which need not be cited in detail.

WILLIAMS.

THE EFFECT OF THYROID EXTRACT ON THE BLOOD PRESSURE AND ISOLATED HEART.—(Grube, *Russk. Vrach. From International Abstract Surgery*, June, 1913, page 483.) "The author experimented on dogs, into the veins of the neck of which he injected the extract of the healthy thyroid and toxic extracts of exophthalmic goiters, in doses of 0.5 of extract for each KG. The experiments on the isolated hearts were done with the apparatus of Borschadow in solutions of the extract of 1 in 500. He came to the following conclusions: The extract of the thyroid produces lowering of the blood pressure in most cases. It produces an increase in the height of the peripheral pulse and also the rate of the pulse. The reduction of the blood pressure is dependent in a large measure upon the diminution of the tonus of the vessels and dilation of the peripheral vessels. On the isolated heart the extract of the thyroid increases the pulse rate in most cases and increases the height of the pulse wave. The degree of the effect of the extract upon the blood pressure can be brought into relation clinically with height of the pulse wave. The degree of the effect of the extract of the healthy thyroid on the blood pressure of animals into the abdominal cavity of which a thyroid enucleated from a diseased animal was introduced give rise to the opinion of an increased sensibility to thyroid toxins. The condition resulting reminds one of the appearance of anaphylaxis. This probably explains the effect of even small doses of thyroid extracts on patients suffering with toxic goiter."

J. F. Perey, of Galesburg, Illinois, in a paper read before the last meeting of the A. M. A., spoke of the good effect of thyroid extracts in preparing patients, the subjects of high blood pressure, for operations. He stated that the results were practically uniform, in that a decided reduction of pressure was obtained. The writer (abstractor) has tried this on five cases, all of interstitial nephritis and with blood pressure above 210 in each instance, and has seen very marked effects in each instance. In view of our handicap in the treatment of this condition the subject would seem to be of more than passing importance.

WILLIAMS.

THE MALIGNANCY OF GIANT-CELLED SARCOMA.—J. Clark Stewart, M. D. (*Surgery, Gynecology and Obstetrics*, July 1913, Vol. XVII, No. 1, page 30): The sarcoma matrix in which the giant cells lie is the essential element in this tumor, and is responsible for its clinical features. This is usually of a spindle or mixed-celled type." . . . "There has been a good deal of writing lately to show that these tumors are not malignant, and statements are freely made to show that they never form metastases, and possess but limited malignancy." The author cites two cases which came under his personal observation to show that giant-celled sarcoma is malignant, though they are of slow growth and delayed malignancy. These tumors occur in relation to bones as either periosteal or central growths. One of his cases, in a male 35 years of age, developed a small tumor at the base of the great toe. A tumor subsequently in the tibia. The leg was amputated above the second tumor, and the external saphenous vein was plugged with sarcoma at the site of amputation. The tibial tumor was central and had caused a pathologic fracture. The patient died after a few months with local recurrence and a metastatic tumor in the brain. The tumor was a giant-celled sarcoma, containing many large giant cells in a mixed-celled matrix with many narrow cells.

The second case was in a male with a tumor of the humerus, which followed a fracture which failed to unite. Sarcoma was diagnosed and the arm amputated at the shoulder. Recurrence was prompt and death ensued within six months. The tumor was a giant-celled sarcoma, which had destroyed the bone from four inches below the shoulder to within two inches of the elbow. Muscular tissue was deeply infiltrated. The microscope showed giant-celled sarcoma with spindle-celled matrix. The author further says: "It must always be remembered that a giant-celled sarcoma is only a sarcoma containing giant cells, and its malignancy depends upon the character of the sarcoma matrix. The most usual type of matrix is spindle-celled, hence these tumors are slow-growing and less malignant than many other types of sarcoma. The cases cited in this paper, while few in number, certainly prove malignancy, and one fatal case is enough to disprove all theories of non-malignancy." WILLIAMS.

Medical News Items.

THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA will hold its fourth annual session, Chicago, November 10 to 15, 1913. General headquarters of the Congress will be at the Hotel La Salle, where the eighteenth and nineteenth floors have been reserved for the Registration Rooms, Bulletin Rooms, etc. Headquarters for the Section on Surgery of the Eye, Ear, Nose and Throat will be at the Hotel Sherman. At each of these headquarters the daily clinical program will be bulletined one day in advance. On each evening of the week except Saturday there will be scientific sessions and on Tuesday, Thursday and Friday evenings there will be separate meetings for those especially interested in surgery of the eye, ear, nose and throat and mouth. Prominent European and American surgeons have been invited to read papers and exceptionally attractive programs have been arranged. An interesting program is announced and from 2,500 to 3,000 visitors are expected.

ASCENSION PARISH ORGANIZES.—The Ascension Parish Medical Society was organized on September 26, at a meeting of physicians. The following officers were elected: Dr. E. K. Sims, of Donaldsonville, president; Dr. R. M. Smith, of Gonzales, vice-president; Dr. A. W. Martin, of Donaldsonville, secretary-treasurer. The next meeting of the Society will be held at the Hotel Donaldson on the fourth Sunday of November.

SHREVEPORT MEDICAL SOCIETY ADOPTS RESOLUTIONS.—The Shreveport Medical Society at its September 2 meeting adopted the following resolutions:

“Whereas, it is desirable that the House of Delegates of the Louisiana State Medical Society should represent the sentiment of the profession of the State; and,

“Whereas, the present method of accrediting delegates often results in the failure of parish societies to have representation in the House of Delegates, even with presidents and other members in good standing present; therefore, be it

“Resolved, by the Shreveport Medical Society in regular session convened, That it is the sense of this Society that the accompanying amendment to the by-laws of the Louisiana State Medical Society be adopted at the next session of the House of Delegates, and that the delegates from this Society be instructed to work to that end.

“Be it further resolved, That a copy of this resolution and a copy of the proposed amendment be mailed to the president and secretary of the State Medical Society, to the New Orleans Medical Journal, New

Orleans, La., and to each parish medical society, with the request that similar resolutions be adopted by them, and that their delegates be instructed to work for the adoption of the proposed amendment."

The resolutions, as finally adopted unanimously, are as follows:

"Be it Resolved by the House of Delegates of the Louisiana State Medical Society, in regular session convened, That Section 12, of Chapter XII, of the By-Laws of this Society be amended so as to read as follows:

"At some meeting in advance of the annual session of this Society each parish society shall elect a delegate or delegates, and alternates, to represent it in the House of Delegates of this Society, in the proportion of one delegate and alternate to each twenty-five members, or fraction thereof, and the secretary of the society shall send a list of such delegates and alternates to the secretary of this Society at least ten days before the annual session.

"Should any delegate or alternate so elected to represent any parish society fail to attend any meeting, it shall be the duty of the president of such parish medical society, or in his absence the vice president thereof, to appoint an alternate or alternates in writing or by telegraph."

TOURO INFIRMARY HOLDS MEETING.—A clinical meeting of the Medical Staff of Touro Infirmary was held October 8, with presentation of cases.

SCHOOL FOR HEALTH OFFICERS.—Harvard University and the Massachusetts Institute of Technology announce a school for public health officers. The facilities of both institutions are to be available to students in the school and the certificates issued are to be signed by the president of both institutions. The object of the school is to prepare young men for public health work. The Administrative Board which will conduct the new school is composed of Professors Wm. T. Sedgwick, of the Massachusetts Institute of Technology; Professor Milton J. Rosenau, of Harvard, and Professor Geo. C. Whipple, of Harvard. Professor Rosenau, of Harvard, has the title of Director, and the work of the school will be under his immediate supervision.

LISTS OF CHIEFS OF SERVICE AT CHARITY HOSPITAL.—The following is a list of Chiefs of Service at the Charity Hospital:

Surgical Division.—Drs. R. Matas, F. W. Parham, H. B. Gessner, J. Smyth, E. D. Martin, F. A. Larue, J. A. Danna, S. W. Stafford, J. M. Batchelor.

Medical Division (including Neurology).—Drs. John B. Elliott, Jr., J. T. Halsey, Geo. S. Bel, C. Wellman, G. F. Patton, J. M. Elliot.

Gynecological and Obstetric Division.—Drs. P. Michinard, S. M. D. Clark, C. Jeff Miller, Wm. Kohlmann.

Genito-Urinary Division.—Drs. C. Chassaignac, Jos. Hume, A. Nelken.

Ear, Nose and Throat Division.—Drs. C. J. Landfried, H. Dupuy, O. Joachim.

Eye Division.—Drs. M. Feingold, T. J. Dimitry.

Skin Division.—Drs. Isadore Dyer, H. E. Menage, J. N. Rous-
sel.

Division of Children's Diseases (Medical).—Drs. W. W. Butterworth, L. R. DeBuys, C. A. Borey.

Orthopedics and Surgical Diseases of Children.—Drs. E. D. Fenner, J. F. Oechsner, E. S. Hatch.

AMERICAN MEDICAL ASSOCIATION DECISION.—In the case of G. Frank Lydston versus the State's Attorney, Cook County, Ill., the Appellate Court handed down the opinion on October 9, 1913, that the A. M. A. is holding meetings contrary to law, that its elections and its delegate system are illegal, and that each and every member is entitled to a direct vote. Unless the Supreme Court reverses the decision this means that for nearly fifteen years the A. M. A. has been conducting its business illegally and will necessitate a complete reorganization of the A. M. A. The points decided by the Court in Dr. Lydston's favor were embodied in the famous "Reform" resolutions which he attempted to present to the Illinois State Medical Society several years ago. Dr. Lydston succeeded in getting a hearing in the courts which he did not get elsewhere.

ALVARENGA PRIZE.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about \$180, will be made on July 14, 1914, provided that an essay deemed by the Committee on Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by the secretary of the college on or before May 1, 1914.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the college; other essays will be returned upon application within three months after the award.

CHANGES IN THE ARMY MEDICAL SCHOOL.—Many changes in the Army Medical School are involved in orders issued by the War Department on September 9. Col. Walter D. McCaw and Major Chas. R. Reynolds are relieved from further duty at the school. Lieut.-Col. Champe C. McCullough, Jr., is assigned to duty as professor of military and tropical medicine; Lieut.-Col. Jas. D. Glennan as professor of Medical Department administration; Major Eugene R. Whitmore as professor of bacteriology, pathology and clinical diagnosis, and Capt. M. Talbott as assistant-professor of ophthalmology.

THE GOVERNORS OF THE NEW YORK SKIN AND CANCER HOSPITAL announce that Dr. L. Duncan Bulkley will give his annual clinical lectures on diseases of the skin beginning November 5, 1913. The lectures will be free to the medical profession, on the presentation of their professional cards.

TYPHOID FEVER IN ST. LOUIS.—During the month of August, 1913, there were reported to the Department of Health 172 cases of typhoid fever, and during the first five days of September 72 cases, making a total of 244 cases reported from August 1 to September 5.

UNIVERSITY BUREAU FOR CHILD WELFARE.—A department of child welfare, said to be the first of its kind established in an educational institution in the United States, was inaugurated formally in the University of Kansas on October 8, 1913, with Prof. Wm. A. McKeever at its head. The object of the department is to give instruction in child welfare work, to arrange for healthful vacation employment for city school boys, to organize parents', teachers' and civic improvement associations that will look after the welfare of children in small towns, and the establishment of playgrounds and social centers.

NEW TULANE INFIRMARY.—Dr. Robert Sharp, president of Tulane University, has announced that the infirmary of the University will be housed in a building on the Newcomb wing of the campus. The infirmary is receiving special attention, as a place of

isolation is of greatest necessity should any contagious diseases appear among the students. Provision will also be made for consultation treatment of sick students. The University is in need of funds to do the infirmary full justice, but it will be equipped as far as possible with the money at hand.

REQUESTS TO TULANE MEDICAL DEPARTMENT, CHARITY HOSPITAL AND TOURO.—As a testimonial to the memory of his deceased son, Fergus Sidney Lee, who was a student at Tulane University, Mr. Fergus G. Lee leaves \$200 to Tulane Medical Department, and \$100 each to the Charity Hospital and the Touro Infirmary.

NEW YORK TYPHOID DUE TO BAD MILK.—One hundred and forty-seven cases of typhoid fever from the 1st to the 18th of September was reported as existing on the East Side and were traced to infected milk. The epidemic was one of the most virulent with which the health officers ever had to contend.

TUBERCULOSIS IS STATE CAMPAIGN.—The Louisiana State Tuberculosis Commission has been organized, with Dr. Oscar Dowling president. The members who will constitute the board and their positions are: Gov. Luther Hall, ex-officio; Dr. Wm. M. Perkins, secretary-treasurer, and Attorney-General Ruffin G. Pleasant. The commission is under the general supervision of the Board of Health, and has appropriated \$100 for the initial expenses. It has opened up a subscription fund and will work in league with the Louisiana Anti-Tuberculosis League and generally make an effort to stop the dreaded disease as far as possible.

PERSONALS.—Drs. Dimitry and Larose have formed a partnership and are located at 729 Maison Blanche building, for practice in diseases of the eye.

Dr. Wm. C. Patton has resumed practice and is located at 1109 Maison Blanche building. His practice hereafter will be limited to ear, nose and throat.

Dr. R. E. Swigart, medical superintendent of the United Fruit Company, has been transferred to the New York division of this company.

REMOVALS.—Dr. M. Cappel, of Alexandria, La., to Presbyterian Hospital, New Orleans (House Physician).

Dr. W. A. Cole, from North Zulich, Tex., to Normangee, Tex.

Dr. J. H. McClendon, from Hammond, La., to Amite, La.

Dr. P. B. Wilson, from Sneed, Fla., to 841 N. Rampart, New Orleans.

Dr. W. E. Graves, from 2112 Tulane Avenue, to 1440 Magazine Street.

Dr. L. R. DeBuys, from 1126 Maison Blanche building, to 1122 Maison Blanche.

Dr. R. T. Perkins, from 1135 Fern Street, to 602 Perrin building.

Dr. Isaac Erwin, from Cusach's building, to 1232 Maison Blanche building.

Dr. Mayer Newhauser, from Louisiana State Board of Health to 2121 Peters Avenue.

Dr. H. W. E. Walther, from 509 Machecca building to 410 Machecca building.

Dr. H. E. Nelson, from Hotel Dieu, to 411 Machecca building.

Dr. D. Fred Waide, from Audubon building, to 312 Machecca building.

Dr. F. J. Kinberger, from 609 Machecca building to 317 Machecca building.

Dr. M. S. Picard, from 1014 Robert Street, to 1539 Louisiana Avenue.

Dr. T. J. Dimitry, from 714 Audubon building to 729 Maison Blanche building.

Dr. J. G. Harz, from 822 Nashville Avenue, to 500 Nashville Avenue.

Dr. J. A. Danna, from Charity Hospital, to 714 Maison Blanche building.

Dr. C. G. Cole, from Charity Hospital, to 1109 Maison Blanche building.

Dr. S. W. Stafford, from Charity Hospital, to 604 Machecca building.

Dr. T. J. DeGrange, from 1636 Berlin Street, to 706 Machecca building.

Dr. L. M. Provosty, from 708 Audubon building, to 729 Maison Blanche building.

Dr. L. B. Crawford, from 741 Carondelet Street, to Charity Hospital.

Dr. L. A. Fortier, from 105 Medical building, to Charity Hospital.

Dr. W. B. Chamberlin, from Cusachs' building to Charity Hospital.

Dr. A. Nolte, from 200 Medical building, to 1213 Maison Blanche building.

Dr. E. F. Bacon, from 704 Audubon building, to 715 Maison Blanche building.

Dr. G. A. Maediarmid, from 704 Audubon building, to 715 Maison Blanche building.

Dr. A. Weber, from 714 Audubon building, to 715 Maison Blanche building.

Dr. W. H. Robin, from 714 Audubon building, to 715 Maison Blanche building.

Dr. Geo. S. Brown, from 2901 Prytania street, to 1329 Josephine Street.

Dr. J. B. Hart, from 1305 St. Andrew Street, to 4037 Prytania Street.

MARRIED.—On October 14, 1913, Dr. Stephen John Sougy, of Wallace, La., to Miss Helen Roche, of Alexandria, La.

DIED.—On September 30, 1913, Dr. W. W. Watkins, of Aberdeen, Miss., aged 63 years.

On October 11, 1913, Dr. Stewart L. Henry, of New Orleans.

On September 29, 1913, Dr. Charles Eugene Michel, of St. Louis, Mo., physician in the Confederate Army, who attended General Albert Sidney Johnson when he was mortally wounded.

On October 8, 1913, Dr. Charles Francis Richardson, of Lisbon, N. H., aged 62, professor emeritus of English at Dartmouth College.

On September 23, 1913, Dr. Joshue Hering, of Baltimore, Md., until recently a member of the State Public Service Commission, aged 80 years.

On September 30, 1913, Dr. Reginald Heber Fitz, of Boston, Mass., professor emeritus of theory and practice of physie at Harvard medical school, aged 70 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

The Modern Treatment of Nervous and Mental Diseases. By American and British Authors. Edited by William A. White, M. D., and Smith Ely Jelliffe, A. M., M. D., Ph. D. Lea & Febiger, Philadelphia and New York.

It seems but yesterday that we extolled the valuable features of the first volume of this work, and to-day we welcome with pleasure the early publication of this the second and last volume, which contains fifty plates, nearly one hundred illustrations and 800 pages of text. The seventeen chapters represent as many valuable monographs wherein the contributors present to the reader in a concise and yet explicit manner the most recent views on the etiology, symptomatology, pathology, diagnosis, and particularly the treatment of the diseases discussed.

The limited scope of a review will not allow a detailed discussion of this excellent work. It is the reviewer's opinion, however, that the practitioner will find here the latest views and modern therapeutic methods employed in the treatment of the neuralgias and neuritides; of injuries to the peripheral nerves; of the muscular atrophies and dystrophies; of headaches; of spasmodic disorders; of the epileptics; of the meningitides; of the syphilitic diseases of the nervous system. Also the use of salvarsan and neo-salvarsan in diseases of the nervous system. The treatment of cerebral hemorrhage, embolism and thrombosis; of disorders of expression (aphasia, aproxia, etc.); of stuttering; of diseases of the cranial nerves and organic lesions of the spinal cord; of diseases of the optic thalamus, mid-brain and cerebellum; of paralysis agitans and multiple sclerosis; of the toxemias of dangerous trades and of drugs, and finally the surgery of the brain and spinal cord.

CAZENAVETTE.

A Reference Handbook of Gynecology for Nurses. By Catherine MacFarlane, M. D. W. B. Saunders Company, Philadelphia, 1913.

This is an excellent little volume of 155 pages and of convenient size, in which is described in a condensed form the technic of gynecologic operations, the instruments necessary and the post-operative treatment of wounds. In the present edition, the principal changes pertain to the details of the technic and the after-cure of major surgical operations. The illustrations are well selected and executed.

MILLER.

The Modern Hospital; Its Inspiration; Its Architecture; Its Equipment; Its Operation. By John A. Hornsby, M. D., and Richard E. Schmidt. 644 Pages. W. B. Saunders & Co., 1913.

The last word in hospital management and make up has not been uttered, but for a vast amount of information directed at almost every phase of the hospital, the work in review is a competent purveyor.

First of all, the book is presented by one of the most prominent

of modern authorities on hospitals, and he has been aided by an architect, experienced in hospital construction.

The result of this combination is a work of magnitude dealing with every item in a hospital plan, from the material makeup of the building, its detail in spacing, provisions of equipment, cost and maintenance as well as the commissary and supervision.

From the nursing staff to the superintendent, from the extern to the visiting staff, every phase of management is considered in particularity.

There are over six hundred pages in the book and between the covers there is full and direct information on almost every point which could be discussed in a modern hospital and its management.

This book fills a long want and it will be a long time again before anything like it will be written, for thoroughness and breadth of information.

DYER.

Progressive Medicine. Vol. XV, Nos. 1, 2 and 3. Edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. Lea & Febiger, Philadelphia and New York.

These volumes of this now established reference review of medicine and surgery contain a mass of valuable material, bringing up to date the information on the various divisions of medical and surgical practise and research. Number 1 contains chapters on surgery of the head, neck and thorax (Frazier); on infectious diseases (Ruhrah); on diseases of children (Crandall); on rhinology and laryngology (J. B. Wood); otology (Duel). We note extended reference to Bass and Johns' work on the plasmodium malariae, in this number.

Number two carries an article by Coley on hernia; by Gerster on surgery of the abdomen; by John G. Clark on gynecology; by Stengel on diseases of the blood, and by Edward Jackson on ophthalmology.

The third number of the current year has articles by Ewart (diseases of the thorax); Gotthiel (dermatology and syphilis); Edward P. Davis (obstetrics), and Spiller (diseases of the nervous system).

In this catalog of reviews the subjects cover a large field and the material offered is cyclopedic in its scope, affording a collection of modern views on every topic of importance discussed in recent medical literature.

DYER.

Lang's German-English Dictionary of Terms Used in Medicine and the Allied Sciences. Second Edition, Edited and Revised by Milton K. Myers, M. D. P. Blakiston's Son & Co., Philadelphia, 1913.

Something like 50,000 words are given in this word book, including over four thousand more recent terms of medical and scientific usage. The type is bold and clean and the arrangement of the matter is excellent for ready reference. To all who need clear definition of German terms this book must come as a useful adjunct for ready use.

DYER.

Private Duty Nursing. By Katherine DeWitt, R. N. J. B. Lippincott Company, Philadelphia and London.

"The time has come in the development of nursing education when we need books on special branches of nursing rather than more general text-books." So begins the introduction of this little book and no better way of indicating its usefulness could be suggested than by quoting this aphoristic sentence.

The book itself is full of timely advice and the ethics which appertain to the nurse's conduct in the home of the patient. Every nurse before and after graduation should read and digest this book.

Besides the discussion of the nurse's conduct, there are many practical suggestions on the little things which the nurse should do, both as her duty and as her privilege. Altogether the book is really worth while.

DYER.

When to Send for the Doctor and What to do Before the Doctor Comes.

By Frieda E. Lippert, M. D., and Arthur Holmes, Ph. D. J. B. Lippincott Co., Philadelphia and London.

A handy volume for the household of any intelligent layman. Contains many appropriate suggestions for every day practise. Includes practical and descriptive matter dealing with common accidents and emergencies at home and abroad. A final chapter on poisons, accidents and the things to do is well presented.

In the education of the public this little book has a place.

DYER.

Surgery of the Eye. By Ervin Török, M. D., and Gerald H. Grout, M. D. Lea & Febiger, Philadelphia and London, 1913.

A clear text, written in an authoritative style and elucidated with over 500 illustrations, all practical and directly applicable to the descriptive matter. Presented so as to be a guide to the surgeon in eye work. Worthy of an extensive, technical review.

DYER.

Insurance Medicine. By Henry H. Schroeder, M. D. Wm. Wood & Co., New York.

This brochure is a welcome guide for the insurance examiner and should find its place among the reference books of the practitioner, young or old, who is in life insurance work.

It goes beyond the mere detail of customary routine and engages in the discussion of many phases which confront the examiner in life insurance work.

DYER.

Mechanical Treatment of Abdominal Hernia. By Wm. Burton DeGarmo, M. D. J. B. Lippincott Co., Philadelphia.

“This little book is intended as a guide in the selection and fitting of trusses, and especially as an aid to those who have no interest in the surgical side of the subject.”

The above words are quoted from the preface of this book and clearly indicate its purpose. Though written especially for the use of truss fitters, it is as valuable to practitioners. Notwithstanding the fact that hernia is curable to-day and the percentage of non-operable cases is practically nil, there are laymen who prefer a truss with all its drawbacks and inconveniences to a short operation. The author deserves credit for the manner in which he has treated the whole subject. The chapters on the treatment of hernia in infancy is one which should be read by every surgeon, it deals with the subject in detail and points out minutely the causes of failure in so many cases.

Any one familiar with the subject must read this chapter with great interest and will probably be able to account for many of his own failures. The fitting of trusses is purely mechanical, but a very small number of surgeons have any mechanical sense and what they have is acquired by hard study and repeated failures. Read DeGarmo's book, it is worth while and will help both doctor and patient. It is especially valuable to any man who makes a business of fitting trusses and is written in such language that any layman can read and understand.

MARTIN.

Surgical Clinics. J. B. Murphy, M. D. W. B. Saunders, & Co., Philadelphia.

Vol. 1, No. 5. October, 1912. This volume contains lectures on Anesthesia at Clinic, Nephrolithiasis, Cholecystitis, Gastro-Duodenal Ulcer, Appendiceal Abscess, Chronic Adhesions Emulating Recurrent Appendicitis, Exophthalmic Goitre, Traumatic Lesions of the Brain, Trifacial Neuralgia, Tumor of Spinal Cord, Chronic Mastitis, Recurrent Ovarian Cyst-Sarcoma, Retroversion of Uterus, Rectocele and Perineal Lacerations, Ununited Fracture Shaft of Humerus, Ostitis Fibrosa Cystica of Right Humerus, Ankylosis of Left Elbow, Ankylosis of Right Hip Joint. The object in repeating the index to this volume as the reviewer has always done, is to give the reader a better insight into the contents of the book and the subjects. Each lecture is treated in Dr. Murphy's own impressive style, anyone familiar with his teachings, who has ever attended his clinics, can easily recognize the genuineness of the lectures. Each is a masterpiece in itself, not only rich in substance, but precise in technic, and like those which have come before, a monument to his skill and versatility. MARTIN.

Surgical Clinics. By John B. Murphy, M. D. W. B. Saunders & Co., Philadelphia.

Vol. I, No. 6. In this, the last number of the first volume, we find lectures on Carcinoma of the Breast; Improvement in the Treatment of Malignant Tumors With Radio-Active Substances; Salpingitis; Metastatic Gonorrhoeal Arthritis of the Knee; Ankylosis of the Elbow; Fracture of Patella; Ununited Fracture of Femur; Fracture of Internal Semi-lunar Cartilages; Splitting Fractures of Anterior Half of Lower End of Tibia; Ununited Fracture of Humerus; Tenoplasty for Obstetric Palsy; Ankylosis of the Tempero-Maxillary Joints, etc. The value of this volume will be seen at a glance. It is largely devoted to fractures, but this in itself adds to the interest of the work for in this work Murphy probably leads American surgeons. Whereas many of the subjects have been repeated during the year so far as the titles are concerned, each has been differently treated to meet the special conditions prevailing and each is a masterpiece in itself. The first volume has been completed and the work so well done, meeting the present day requirements of teaching and so far excelling the conventional text-book style that there can be no question of the continued success of this work and it is to be hoped that Dr. Murphy will allow the printing of these lectures to be continued so long as he has something good and new to talk about.

MARTIN.

The Narcotic Drug Diseases and Allied Ailments. By Geo. E. Pettey, M. D. Illustrated. F. A. Davis Company, Philadelphia, 1913.

The author impresses the reader with the necessity of considering the narcotic drug diseases as belonging to the realm of internal medicine, giving as his reason that while it is true that many nervous manifestations attend the use of narcotics, and especially the disuse of narcotics by those who are habituated to their use, still the condition is not in any sense a true neurosis, but it is purely and solely a toxemia of drug-auto and intestinal origin and as such belongs to the field of internal medicine. The reviewer is of opinion that it has best be considered as a borderline condition between neurology and internal medicine.

The subject is presented in 26 chapters, covering over 500 pages. In the first chapter the history, definitions, pathology and etiology are dis-

cussed. In the second, the symptoms indicating not only the use of opiates, but also the deprivation of the accustomed drugs are gone over very carefully and minutely. In the following twelve chapters the treatment of narcotic drug diseases is gone over very thoroughly. Here, again, the author presents this phase of the subject with all its intricate and attending circumstances in a most instructive manner. He gives most probable indications for the use of remedies employed in such conditions, mentioning the exact dosage and time when each should be used. The value of physical training and diet forms a valuable part of the treatment. Mention is made of some reasons for the past failures with treatment of morphinism. The value of institutional control is paramount.

A most valuable chapter is that devoted to the treatment of acute ailments occurring in persons addicted to the habitual use of narcotic drugs.

Four chapters are devoted to the Review of Literature, both foreign and American. The remaining chapters contain a discussion of the cocaine habit treatment and prognosis, and last but not least, chronic alcoholism symptom and treatment.

This book should fill a valuable want in every doctor's library.

CAZENAVETTE.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1913.

"Obstetrics," by W. P. Manton, M. D. Second edition, revised and enlarged, including list of State Board Examination Questions.

"Protein Split Products—Relation to Immunity and Disease," by Victor C. Vaughan, M. D., LL. D.; Victor C. Vaughan, Jr., A. B., and J. Walter Vaughan, M. D., A. B.

"Minor and Operative Surgery, Including Bandaging," by Henry R. Wharton, M. D. Eighth edition, enlarged and thoroughly revised.

"Manual of Otology," by Graham Bacon, A. B., M. D. Sixth edition, revised and enlarged.

"Principles and Practice of Gynecology," by E. C. Dudley, A. M., M. D. Sixth revised edition.

"Diseases of Women," by Palmer Findley, B. S., M. D.

W. M. LEONARD, Boston, 1913.

"Studies Concerning Glycosuria and Diabetes," by Frederick M. Allen, A. B., M. D.

REBMAN COMPANY, New York, 1913.

"The Doctor in Court," by Edwin Valentine Mitchell, LL. B.

"Diagnosis of Malignant Tumors of the Abdominal Viscera," by Prof. Rudolph Schmidt. Authorized English version by Joseph Burke, Se. D., M. D.

CRITIC AND GUIDE COMPANY, New York, 1913.

"Treatment of Sexual Impotence," by Wm. G. Robinson, M. D.

P. BLAKISTON'S SON & CO., Philadelphia, 1913.

"The Microtometist's Vade-Mecum," by Arthur Bolis Lee. Seventh edition.

C. V. MOSBY COMPANY, St. Louis, 1913.

"The Diseases of Children," by Henry Enos Tuley, M. D. Second revised edition.

W. B. SAUNDERS & CO., Philadelphia and London, 1913.

"Essentials of Prescription Writing," by Cary Eggleston, M. D.

"Obstetrics for Nurses," by Joseph B. Delee, A. M., M. D. Fourth edition, thoroughly revised.

"Diet in Health and Disease," by Julius Friedenwald, M. D., and John Ruhrah, M. D.

"The Elements of Bacteriological Technique," by J. W. H. Eyre, M. D., M. S., F. R. S. Second edition, rewritten and enlarged

"A Clinical Manuscript of Mental Diseases," by Francis X. Dercum, M. D., Ph. D.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1913.

"International Clinics." Volume III, twenty-third series.

"Surgery of the Vascular System," by Bertram M. Bernheim, A. B., M. D.

MISCELLANEOUS.

"Medical and Surgical Reports of the Hospital of the Protestant Episcopal Church in Philadelphia." Volume I. (Press of Wm. J. Doran, Philadelphia. 1913.)

"Illustrated Catalog." (P. Blakiston's Son & Co., Philadelphia, 1913.)

"Public Health Reports," Volume XXVIII. Nos. 37, 38, 39, 40 and 41.

"Report of the Department of Sanitation of the Isthmian Canal Commission for the Month of July. 1913."

"A Model State Law for Morbidity Reports." (Washington Government Printing Office. 1913.)

"Digest of Comments of the Pharmacopoeia of the United States of America," by Murray Galt Motter and Martin I. Wilbert. (Washington Government Printing Office, 1913.)

"Second Report of the Commission on Milk Standards." (Washington Government Printing Office. 1913.)

"Bulletin of the State Board of Health of Kentucky." (Kentucky State Journal Publishing Co., Frankfort.)

"The Institution Quarterly of Springfield, Ill." June 30. 1913.

"The Handbook of the Mental Hygiene Movement and Exhibit." (Published by the National Committee for Mental Hygiene, New York City.)

"Proceedings of the Mental Hygiene Conference and Exhibit," November 8 to 15, 1913.

"Ophthalmic Literature." (Published by Edward Jackson, Denver, Col.)

"Studies Upon Leprosy." (Washington Government Printing Office, 1913.)

"Semi-Annual Report and Mortality Statistics of Shreveport, La." (Caucasian Printing Co., Shreveport.)

Reprints.

“Sewerage Pollution of Interstate and International Waters, With Special Reference to the Spread of Typhoid Fever; The Missouri River From Sioux City to Its Mouth,” by Allan J. McLaughlin. (Washington Government Printing Office, 1913.)

“An Investigation of the Prevalence of Trachoma in Minnesota,” by Taliaferro Clark. (Washington Government Printing Office, 1913.)

“Outbreak and Suppression of Plague in Porto Rico,” by Richard H. Creel. (Washington Government Printing Office, 1913.)

“The Rat—A Sanitary Menace and An Economic Burden,” by R. H. Creel. (Washington Government Printing Office, 1913.)

“Thymol Administration,” by Chas. Wadell Stiles and Hal F. Boatwright. (Washington Government Printing Office, 1913.)

“Pellagra,” by C. H. Lavinder.

“Rocky Mountain Spotted (or Tick) Fever. by L. D. Fricks.

“A New Design for a Sanitary Pail,” by Victor G. Heiser.

“Fumigation of Vessels for the Destruction of Rats,” by C. B. Grubbs and B. E. Holsendorf.

“Shower Bath for Country Houses,” by Carroll Fox.

“Medical Inspection of Schools,” by J. W. Schereschewsky, S. U. P. H. S.

“A Febre Bibliosa Hemoglobinurica; Paludismo. Variola. Tuberculose em Manaos,” by Dr. Alfredo A. Da Matta.

“Physical Observations Kromayerlamp. Tinsen Light, Ultraviolet Rays, ‘Alpine Sun Lamp’ (Quartz Lamp Radiation After the Bachnagel-Schmidt Modification of the Kromayer Mercury Vapor Lamp).” by Dr. Karl Wagner, of Graz.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.
FOR SEPTEMBER, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....	5	2	7
Intermittent Fever (Malarial Cachexia).....	1	3	4
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	1		1
Diphtheria and Croup.....	2	5	7
Influenza.....	1		1
Cholera Nostras.....			
Pyemia and Septicemia.....	2		2
Tuberculosis.....	32	37	69
Cancer.....	19	3	22
Rheumatism and Gout.....			
Diabetes.....	2	1	3
Alcoholism.....	1	1	2
Encephalitis and Meningitis.....	1		1
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	13	11	24
Paralysis.....	5		5
Convulsions of Infancy.....	1		1
Other Diseases of Infancy.....	13	9	22
Tetanus.....		5	5
Other Nervous Diseases.....	6		6
Heart Diseases.....	40	33	73
Bronchitis.....	1	5	6
Pneumonia and Broncho Pneumonia.....	12	13	25
Other Respiratory Diseases.....			
Ulcer of Stomach.....			
Other Diseases of the Stomach.....	3	5	8
Diarrhea, Dysentery and Enteritis.....	13	19	32
Hernia, Intestinal Obstruction.....	3	2	5
Cirrhosis of Liver.....	7	6	13
Other Diseases of the Liver.....	2	2	4
Simple Peritonitis.....		2	2
Appendicitis.....	4		4
Bright's Disease.....	23	29	52
Other Genito-Urinary Diseases.....	10	8	18
Puerperal Diseases.....	4	2	6
Senile Debility.....	5	2	7
Suicide.....	5		5
Injuries.....	15	22	37
All Other Causes.....	21	28	49
TOTAL	274	255	529

Still-born Children—White, 20; colored, 14. Total, 34.

Population of City (estimated)—White, 272,000; colored, 101,000.
Total, 373,000.

Death Rate per 1,000 per Annum for Month—White, 12.09; colored, 30.30. Total, 17.02.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmosphere pressure29.98
 Mean temperature78.
 Total precipitation11.84 inches
 Prevailing direction of wind, southeast.

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No. 6

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

REMOVAL OF A WIRE NAIL FROM THE STEM BRONCHUS TO THE LOWER LOBE OF THE RIGHT LUNG.*

By R. CLYDE LYNCH, M. D.,

Professor of Oto-Laryngology, Post-Graduate Medical School, Tulane University; Surgeon in Charge Ear, Nose and Throat Department, Eye, Ear, Nose and Throat Hospital;
Member American Laryngological, Rhinological and Otological Society;
American Academy of Ophthalmology and Oto-Laryngology.

Odessa May, four years old, while playing on the floor of her home, allowed a five-penny wire nail to slip into the trachea. Violent fits of coughing and dyspnea attracted the parents' attention to the accident, and relief was sought at once. She was taken to Beaumont, and from there to Houston and Galveston, where a tracheotomy was performed and many attempts made for its removal. She was then brought to Dr. E. D. Fenner, of New Orleans, with whom I saw the patient in consultation.

Dr. Fenner immediately procured a satisfactory X-ray plate. It showed the nail lying deep in the right lung, between the seventh and tenth ribs, and, with the aid of the Jackson positive overlay film of the bronchial tree, the nail was found to be located in the stem bronchus to the lower lobe of the right lung, with its head up,

apparently imbedded in the side of the bronchus and about one-half inch of its point end in one of the bronchiole offshoots.

A close study of the print will give an exact idea of its location, as was proved during the manipulations of removal. These films will surely aid to a considerable degree in the proper localization of foreign bodies, especially where they are of small size and find their way into the smaller branches of the stem bronchus. While the X-ray plate showed the nail to be located in the right lung, between the seventh and tenth ribs, it was a source of great satisfaction to have a more accurate picture of the nail in the bronchus, made possible by the Jackson films. Had I paid more attention to the detail of its location I would have removed the foreign body with more promptness. The film overlay shows the head of the nail lying obliquely in the stem bronchus, with the head pressing or being imbedded in one of its walls, instead of lying directly in the lumen. This was found to be accurate, for the scope was directed down past the nail for a distance of half an inch or more, as was shown by the fluoroscope during the process of extraction.

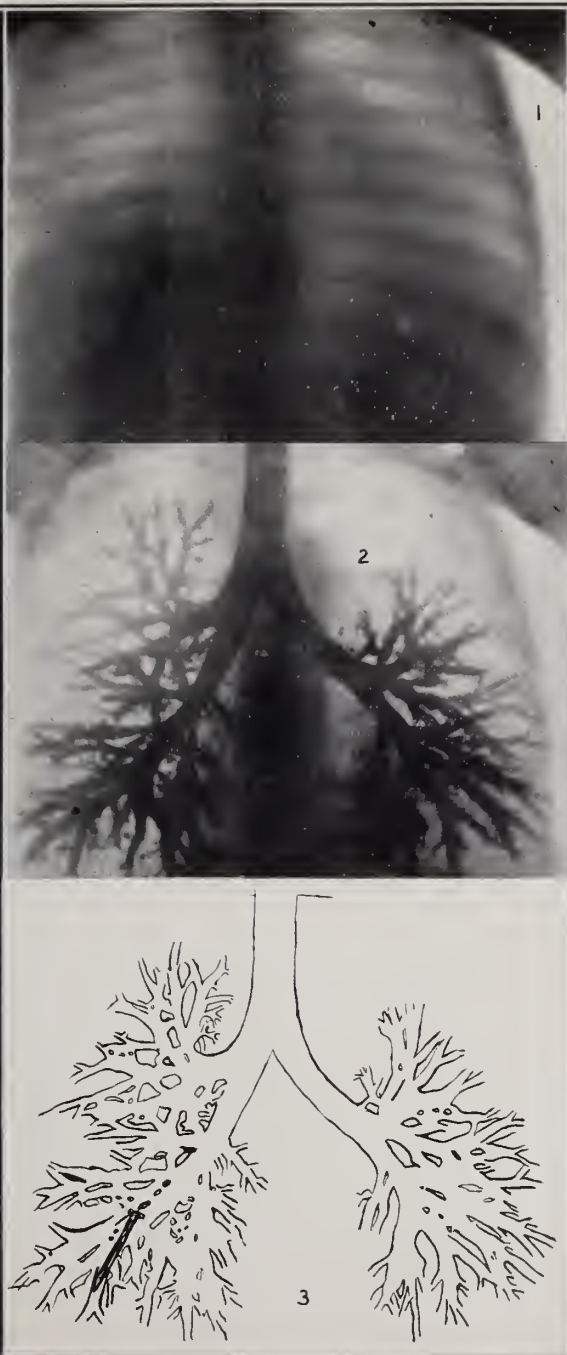
The nail had been in this position for seven weeks, though the child suffered but little; there was some loss of weight, due to previous manipulations. Except for some dullness over the lower lobe of the right lung, a few moist râles and an occasional flash of temperature, she gave no serious evidence of pulmonary involvement.

An attempt to remove the nail was made, but the smallest tube at my disposal was too large to enter the bronchus. This was a seven m. m. tube of the original Killian set.

Chagrined at this failure, I decided to prepare for the next attempt and take advantage of every aid possible at my disposal. I procured immediately the Killian baby set of bronchoscopes, with the five forceps accompanying. These tubes, six in number, range in sizes small enough to enter the smallest bronchus.

In order that I might follow the movements of the bronchoscope in its journey to the foreign body with the X-ray, I constructed a canvas cot, to be set on two wooden trucks, so that the X-ray tube could be placed beneath the cot and the fluoroscope used over the area under examination. I had the instrument-maker prepare for me a small steel rod long enough to pass through the scope and to be attached to our giant magnet, hoping that, if I were unable to catch the nail with the forceps, I might deliver it with the magnet.

The cot would then act as a stretcher and permit of the removal



ILLUSTRATING DR. LYNCH'S ARTICLE.

of the child with the bronchoscope *in situ*, without disturbing the position of the instrument, since the magnet is in one room and the X-ray in another.

Under general anesthesia (ether vapor), with Drs. Fenner and Logan assisting, and Dr. Henriques, special radiologist, in charge of the fluoroscope, I proceeded to enter the trachea through the low tracheotomy wound made previously in Texas. Using the No. 6 Killian tube, four m. m. in diameter, illuminated by a Brunning's handle, passing the bifurcation, I entered the right main bronchus to the upper lobe; I proceeded on down to the lower lobe. The fluoroscope, used at this instant, showed the instrument about one inch from the foreign body. Bleeding here was somewhat annoying and interfered with vision. Adrenalin on small cotton applicators controlled this very nicely and facilitated the passage of the bronchoscope down to the offending body. The fluoroscope showed the scope to be at the foreign body, though it could neither be seen through the tube or felt with a probe. The child was very carefully turned to the left lateral position, and in this position the scope was again seen to be on a plane with the nail. In this position the Killian tube passed through the mouth would not have been long enough to reach the foreign body, for the tip of the instrument was below the angle of the lower jaw, projecting not more than one inch beyond the low tracheotomy wound.

After biting away some granulation tissue, the nail could be felt with a probe, but many attempts with the forceps failed to grasp it. Under the direction of the radiologist, the forceps were opened, passed down beyond the head and closed, but they would not take hold, or they would slip off.

Since I was able to pass the bronchoscope beyond the nail, I felt sure the location, as shown by the Jackson film, was correct, so, withdrawing the tube to the proper point and deflecting its distal end slightly to the right, I was able to feel the nail perfectly.

We then carried the child to the magnet. The steel rod was passed down through the tube, and felt and heard it come in contact with the nail. With the rod in contact with the magnet the current was turned on and the rod was withdrawn. After two attempts at this, the forceps was tried again, this time using the small hook forceps intended for the removal of beans, etc. When these were used it felt as though the nail had been loosened from its bed and was lying free in the lumen of the bronchus. It was grasped

easily, and, since the head was too large to come through the bronchoscope, the instrument forceps and foreign body were removed at the same time.

Immediately following the delivery there was considerable bleeding, and our patient was practically awake from the anesthetic, so the cough reflex was active and she was able to free the trachea of this accumulation.

A tracheotomy tube was inserted and the patient stimulated and put to bed in a room previously warmed with benzoin steam. The room temperature was maintained at about 88° for forty-eight hours, then gradually cooled to air temperature. Chest was rubbed with oil of turpentine ($\frac{1}{6}$) every half hour until surface was red. The tube was guarded carefully, and the dressing changed frequently. In seventy-two hours all secretion had stopped; lung-sounds were clear; temperature was normal, and the tube was removed. Forty-eight hours later the tracheal wound was about closed, and in six days she left the hospital as cured.

I was impressed with the usefulness of the Jackson film in accurately locating this foreign body, with the great help afforded by the conjoined use of the X-ray and bronchoscope, and lastly, while I am a wee bit doubtful as to the part played by the magnet, I am sure that some change in the position of the nail occurred after its use, for I was able to feel the nail free in the lumen of the bronchus and to grasp it easily with the forceps now, when I had failed repeatedly before the use of the magnet. This magnet is an improved Haab, and its zone for attraction for bodies of this kind is about nine and three-fourths inches, as worked out by Dr. A. W. deRoaldes, who experimented considerably with this method and reported his results in 1899. Attaching the steel rod, thirteen inches long and one-eighth inch in diameter, to the magnet, the wire nail was started at three inches, so there may have been sufficient force exerted on the nail to at least loosen it from its bed, and thereby facilitate its removal by the forceps.

**SUPRAPUBIC INTRAURETHRAL PROSTATECTOMY.
REPORT OF A CASE.***

By F. C. WALSH, M. D., San Antonio, Texas.

Without entering into a discussion as to the relative merits of the two accepted methods for the removal of the hypertrophied prostate, the suprapubic and the perineal, I believe in making his choice the operator should be guided by two considerations: First, his experience with the respective operative technic; and, second his opinion as to which method affords the greater accessibility to the prostatic tumor, together with its conformation and possible complications—this opinion being based upon a careful examination, both rectal and cystoscopic. While occasional prostatitis are met with in whom the introduction of the cystoscope is impossible, the large majority are readily cystoscoped, the information thereby gained being of extreme value. I am of the opinion that the former consideration—that of greater familiarity of technic—should be the main factor in determining the method of approach, for even those cases in which, to the surgeon trained in both methods, one route shows marked advantages over the other, to the man unfamiliar with the method of election a better result is more sure of attainment by his adherence to that route with which he is the more familiar than an attempt to avail himself of the supposed advantages of a more or less unfamiliar operation.

During the past five years the suprapubic route has grown much in favor, and unquestionably the majority of surgeons, both at home and abroad, are employing this method. That the perineal operation is of value is fully appreciated by those experienced in prostatic surgery, and the tide of disfavor which has set in against this procedure is due to two causes: First, the brilliant results through a long series of cases obtained by Hugh Young, of Baltimore, served as a stimulus to others, who endeavored with varying success to carry out a technic which he had perfected only through vast experience and untiring effort. Imperfect dissection due to a lack of familiarity with the structures of the peritoneum, failure to obtain proper support through neglecting to secure the levator muscles in proper position after enucleation, and a misunderstanding of the preliminary and after-treatment, points all of which are highly important and much dwelt upon by Young, tended to bring into disrepute an

* Read before the Sixth District Medical Association, Corpus Christi, Texas, October 15, 1913.

operation which, in the hands of an expert, yields almost uniformly good results. The second reason for the popularity of the suprapubic method is due to the realization on the part of surgeons that in nearly all these old prostatics a preliminary drainage is highly desirable in order to clear up the old cystitis usually present, and at the same time remove back pressure on the kidneys, due to large amounts of residual urine. With pressure removed, and a fairly clean bladder, the mortality in either operation is much reduced, and the choice of operation then becomes merely a question of the easier route to the prostate. This, to most operators, is the suprapubic.

In the majority of moderate-sized enlargements I am still of the opinion that Young's method is the one of election, but in large middle-lobe hypertrophies, in very obese subjects, or whenever it is determined that the enlargement is mainly intravesical or pushing well up into the bladder, the greater accessibility offered by the suprapubic route renders it the method of choice.

Suprapubic enucleation effected by finger dissection through the elongated prostatic urethra, as described by Deaver, Squier and others, is generally easy of accomplishment, and yields most gratifying results. The operation I employ in those cases particularly adaptable to the suprapubic route, and to which has been given the name intraurethral prostatectomy, differs but in one main essential from the classic suprapubic operation. This variance concerns the actual site of approach to the enlarged gland through the mucous membrane from within the opened bladder. In all prostatic enlargements it is readily demonstrable that the prostatic urethra is more or less elongated, so that a finger introduced through the bladder incision and engaging the opening at the vesical neck in reality enters well into the prostatic urethra to a point even beyond the veru montanum, and, of course, in front of the so-called vesical sphincter. If, then, as we have been taught to do, we make our mucous membrane incision transversely over the most prominent part of the prostatic tumor, and attempt to enucleate from that point, in all probability before reaching a line of cleavage, we of necessity must do considerable damage to the muscle fibres surrounding the vesical neck, thus paving the way to post-operative incontinence. If, on the other hand, we employ the dilated prostatic urethra as a site for our incision, we are frequently able to enucleate the tumor in its entirety, doing but slight violence to these muscle

fibres, the dissection being made in front of, and not through, the vesical neck. I do not mean to affirm that this method will in all cases permit of a delivery of the enlarged gland without damage to contiguous structures, but I do believe that we may hope to attain better functional results by employing a method which, from an anatomical standpoint, possesses this distinct advantage.

Aside from the absence of incontinence as a remote result of this operation, I have been particularly struck with the unusual freedom from hemorrhage accompanying this method in my last twelve cases. In no instance has this complication been of sufficient gravity to cause concern nor to warrant the employment of packing. I attribute this to the fact that, with a complete enucleation of the gland from in front of the vesical sphincter, instead of through its fibres, the bladder wall itself receives but little damage, and it is to tears of this structure that most of the operative and post-operative bleeding is due.

If, then, by utilizing the prostatic urethra, we are enabled to overcome these two great *bêtes noires* to the operator, I feel that the method is highly desirable and well worth its employment.

It is true of all prostatic work that the best results will only be gained by careful preliminary treatment. In this connection I refer, aside from regulation of the patient's intestinal tract and renal output, to particular attention shown the bladder itself. Bladder infections with little or no residual urine should be overcome, unless very resistant, by appropriate local medication. In the presence of large amounts of residual urine the employment of the catheter at regular intervals, the use of a permanent catheter in the urethra for several days, or a preliminary cystotomy, will help to clear up the cystitis, at the same time relieving back pressure upon the kidneys. As it is possible to perform a cystotomy without recourse to a general anesthetic, and as the same incision may be utilized for the subsequent prostatectomy, in the majority of cases I prefer the cystotomy as the preliminary measure in infected cases.

The bladder is exposed by the usual longitudinal incision through skin, fascia and muscle, this incision, to my mind, being much preferable to the transverse. The peritoneum is stripped upward and the bladder opened transversely. I consider a transverse incision of the bladder of the utmost importance, as experience has taught me the fact that the manipulations incident to the removal of the prostate from its bed will, when a longitudinal incision has

been employed, cause a further tearing of the bladder wall in the same direction, so that when, after enucleation, we are ready to approximate the bladder edges, we may find that the tear has extended to the vesical neck deep down under the pubic arch, and in a most inaccessible location for the use of the needle. The index finger of the right hand, with the tip of the glove removed so that the finger nail is exposed, is introduced into the bladder. The left index and middle fingers are introduced into the rectum, thus forcing the prostate upwards and backwards, at the same time more or less fixing it in position. Carrying the finger forward well into the urethra, the finger nail is made to cut through the mucous membrane from before backwards. After opening the urethra, gentle dissection will generally find a line of cleavage, and by first carrying this dissection forward and then backwards and around to the opposite side, in favorable cases the gland, either entire or in separate lobes or lobules, is extracted through the urethral incision.

With enucleation completed, all clots are removed and a medium-sized two-way rubber drainage tube inserted, around which the bladder incision is closed. Care should be taken to see that the end of the tube is not in contact with the bladder neck, and also that a water-tight joint has been effected around the tube where it leaves the bladder. In this way post-operative tenesmus is reduced, and subsequent urinary soiling overcome. In the lower end of the skin incision a small rubber tissue drain should be placed.

Inasmuch as the post-operative treatment of suprapubic prostatectomy is the subject of a paper to follow, I omit reference to it here.

Case I. Referred by Dr. J. E. Coyle, San Antonio, Texas. M. B. J., age 69. November 20, 1912, complete retention relieved by catheter. Suprapubic cystotomy November 21. November 28 prostatectomy through cystotomy incision. Patient left hospital at end of third week. Fistula closed at sixth week. Present condition: perfect control, no residual urine, urinates once during night and at normal intervals during day.

Case II. Referred by Dr. W. T. DeTor, Victoria, Texas. J. A. D., age 62. December 1, 1912. This patient was operated eighteen months previously in a neighboring city. The operation was done for bladder calculus. No calculi were found; but patient was told a portion of his prostate was removed. A suprapubic tube was inserted and patient instructed to retain same indefinitely. At the expiration of a year, the close acquaintanceship with the tube, draining into a urinal strapped to the leg, having grown burdensome, he applied to the operator for relief and was told that it would, on account of a peculiar condition existing at the neck of the bladder, be impossible to do anything further, and that, inasmuch as his general condition was good, he had better

make up his mind to let well enough alone. A cystoscopic examination revealed the presence, in addition to an enlarged prostate, of three large calculi. December 2, through an enlargement of the cystotomy incision, the prostate and calculi were removed. The cicatricial tissue around the old scar was dissected away, and the usual drainage instituted. Fistula healed in three weeks. Present condition: no residual urine, complete control, urinates once during night.

Case III. Referred by Dr. C. L. Treace, San Antonio, Texas. J. W. S., age 80. Retention at intervals for past ten years, April 24, 1913. Acute retention of twenty-four hours standing. Suprapubic cystotomy and 3,000 c. c. of urine evacuated. Prostatectomy six days later. Seven small vesical calculi removed. Patient left hospital at end of third week. Fistula healed completely at end of fifth week. No residual urine. Complete bladder control, urinates once and sometimes twice during night.

Case IV. Dr. J. W. W. Age 61 years. Patient has led a continuous catheter life for four years. Unlike most cases given over to constant catheterism, he, through great care and regularity in its use, had employed the catheter for this length of time without setting up a cystitis. The bladder mucosa was in excellent condition; there was no back pressure on the kidneys; consequently he was in excellent shape for operation. Examination revealed the hypertrophy extending well up into the bladder. In this case the entire prostate was enucleated en masse. The fistula had entirely closed before the end of the fourth week. He has perfect control, no residual urine and sexual power, practically abolished before operation, has become normal. The specimen very clearly shows a small median lobe riding free between the laterals, each of which has a projection downward and forward. These projections were all that could be outlined by rectal examination and clearly show the fallacy in allowing ourselves to gauge the size of a prostatic hypertrophy by rectal examination alone. The specimen is again interesting in that it clearly shows the projections from the lateral lobes as constituting the so-called anterior lobes.

Case V. Referred by Dr. L. L. Shropshire. H. P., age 69. Retention for two weeks relieved by catheter. June 28. A preliminary cystotomy was done. On account of patient's general condition, prostatectomy was delayed for ten days. Two weeks after operation when patient had been out of bed for a week, uremic symptoms became manifest and patient died two days later in coma. It afterwards developed that this man had shown uremic symptoms six months before operation.

Case VI. Referred by Dr. E. W. McCamish. Patient H. S., age 65 years. Operation June 30. No previous retention had existed in this case, though a troublesome cystitis had been present for several months. With bladder irrigations this had been much relieved. There was six ounces residual urine. Wound closed at end of fourth week. No residual urine. Perfect control.

Case VII. Referred by Dr. J. V. Sprigg. R. G. M., age 67 years. September 1 small middle lobe removed. Fistula closed in twenty-three days.

Case VIII. Referred by Dr. Hines, Uvalde, Texas. H. F. T., age 64 years. Complete retention. Operated September 10. Fistula closed October 5.

Case IX. Referred by Dr. H. W. DeTor, Victoria, Texas. P. S., age 59 years. Complete retention. Permanent catheter. Operated three weeks later, September 10. Fistula closed October 10.

RESULTS OF SANATORIUM TREATMENT OF TUBERCULOSIS: ADVANTAGES, COST, ETC.*

By E. L. McGEHEE, SR., M. D., New Orleans.

There has been a more or less prevalent opinion among the laity that the treatment of consumptives in sanatoria was inclined to render them unhappy, as these patients were deprived of the pleasures of home life, and were, to a certain extent, isolated. Further, the objection has been made that the presence of sanatoria was a menace to the city or town in which they were established. But investigations in sanatoria, and the statistics given, both in the United States and foreign countries, show the fallacy of these beliefs.

The patients are, as a rule, most cheerful, entering into the social life of the sanatorium, where varieties of entertainment are constantly being provided to make them, in so far as possible, forget themselves. For, where the mind is diverted by either light occupation or recreation, the improvement will be more rapid.

The dangers of infection in sanatoria are practically *nil*, since these institutions have at command all the necessary means for preserving hygienic conditions.

Careful inquiries made for over thirty-seven years in the Brompton Hospital in London, where the building was old and badly ventilated, gave the following results: None of the resident medical officers, matrons, porters or clerks contracted the disease, although brought into contact with the patients. But one out of 150 house physicians seemed to have become phthisical while in the hospital; in only one out of 101 nurses was the disease made manifest in the hospital, and but three died of it after leaving the institution. Investigations along the same line in another hospital in London gave equally reassuring results.

At a meeting of the American Climatological Association, in May, 1896, Dr. V. Y. Bowditch, of Boston, said: "I wish to refute the statements that properly regulated consumptives' hospitals are a source of danger to the community, when I believe them to be exactly the opposite, as shown by the statistics."

At the hospital of Madgeburg, Alestadt, where there were 34,560 patients during seventeen and a quarter years, and where 3,820 were consumptive and mostly in an advanced stage, none of the

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913. (Received for publication, October 11, 1913.—Eds.)

other patients and not one of the nurses contracted the disease. Several large sanatoria are near the village of Görbersdorf, and before the establishment of the first sanatorium there, 0.83 of the deaths in the village yearly were from consumption; since then the rate was but 0.47, although the population had doubled in twenty-five years; and in forty years about 25,000 consumptives had been treated in the different sanatoria. Similar investigations in other parts of Germany gave similar results.

Regarding the various benefits to patients of sanatorium treatment, which include education, control, prophylaxis and cure, Dr. W. B. Bartlett (See bibliography) writes as follows:

“The sanatorium patient is shown how to live properly, and is obliged to obey certain strict rules as to disposal of sputum, bathing, exercise, and other matters connected with his daily welfare. When he leaves the sanatorium, he takes these new ideas with him into the home and the workshop. He thus spreads the gospel of fresh air, the open window and suitable food. He arrives at the sanatorium a careless consumptive, spreading disease about him wherever he goes; he returns from it trained in habits of personal cleanliness and right living, and is a menace to no one.”

“Sanatorium treatment has come to be recognized as the chief curative factor in the campaign against tuberculosis.... For practical purposes of treatment cases suffering from the disease should be divided into two classes, namely, reactive and non-reactive. In the first class systemic intoxication is present in varying degrees of severity, in the second class it is absent. Modern sanatorium treatment now includes in its régime tuberculin inoculations, and therefore it may be recommended with confidence as the best form of treatment for non-reactive cases.

“Wherever rest, fresh air, dieting, supervision, exercise and tuberculin treatment are carried out, sanatorium methods are employed.”*

“The statement that statistics are fallacious finds no better illustration than when an attempt is made to compare and classify the results of the open-air treatment in various consumptive sanatoria. A disease like consumption, with its insidious beginning, its many clinical varieties, its chronic course, and gradual amelioration of one or more symptoms till health is slowly established, presents such a wide basis that it does not easily lend itself to such strict statistical control as measles or smallpox, which present distinct symptoms and run a definite course. Hence any classification either of the disease or its cure is met with many difficulties.”

The above quotation is from Dr. Muthu's book, published in 1910, on “Pulmonary Tuberculosis and Sanatorium Treatment.” After ten years' observation and work in open-air sanatoria in England, Dr. Muthu begins his chapter on “The Results of Sanatorium Treatment” with the remarks just quoted, and, after discussing the various difficulties met with in giving such results, he says:

“My object is not to confuse the reader with a minute analysis of results which may or may not have any significance, but to give figures

* See “Consumption in General Practice,” by H. Hyslop Thomson, Medical Superintendent of Liverpool Sanatorium.—London, 1912.

that would prove the efficiency of the sanatorium treatment as shown by the patient's capacity to return to work and to continue in it, which is, after all, the crux of the whole question. Exclusive of patients who did not stay more than a month, the number of patients who were discharged from August, 1889, to August, 1908, was 339, of whom five cannot be traced. Of the remaining 344 patients, 177 were either apparently cured, or their disease arrested, so that they were able to follow their old or some new occupation. This means that about 52 per cent., or a little more than half the number of patients that entered the sanatorium, have recovered, and are living at the present day. Among the rest I include all those who have either slightly improved, or made no improvement, or died. This percentage of recovery would have been greater had some of the patients who had every prospect of getting well remained in the sanatorium a little while longer to complete their cure....

"About 80 to 85 per cent. in the early stage, 40 to 45 per cent. in the moderately advanced, and 8 to 10 per cent. in the advanced stages got quite well—i. e., well enough to take up their old or some new work. In about 7 per cent. of cases there was no sputum; these were mostly early cases. In about 26 per cent. no tubercle bacilli could be found; some of these had extensive diseases of the lungs. Only in about 67 per cent. were bacilli found in the sputum."

Dr. D. R. Lyman, writing in 1911 on "The Economic Value of the Sanitarium Treatment of Pulmonary Tuberculosis," gives the following among a number of tables of statistics showing the results of modern sanatorium treatment not only in lives saved and health improved, but also the economic return to the community, from money invested in such treatment. The reports are made on 633 discharged patients of the Gaylord Sanatorium, covering the period from September, 1904, to May, 1911. Briefly stated, the patients, classified according to condition on admission, were found to be as follows on April 30, 1911:

Incipient cases, 140. Of these, 75 were *arrested*; 63 *improved*; 2 *progressive*. Up to April 30, 1911, of the arrested cases there were 70 well; 1 living; 4 dead. Of the improved, there were 56 well; 4 living; 3 dead. The two progressive cases died.

Moderately advanced cases, 373. Arrested, 169; improved, 148; progressive, 56. Of the arrested cases, 140 were well; 5 living; 24 dead. Of the improved, 81 well; 26 living; 41 dead. Of the progressives, 8 well; 9 living; 39 dead.

Far advanced cases, 120. Arrested, 18; improved, 42; progressive, 60. Of the arrested, 7 were well; 1 living; 10 dead. Of the improved, 7 well; 8 living; 27 dead. Of the progressive, 1 living; 59 dead.

Of these 633 cases, Lyman says that 424 are living and with an earning capacity.

In another table he gives the expenditures of the Gaylord Sanatorium, and adds that to date (1911) the total expenditures, in-

cluding interest, were \$369,037.87. "Interest at 5 per cent. figured for the expectation of life for the three classes of cases, amounts to \$470,522.43, making a total of \$839,560.30, on which we return to the community in earnings of patients a total of \$4,705,820.00." (See Lyman's article for details, in which he figures the earning capacity of the patients.)

The results of treatment of 318 patients discharged from the Vermont Sanatorium, at Pittsford (which was opened in 1907), as reported in December, 1911, were as follows:

CONDITION ON ADMISSION.

Incipient.	127=39.9%
Mod. Advanced	171=53.8%
Far Advanced	19= 5.9%
Gen. Mil. Tuberculosis	1= 0.3%

CONDITION ON DISCHARGE.

	Ap. Cured.	Arrested.	Improved.	Failed.	Died.
Incipient.	50=39.3%	53=41.7%	22=17.3%	2= 1.6%	
Mod. Advanced...	12= .7%	60=55.0%	58=33.9%	37=21.6%	4= 2.3%
Far Advanced....		6=31.6%	3=15.7%	10=52.6%	
Gen. Mil. Tb.....					1= 100%

See the above article for a large number of other tables giving various details.

Dr. W. B. Bartlett's statistical results in treatment of the tuberculous at Wildwood Sanatorium in Hartford, Conn., as covering the five years from October, 1905, to October, 1910, are briefly as follows. During that time 538 patients were admitted to the sanatorium, classified as:

- Incipient cases 197, or 36 per cent.
- Moderately advanced 267, or 50 per cent.
- Far advanced 74, or 14 per cent.

During the same period 488 patients were discharged in the following conditions:

- Cured. 38, or 8 per cent.
- Arrested. 107, or 24 per cent.
- Improved. 176, or 36 per cent.
- Unimproved. 167, or 32 per cent.

Of the patients who remained three months or more, and who were discharged during the three years from 1908 to February, 1911, there were 186, of whom 48 were incipient cases, 113 moderately advanced, 25 far advanced. Of the incipient cases, 18 were

discharged as cured, 22 as arrested cases, and 8 were still active. Of the moderately advanced, 6 were discharged cured, 45 arrested, 64 disease still active. Twenty-three of the far advanced cases were still active after three or more months' treatment, while two were discharged as arrested cases.

In reporting on 300 patients that were traced after leaving the sanatorium, the length of time varying from one to five years, Bartlett reports as follows:

Of 23 patients discharged apparently cured, 19 are well, 3 living, and 1 is dead; of 61 patients discharged arrested, 34 are well, 20 living, and 7 dead; of 109 discharged improved, 42 are well, 36 living, and 31 dead; of 107 discharged as unimproved or progressive, 2 are well, 17 living, and 88 are dead.

Bartlett and all physicians are impressed with the necessity for early diagnosis and early treatment in cases of tuberculosis, although the chances for securing an arrest of the disease are nearly 50 per cent, "provided the treatment is begun, and *persisted in*, during the moderately advanced stage."

Dr. W. J. Barlow, of the Los Angeles Tuberculosis Sanatorium, reported in 1907 on 200 charity cases that had been treated there in the three years previous. In his article he states that patients in all stages of the disease were admitted, and that the records show that 92 per cent. were beyond the first stage. This fact must be considered in connection with the figures given.

The average duration of treatment for the whole number was somewhat over two months.

In the first 100 cases there were 93 that were found, when admitted, to be in the second and third stages of the disease; of these, 62 $\frac{2}{5}$ per cent. either progressed or died, while 37 $\frac{3}{5}$ per cent. improved. Ninety-one of the second 100 cases were also in the second and third stages when admitted, and of this number, 45 per cent. showed progression or died, and 55 per cent. improved.

"To sum up the total 200 cases, 46 $\frac{1}{5}$ per cent. of the second and third stages showed a marked improvement. Many of these patients discharged improved became wage earners immediately. The few cases that were admitted in the first or incipient stage, that is, 13 or 6 $\frac{1}{2}$ per cent., were all discharged as arrested or apparently cured, as well as 3 per cent. of those admitted beyond the first stage."

Dr. Lawrason Brown, who was for many years resident physician at the Adirondacks Cottage Sanitarium, and who is a recognized authority on the subject of tuberculosis, not only in this country,

but also abroad, published in 1908 a lengthy report on "The Ultimate Results of Sanatorium Treatment," covering in his statistics a period of about twenty years. His article contains a number of illustrative figures, tables and diagrams, giving various details regarding special points, but, of course, in a digest of the nature we are giving, only the results can be mentioned.

Of all patients discharged as neither apparently cured nor arrested—that is, with the disease still active—only 25 per cent. were alive at the end of five years, 15 per cent. at the end of ten, and 10 per cent. at the end of fifteen years after discharge. In 1908 there were 1,209 patients known to be living out of 2,553. "Of these, 1,058, or 41 per cent. of the whole, are engaged in or able to do some work. Less than 353 of all the patients remain untraced, and if we consider the 2,200 patients about whom definite information is at hand, we find that, after a lapse of one to twenty-three years, at least 48 per cent. of the traced patients are able to work. Of the remainder of the 1,209 patients, 107, or 8.8 per cent., are doing nothing, and about 44, or 3.6 per cent., no information has been obtained in regard to their working capacity. So, out of the 1,209 patients alive, 87.5 per cent. are still able to work.

Dr. Brown also gives a table showing various details concerning 63 patients who were discharged from fifteen to twenty-three years previously, and in 1908 only 5 of this number were marked as "chronic" cases, 2 were "arrested," and the remaining 56 were "well."

J. A. D. Radcliffe, pathologist to the King Edward VII Sanatorium, at Midhurst, in a recent article says that the chief methods of treatment in pulmonary tuberculosis at the present time (1912) are: (1) the sanatorium, with or without graduated labor; and (2) tuberculin, either alone or preferably combined with the sanatorium. In comparing the two methods, the standard of comparison taken is the absence of tubercle bacilli in the sputum at the termination of the treatment, for, when this is accomplished, the patient is no longer a potential source of infection to others. Those patients who had tubercle bacilli in the sputum on admission, and who remained a minimum period of twelve weeks, are first mentioned in Radcliffe's report as having received sanatorium treatment alone. During four years' time there were 631 such patients, and, dividing these

into three groups according to the stage of the disease, the results were as follows:

Group I contained 160 patients whose average stay in the sanatorium was 20.16 weeks. Of this number, 73, or 45.62 per cent., lost their tubercle bacilli. Group II, 315 patients; average stay, 21.82 weeks; 60, or 19.04 per cent., lost the bacilli. Group III, 156 patients; average stay, 21.03 weeks; 14, or 8.97 per cent., lost tubercle bacilli. That is, of the 631 patients, 147, or 23.3 per cent., were found with their sputum negative at the termination of their stay.

Radcliffe then cites the results reported by some of the leading German sanatoriums, in which large numbers of patients were given a combined tuberculin and sanatorium treatment. He quotes from a Berlin report in which the test for freedom from tubercle bacilli was most severe, and which includes in its figures all those patients who reached a stage of immunity during treatment towards either 10 mg. of old tuberculin or 0.01 mg. of new tuberculin. Six hundred and eighty-two cases are reported on who had tubercle bacilli on admission to the sanatorium, and these are classified according to the variety of tuberculin with which they were treated.

TABLE.

Treatment.	Total number of patients.	Number with sputum negative.	Number expressed in percentage.
Old Tuberculin..	409	237	57.94
New Tuberculin.	204	86	42.15
Old and New Tuberculin....	69	38	55.07
Totals.....	682	361	52.93

Two other tables are given, showing equally good results, and Radcliffe then concludes as follows:

"1. With sanatorium treatment alone we can only reckon on 20 to 25 per cent. of all cases losing their bacilli as an immediate result of the treatment.

"2. When a combination of tuberculin with sanatorium treatment is adopted, at least 50 per cent. of the cases will lose their tubercle bacilli.

"3. The earlier the cases come under treatment the better the results....

"4. A comparison of the immediate results is so much in favor of tuberculin that it is difficult to understand the opposition to its employment, both in treatment and diagnosis."

One of the latest articles on the after-results of the sanatorium treatment of tuberculosis is by Drs. Bowditch and Griffin, of the

Sharon (Mass.) Sanatorium. In this paper, published in December, 1912, the writers state that 592 patients were treated and discharged during the past nineteen years—no one being reported who had not been away at least one year. A number of these are excluded from the report for various reasons, leaving 520 patients, of whom 48 were discharged as “not improved,” 175 as “improved,” and 297 as “arrested” or “apparently cured” cases. All of the 48 non-improved died. Of the 175 “improved,” 107, or 60 per cent., died; 51, or 29 per cent., are in good condition, while 17, or 9 per cent., are untraced. Of 79 patients reported on in 1902, at least 66 per cent. are living, after ten years, practically all in good condition and many of them at work.

Of the 297 “arrested” cases, 25, or 8 per cent., are untraced; 35, or 10 per cent., have died, while 237, or 81 per cent., are alive, and the majority in excellent health.

Since 1902 nearly all the patients at this sanatorium have received the tuberculin test for diagnosis, and in 42 cases tuberculin has been used in treatment, 34 of the number being in good condition at the present time.

There are several other papers of recent date (1912) noted in our bibliography which discuss the various phases of the subjects under consideration here, but which are not at present available to us.

COST.

The following statistics show the cost per patient of care and treatment in various sanatoria:

Dr. Richard C. Cabot, writing in December, 1912, on Arequipa Sanatorium, says that this institution for the treatment of incipient case of tuberculosis is situated in one of the loveliest parts of California, only an hour by rail from San Francisco, and was established in 1911 by Dr. P. K. Brown, who has enabled the patients to earn the cost of their maintenance by the making of pottery. Although the sanatorium, in October, 1912, was but a year old, it was in a flourishing condition and free from debt, while the total cost of care for each patient was but \$7 a week, laundry included. This is, says Cabot, “the lowest figure that I know of in institutions giving a high type of care such as Arequipa provides.”

In 1906 it was reported that at the Adirondack Cottage Sani-

tarium, at Trudeau, N. Y., each patient cost the institution \$9 a week, while only paying in \$5.

A writer in *Survey*, of January 14, 1911, says that in 1910 nearly \$15,000,000 was spent in the fight against tuberculosis in the United States; \$11,376,500 of this amount being spent for treatment in sanatoriums and hospitals. This last item is almost double the amount expended in 1909.

An article by Eliza D. Gardiner in the *Outlook* of May 15, 1909, makes the statement that the proper nourishment, care and training given patients at the Stony Wold Sanatorium, in the Adirondacks, can only be obtained at the cost per patient of \$2 per day, and that the managers of this institution need an annual income of \$50,000, secured by regular subscriptions. This is a private organization for the treatment of incipient tuberculosis in working women and children.

Dr. F. C. Smith, of the United States Public Health Service, in his 1902 report on the United States Sanatorium at Fort Stanton, New Mexico, gives the following concerning the cost of maintenance of a patient (all males) per day:

The cost per patient at Fort Stanton, as a whole (which includes fuel, light, repairs, furniture, etc., as well as food and nursing), has been \$1.5554 per day.

Concerning the cost in other sanatoria, Smith says that the average daily cost per patient in thirty semi-charitable sanatoria was given in a bulletin issued in 1911 as \$1.669, of which the average daily ration amounted to \$0.544, and salaries and wages \$0.481. He then adds:

"All the specific data available, in published annual reports or from verbal statements, on the costs in various institutions are tabulated below. It may be mentioned that a sanatorium for incipient cases can be maintained at less expense than one admitting advanced cases. Most of the sanatoria in this list also admit pay patients, and while moneys paid by them are not deducted from the cost of maintenance, work performed by them in lieu thereof is usually omitted from the list of expenditures. This accounts in part for the low cost of maintenance in the Otisville Sanatorium and some others. No data are available regarding the cost in Western sanatoria."

Smith's table is as follows:

COST OF MAINTENANCE PER PATIENT PER DAY IN OTHER SANATORIA.

New York State Hospital for the Treatment of Incipient Tuberculosis, Ray Brook, N. Y.....	\$1.354
New Jersey Sanatorium for Tub. Dis., Glen Gardner, N. J.....	1.301
Maryland Tuberculosis Sanatorium, Sabillasville, Md.....	.9708
Edward Sanatorium, Napierville, Ill.....	1.50
State Sanatorium for Incipient Tub., Mount Vernon, Mo.....	1.74
Penn. State South Mountain Sanatorium, Mont Alto, Pa.....	1.285
Mass. State Sanatorium, Rutland, Mass.....	1.44
Adirondack Cottage Sanitarium, Saranac Lake, N. Y.....	\$1.55- 1.71
Otisville Sanatorium, Otisville, N. Y.....	.9885
Tuberculosis Hospital of the District of Columbia.....	1.48
The Hospital for Consumptives of Maryland, Towson, Md.....	1.09
Cincinnati Tuberculosis Sanatorium.....	.8839

With regard to the question of work or exercise in connection with the treatment of tuberculous patients, we quote from the excellent directions on that point given by Dr. W. J. Dobbie, of the Toronto Hospital for Consumptives, in his comprehensive paper on the "Hygienic, Dietetic and Medicinal Treatment of Tuberculosis," which was published in the March, 1911, number of the *Canadian Practitioner and Review*:

"Exercise.—For while, no doubt, there is the least expenditure of energy when the patient is at rest, it is also true that even in health a certain amount of exercise is necessary to maintain a physiological balance. In a tedious disease such as tuberculosis this point must not be lost sight of in the treatment. Nor is it permissible to forget that no case can be considered cured or arrested until an ordinarily active life can be resumed without the onset of symptoms. And it is just here, if one might venture to say so, that a mistake is made in many sanatoria. Patients live for months amid ideal surroundings, and then return to the ordinary conditions of home life, only to find themselves ill-prepared to stand the strain of less favorable circumstances. Patients who have improved should be returned gradually to the conditions of, shall we say, a reformed ordinary life. It is, therefore, for these reasons that exercise is indicated. And the exercise should ultimately be such as to prepare the patient for the kind of work which it is necessary for him subsequently to do...."

"The chief contraindications to active exercise are: (1) Fever, (2) Rapid Pulse, (3) Blood in Sputum, (4) Loss of Weight. In a general way, patients with a temperature above 99 F., or a pulse rate of 100 or more, should have no exercise, and a simple guide to give the patient after an apparent recovery is that there should always be 'Much Rest and Some Exercise.'"

In a very recent paper (February 1, 1913) on "Some Newer Problems and Some Newer Phases of the Anti-Tuberculosis Warfare in the United States," Dr. S. A. Knopf says:

"Many of our more progressive sanatoria resort to occupation therapy as a means of strengthening and improving the patient's health. Grad-

uated labor is, to my mind, one of the most valuable modern adjuvants we have in the hygienic and dietetic treatment of the tuberculous patient. The problem of occupying the patient arrested or cured, discharged from the sanatorium, is a difficult one.... I would suggest therefore in connection with our system of sanatoria and sanatoria-hospitals, intermediate stations, which you might call health work stations, where patients may be able to resume their former occupation in exceptionally good sanitary environments for at least six months after their discharge from the sanatorium. I am convinced that such intermediate stations would greatly reduce the number of relapses, and much of the vast sums we are now spending for the care of tuberculous individuals would not have been spent in vain."

In making a plea for more institutions for the care of tuberculous patients, Dr. Knopf also says:

"In the United States we have at this time [1913] 525 hospitals and sanatoria for the tuberculous, representing accommodations for about 30,000 patients. Although hopeful and inspiring when compared with conditions of 20 or even 10 years ago, this number still offers only a drop of relief in an ocean of woe....

"A comparison of the hospital provisions in the United States with the needs and growth of population shows that the demand is increasing twice as fast as the supply.

"London offers the lowest death rate of the world's great cities. The isolation of advanced cases to which our English co-workers attach the greatest importance, is said to be responsible for this remarkably low death rate from tuberculosis."

Further, in referring to the difficulties frequently met with in persuading patients to enter a sanatorium, Knopf writes:

"That we often encounter objections to entering a sanatorium even among the earlier cases and also the well-to-do, is a well-known fact. This prejudice on the part of patients to entering sanatoria arises mainly in their fear of having to associate with individuals whom they consider more ill than they are themselves. Education through appropriate literature and tactful explanation on the part of the physician who sends the patient to the sanatorium, are the only remedies for this sanatorium-phobia."

(See, also, Dr. Knopf's article in the *Medical Record* of September 28, 1912, for a more detailed discussion of this prejudice against sanatoria.)

It is to this point in the crusade in Louisiana that we earnestly ask the influence of the profession in the segregation of third-stage cases. We confidently believe if this were faithfully done, in ten years the consumption would be eliminated. The Anti-Tuberculosis League has succeeded in getting an appropriation of \$10,000 by the Legislature for this purpose, to be used by the State Health Board, and before you meet again we will have a small hospital somewhere in Louisiana for the care of advanced cases. The League is endeavoring to arrange to care for more advanced cases

at Hygeia, and doing their utmost to establish a hospital for third-stage cases in New Orleans.

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A NEW DEVICE FOR THE TREATMENT OF FRACTURES.*

By F. W. PARHAM, M. D., AND E. DENEGRE MARTIN, M. D., New Orleans.

It will not be necessary at this time to review the history of the so-called open treatment of fractures, except, possibly, to sound the oft-repeated warning to the inexperienced of its dangers.

From my internship at the Charity Hospital, more than twenty years ago, the mechanics of surgery always appealed to me, and since that time the treatment of fractures has been more or less a hobby. From that time also dates my association with Dr. Parham, and I have trotted along right behind him, picking up such suggestions as he had to spare, and occasionally sneaking off to work up some idea before submitting it to his critical mind, with the result that we think we have learned something about fractures.

Of all the methods now in vogue, none are entirely satisfactory in every case. Wire, which was used so extensively at first, was found most unreliable, though still useful in selected cases; staples are hard to insert and to make hold, though we still hope to overcome this difficulty and demonstrate their field of usefulness. Lane plates, though more satisfactory than anything in general use up to the present time, are most difficult to apply and are not always reliable, as recent reports show. In many instances the bones are soft and the screws will not hold, becoming at once a menace to success. It was this danger which first suggested to Dr. Parham the necessity of a band to apply around the plate in cases where the screws would not hold.

At the last meeting, December, 1912, of the Southern Surgical and Gynecological Association, Dr. Milne, of London, showed an ingenious device for the treatment of oblique fractures, which consisted of a steel band thrown around the bone and held by a nut at the point of proper tension. We experimented with wire of various kinds drawn tightly around the bone and held by a com-

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pressed shot, but we found this not satisfactory, because, when the wire was drawn to sufficient tension to hold the oblique fragments in apposition, either the wire broke or cut through the shot. We then tried the bands, which we found answered admirably.

The device we are presenting now is the successful issue of many failures. It appeals to me as especially useful in the treatment of oblique fractures when the bones, by the very nature of the injury, have a tendency to override. Once the fragments are replaced and held in apposition by these bands, the overriding caused by muscular contraction is the mechanical means for the tightening of the fragments; a light external splint modeled from plaster of Paris completes the treatment. The device, as you see, is quite simple—a band from one to three-eighths of an inch in width, six inches long, with a slit in one end and a small hole in the other. It is passed around the bone quite easily by bending to a suitable angle; this is readily accomplished, as the bands are made of malleable iron. The free end is then inserted through the slot in the instrument, made fast to the pin on the screw lever, and with it sufficient force is exerted to make it fit snugly around any unevenness of the bones. It is fixed in position by slightly relaxing the screw as the instrument is turned back over the slit, and is cut to any desired length by holding between the blades of a strong pair of scissors or bone-cutters and worked to and fro several times. The cut end is then pressed down and the band remains fixed.

In presenting this new device we have no hesitation in saying that we think it will prove a valuable adjunct in the treatment of fractures, and hope at the next meeting to present living evidence of its merits.

We have used it on but two cases so far—one an old fracture of the femur, and the other an oblique fracture of the tibia. In the second case the man got out of bed and walked around the ward with only a posterior splint, no damage resulting. The result is shown by the skiagraphs presented.

EMERGENCY SURGERY OF THE SKULL, WITH CASE REPORTS.*

By ROBERT C. KEMP, M. D., Baton Rouge.

In presenting this subject for the consideration of this Society I appreciate the essential limitations of this paper, for a goodly volume text-book could be included in the text. The primary object is to present a few case reports, two of which I think quite interesting.

Emergency surgery of the skull is a subject that should receive the earnest consideration of every medical man in the profession, and especially to those remote from surgical centers do I desire to make an appeal for equipment to handle conditions that often take a life where prompt surgical aid is not given. On account of the exposed condition of the skull it comes in for as much traumatism as most any other part of the economy, excepting, perhaps, the hands. Many of these cases cannot get along on the expectant plan of management, cannot wait to be transported to the hospital, or to some place where skilled operators abide, but must be operated at once if a life is to be spared. I refer to the cases of fracture with rapid hemorrhage, showing symptoms of cerebral pressure. Impact of the skull against any hard substance might cause concussion of the brain, with laceration of the cortex, sinuses or arterial trunks, causing symptoms threatening to life, unless immediate relief is offered surgically. Where concussion without localized evidence of hemorrhage exists, operative interference is not only not necessary, but would be prejudicial to the life of the sufferer. Punctured wounds of the skull need not be operated, unless a bone fragment has been driven into the brain or undue hemorrhage persists, when it would be necessary to enlarge the opening to remove the fragment or arrest a bleeding point. Hemorrhage from traumatism from the skull might be extra- or subdural, or both combined, the latter condition adding to the gravity of the case.

The new-born are especially liable to cerebral subdural hemorrhage, where instrumental delivery has been used, and no doubt but that many sudden deaths of new-born and stillborn infants are due to this cause, unrecognized. It has been known to occur in spontaneous labor, in luetic children, weakened vessels

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from toxins absorbed from an alcoholic mother. Operative interference is necessary in all these cases if the hemorrhage is extensive. The hemorrhage in the new-born in nearly every case takes place under the parietals, hence operation should be at that site, or the clot of blood could be removed by aspiration through the fontanelle, where the hemorrhage is at the convexity. Where the hemorrhage cannot be controlled, drainage is instituted, with gentle packing. Operation should be done in all cases of traumatic cerebral hemorrhage, not only to save the life of the patient, immediately, but to prevent post-traumatic epilepsy. The success of surgery in the skull depends entirely upon a rigidly aseptic technic, for, if sepsis enters the field, gloom will usually crown the result. The skull should be entered, if possible, at the site of the extravasation, which will depend upon the point of injury, and the local symptoms will depend upon the site of the hemorrhage.

The following case reports will illustrate these few points regarding this subject:

Case 1. A. S. McC., age 23, a very large plethoric man, on January 30, 1910, while working in a ditch about twelve feet from surface was in a stooping position when an iron maul, weighting probably twenty-five pounds, fell into the ditch striking him upon the head and neck; he was felled by the blow, but upon being assisted out of the ditch, he said he felt stunned, but refused to go to the emergency hospital, saying that he would be all right in a short while. The balance of the crew continued work until the noon hour, and while eating lunch noticed that the injured man was not there. Search was instituted and he was found a good distance from the place where injured lying under a tree, semi-conscious, and vomiting. He was at once brought to the sanitarium and, upon examination, he had every evidence of a fracture of the base. No local evidence could be discovered indicating fracture of any other portion of the skull, and no evidence of localized extra or subdural hemorrhage could be elicited. Violent headache, vertigo with rotary motion when attempting to walk, poor vision, vomiting, Ecchymotic upper and lower eye lids, rapid pulse, all pointed to severe concussion, with basal fracture. He was treated expectantly with ice to head, darkened room, morphin for extreme pain and depletion, with the result that he was discharged, relieved, on February 22, 1910, except for unsteady gait and some headache. This case is reported to show that not all severe skull injuries need operative interference.

Case 2. G. M., white, female child, age 4, was brought to the Baton Rouge Sanitarium January 6, 1912 in an apparently moribund condition, with hemorrhage and brain matter exuding from a wound just superior and posterior to the right mastoid, due to horse kick. She was rapidly shaved, prepared and upon being given a few drops of chloroform, respiration ceased and the radial pulse disappeared, but, nevertheless, incision was made exposing a depressed fracture with a large spiculum of bone pressed deep into the brain through the dura and pia. The fragment was removed, the depressed edges of the two portions, measuring about $1\frac{1}{4}$ inch each, were raised with an elevator, when to our surprise, she gasped and the pulse returned. After thoroughly cleansing the field of clot and bone fragments, the rent in the dura was sutured with fine catgut, the periosteum was brought over the space where the

large fragment was separated, sutured with catgut and the scalp wound closed without drainage. All of which was done without anesthetic, with no evidence of pain or discomfort to the little sufferer. The wound healed per primam and on January 14, she was discharged, and up to this time she is enjoying perfect mental and physical health. This case illustrates the importance of prompt surgical aid, for this patient would undoubtedly have succumbed in a short while. This case was operated 45 minutes after the injury.

Case 3. A. K., age 25, white, on September 22, 1912, while coasting down a hill on a bicycle, lost control and was precipitated against a post with great violence, striking the forehead and rendering him unconscious. He was brought to the sanitarium and upon examination the frontal bone over the frontal sinus was found depressed, and an incision revealed a depressed fracture into the sinus. Broken fragments were removed, packed to control hemorrhage. No suppuration. He was discharged September 20, 1912, cured. This injury occurred at a favorable location for this patient.

Case 4. Jos. P., colored, age 18, on September 20, 1912, while playing under a tree, he was struck upon the center of the vertex by an iron bar blown from a tree by the wind where it had lodged, causing a punctured wound of the skull, passing into the longitudinal fissure a depth of possibly $1\frac{1}{2}$ inch. There was considerable hemorrhage. After preparation, the scalp wound was enlarged and search made for the fragment of bone that was pushed in before the end of the bar, but it could not be found, and as the symptoms were lacking of any severe injury, the wound was closed with an uneventful recovery. What became of the bone fragment, we were at a loss to know, unless it adhered to the end of the bar and was removed when the bar was pulled from his skull by his little brother.

Case 5. O. E. L., white male, age 24, of good physique, was struck by a piece of lumber which fell from the top of a derrick about 90 feet, knocking him from a scaffold about 30 feet to the ground. I saw him very soon after the accident and found him with very slow, full pulse 60; deep sighing respiration; bleeding from the nose and right ear, semi-comatose; exophthalmos of the right eye. Severe traumatism to the skull was considered, and he was immediately conveyed to the sanitarium. Rapid preparation was made, ether given and incision over the right tempora-parietal region revealed a very extensive stellate fracture, extending to the supraorbital arch, backward and upward to the vertex. Opening was made at site of depression. Rupture of the anterior branch of the middle meningeal artery was complete. Venous laceration was extensive, and the hemorrhage was appalling. After catching and ligating the ruptured artery, cleaning away the blood clot, the dura was seen to bulge into the wound, it was incised and a large subdural clot removed. The dura was closed with fine catgut, a pack drain was inserted and the balance of wound closed, except most dependant portion with drain exit. The injury was so extensive, hemorrhage so great, that it looked like an almost hopeless case, but the wound healed per primam and his convalescence was uninterrupted. A peculiar feature of the case was the enormous consumption of water, and a like output of urine. I was at a loss to understand this complication, unless there had been extravasation of blood to the pituitary gland, or trauma at time of injury. He is now both mentally and physically well.

In conclusion, I would advocate that every medical man be prepared to handle surgically every case of skull trauma where hemorrhage exists. Success depends upon careful aseptic technic and prompt action, that in every case of unusual and alarming symptoms in the new-born, subdural hemorrhage be considered.

ACNE: ITS TREATMENT AND PROGNOSIS.*

By J. N. ROUSSEL, M. D., New Orleans.

There are few subjects in medicine about which so much has been written and so little is known as acne. Still I am willing to venture the opinion that any case of acne is susceptible of being cured to-day. I say "to-day" advisedly, because it has only come to pass within the past five or six years that such a thing is possible. In this time we have had added to our armamentarium the vaccins, which, to my mind, are an absolute necessity in the treatment of the average case of acne.

What length of time is required to cure the average case of acne is another question. As a general rule, it is safe to predict that a given case of acne will yield to treatment within three or four months, provided the patient is susceptible of being immunized or of holding his or her immunity.

We find a relatively large number of people who react to the vaccins for a day or two, but who do not hold their immunity. This is often due to the fact that the proper vaccin has not been used. In these people, if the proper vaccin has been used and they still appear refractory, it is absolutely necessary that the bolstering treatment, as it were, be instituted. It has been my experience that, in addition to the correction of intestinal derangements, an intensive course of iron or a combination of iron and the Donovan's solution would almost invariably bring these cases to a point of sustaining their immunity.

While on the subject of iron administration I wish especially to note the fact that a large number of the "lean and hungry" are incapable of assimilating iron in any form. I have found that, in these cases, the addition of a small dose of nitroglycerin, or, for that matter, any of the nitrites, would almost invariably make the assimilation of iron a matter of no moment.

Iron and the hematinics generally are not only indicated in the apparently anemic and emaciated subjects; a great many of the fat and greasy subjects also do as well, if not better, on iron than anything else.

The Donovan's solution, as a tonic, has no equal, in my judgment. How it acts is a mystery to me, but the fact remains that it does act, and very satisfactorily, to both the patient and the doctor.

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In connection with the use of Donovan's solution I want especially to warn against the local application of any sulphur compound, for the reason that after the system has become impregnated with mercury it is a very common and distressing fact that the "black heads" multiply at an enormous rate. This is not really due to an actual multiplication of the comedones, but to a formation of the black sulphid of mercury at the mouth of every follicle. While the Donovan's solution is being administered it is advisable, if local applications are deemed necessary, to apply only the mercurial or zinc salts.

This brings us to the consideration of local applications in the treatment of acne. It has been my experience during the past thirteen years that the local treatment of acne by means of ointments or lotions has been more or less of a joke. There appear, occasionally, cases of acne in which local application seems to do good, especially where the seborrhoic element appears to predominate. In these cases it is not only necessary to treat the face, which is usually involved, but also to apply vigorous measures towards the amelioration of the scalp condition. Most of these patients are sufferers from seborrhea capitis, or what is commonly called "dandruff," and while a large number of authorities are disposed to blame the seborrhoic bacillus for the ravages that are wrought, I am not prepared to agree with them. I fully realize that seborrhea plays a very prominent part in most acnes, but that it is the predominant factor in all cases I am unwilling to believe. If this were true, a vaccin made from the acne bacillus would naturally be indicated. As a matter of fact, the acne bacillus vaccins are the least efficacious of all the vaccins.

I have found that the Van Cott vaccin did the most good of any, after several years of experiment. This is a mixed vaccin, containing streptococcus, three strains of staphylococci, the pneumococcus and the bacillus coli communis. With this vaccin I should be much disappointed if very astonishing results were not obtained inside of two or three months. It is no unusual experience to see very aggravated and long-standing cases of acne clear up in six or eight weeks which, to my mind, is nothing short of marvelous.

In regard to the phylacogens, I simply wish to say that my experience in two cases was sufficient to induce me to abandon entirely their use. The patients were confined to bed for three days

after a dose of 2 c. c., which is considered a small dose. The American people who pay for advice will not tolerate such procedure very long.

The X-ray is very valuable in some cases of acne. I have confined its use to the very inflammatory cases, and to those presenting numerous and very large comedones.

In cases in which pus is prevalent I know of no agent quite so efficacious as the nitro-hydrochloric acid. In these cases, nitro-hydrochloric acid is almost as efficient as the vaccins, but a combination of the two is hard to beat.

In addition to the measures above mentioned, a liberal use of green soap is strongly advisable. The pustules should be opened every two or three days and all comedones should be removed. In order to avoid pitting, which is extremely important, if the pustules are closed with plain or contractile collodion, pits are of very rare occurrence. I have found the Von Graefe or sickle-knife, that the oculists use, is by far the best knife to use in opening pustules. It is so delicately made that it can be insinuated into the affected follicle with absolute assurance that a scar will not result.

Now, getting down to the prognosis of acne, which is sometimes, most generally always, very important to the patient, I wish to call attention to the very interesting fact that the worse cases are usually the most easily cured. The more and the larger the pustules, the sooner we can promise relief. It would be intensely interesting to know why, but life is too short to worry about such whys and wherefores. "Sufficient unto the day is the evil thereof," saith the Good Book, and I am willing to let it rest there.

Young subjects are, as a rule, easy to cure, regardless of sex, but I have learned to be very wary of the young married woman, who is generally out of sorts—constipated, dyspeptic and full of what they call "stomach trouble." In these cases it is safe to promise nothing, and only expect to accomplish something when most of their ailments shall have been remedied.

Another patient for whom I have respect is the woman with an occasional pustule, large pores and a greasy face, who is very desirous of having herself transformed into some sort of a nymph, the Queen of Sheba, or some other beautiful goddess. After having tried every imaginable scheme in an effort to satisfy their yearnings along this line, I have come to the conclusion that the task is

herculean, and, in fact, impossible of accomplishment. It is like trying to make a silk purse of a pig's ear.

And still another of whom I have learned to be wary is the benighted youth who worships at the shrine of Onan, and only washes his face at odd times.

These patients, Mr. Chairman and gentlemen, are extremely refractory and very unsatisfactory to treat. It is no uncommon thing to see them go on for years, under the best advice available, with little or no amelioration of their often distressing condition.

In conclusion, gentlemen, I do not know that I have added much to what is known about the treatment of acne, but if I have only set one or two of you to thinking along this line possibly some good shall have been accomplished.

THE PROBLEM OF MENTAL DISEASES AS A NEGLECTED STUDY: ITS COST TO SOCIETY AND THE INDIVIDUAL.*

By CHARLES V. UNSWORTH, M. D.,

House Physician of the Louisiana Retreat for the Insane,
New Orleans.

Despite the great advances in medical education, as evidenced by an improved curriculum of study and a higher pedagogic standard in the majority of our medical schools, there still remains one great branch of medicine which has not been given the attention it rightly merits. I refer particularly to the study of mental diseases.

Few conditions present a more complex problem than does the study of mental diseases, or, plainly speaking, insanity; and before any intelligent discussion on the question can take place it is necessary that the real significance of mental diseases, or insanity, be appreciated. For practical application, insanity may be defined as a condition which impairs or destroys the patient's capacity to coöperate with those who seek to institute measures intended to promote his comfort or cure. It also disqualifies him from conforming to the conventionalities of social, civil or family life, so that some special provisions have to be made for his proper care throughout the course of his disorder. The study of neurology as a whole is the weakest part of the curriculum of the modern medical

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22-24, 1913. (Received for publication, October 11, 1913.—Eds.)

school; and in no instance, to the writer's knowledge, do these studies include even the elementary essentials of mental diseases or insanity. The utter neglect of this momentous problem, with all of its evil consequences, by our medical educators, is of such far-reaching importance that protest must be registered against its further continuance. Therefore, this paper will be addressed primarily to the medical man known as the family physician, or the general practitioner.

The general practitioner sees all of life's panorama, from the entrance of infancy to the parting of old age, and thus he has greater opportunities for observing disease in all of its phases; his scope of clinical experience is wider; his diagnostic faculties more comprehensive, and his pathognomic judgment keener and more erudite than those of his confreres, who specialize in or restrict their medical studies to certain great pathologic divisions of medicine.

When one pauses for a moment and realizes the familiar anguish and despair wrought by insanity, together with its dire social effects, it is little short of wonder why the study of mental diseases is, for all intents and purposes, so little regarded. To-day I am in a retrospective mood, and memory hearkens back to the time when I was a student of medicine. Not once did I hear a lecture on the subject of insanity. I need not add that I did not see any cases of insanity. If I am correctly informed, this same state of affairs obtains even to-day. That the course of study for the fourth year, or senior class, should include a series of lectures on insanity, is too obvious for further comment. Is it any wonder that many of our patients are victims of diagnostic errors? May not an error in diagnosis in mental diseases mean a ruined life, and in some instances death? Treatment and prognosis, always dependent upon a correct diagnosis, are, in these cases, valueless. That a necessity exists for study of mental diseases can be well realized when we consider the rôle the family physician usually occupies in these cases. "Let us remember that only upon us devolve not only medical responsibilities, but also the moral responsibilities inseparable from the practice of medicine."

We now approach a most vital question—the commitment of individuals to an institution for the insane. Certificates of lunacy are frequently signed by physicians wholly unacquainted with even the essential symptoms of insanity. A certificate attesting lunacy

means deprivation of liberty, and makes of the individual, even though he recovers, a social outcast. Time never erases the sting of institutional treatment. Frequently patients hopelessly insane are received at the Louisiana Retreat, where the family has been assured by the family's medical adviser that the patient will be out in two or three weeks. These cases, instead of being out in two or three weeks, often become decidedly worse. Then the sad, but oft-told, tale as related by the family: "Our doctor said he would be all right in two or three weeks, but now you say he will never recover." This state of affairs cannot but shake confidence in both physician and institution.

How can any medical man give advice as to the treatment of these conditions, when he has never seen or had explained to him a case of insanity? For example, a diagnosis of pneumonia is dependent on the recognition of certain physical signs—it is the same with insanity. The further neglect by medical schools of this important branch of medicine is ample proof of backwardness in medical education.

In a general way I will discuss the importance of institutional treatment of mental disease. Many forms of insanity, aside from those which accompany general paresis, or those cases which, from the first, show pronounced mental deterioration, tend strongly towards recovery, and the indications for treatment are, therefore, to assist, and not retard, Nature in her restorative efforts. Treatment in most cases of insanity can only be carried out in an institution specially adapted to that purpose. A comparison of my experience in outside and institutional work strengthens me in this view.

There is another point which I cannot too strongly emphasize, and that is the importance of fresh air in the treatment of mental diseases. Fresh air, sunlight, hygienic and dietetic measures hold as high a place in the therapeutics of insanity as they do in tuberculosis.

While I believe the measures outlined above have a very wide application in the treatment of insanity—indeed, are of cardinal importance—I do not wish to be misunderstood as intending to maintain that sedatives, hypnotics and hydrotherapy are not useful.

I believe the medical profession should advocate the institutional treatment of all mental diseases, as, by so doing, the patient is given the best chance for improvement or recovery; the family

spared many hours of grief; society not deprived of a worthy individual, and the physician's reputation in diagnosis and prognosis untarnished. In a later communication I will give a summary of the happy results obtained in the Louisiana Retreat by this method of treatment.

Finally, I wish to urge upon every member of this Society, who is engaged in teaching, the necessity of instructing medical students the recognition and treatment of insanity. This suggestion is timely, and I hope it will claim the attention of those entrusted with the medical teaching of our youths.

The question of certificates of lunacy and commitment of insane to institutions are legislative, as well as medical problems, and the State should enact in relation thereto more stringent laws for the better protection of not only the individual, but society in general.

TYPHOID FEVER.*

By E. S. MATTHEWS, M. D., Bunkie, La.

The subject of typhoid fever has already been discussed by the members of this Society, and, like in the tariff question, originality is lacking. Within the past few years preventive medicine, and especially preventive typhoid, has made such strides that we can almost anticipate the day when a second typhoid infection following the first in the same household will reflect disparagingly upon the attending physician. Recently, while a large portion of our regular army was encamped upon the Texas border, Major Russel, of the Army Medical Corps, made a series of experimental immunizations upon soldiers. So successful did these prove that now compulsory immunization is practiced. There now has been a lapse of nine months since the last case of typhoid fever was reported in the army. Mulford, and other biological houses, are now placing this immunizing serum upon the market, and I for one will hereafter, if I can get the consent of the family, immunize all those coming in contact with the patient.

However, there yet remains typhoid to be treated—not prevented—and it is incumbent upon me to outline, in a manner, the form of treatment I have used with some success since I entered the practice of medicine thirteen years ago.

* Read before the Avoyelles Parish Medical Society at Moreauville, October 9, 1913.

Nearly every practitioner of any length of practice has evolved some line of routine treatment as soon as the diagnosis is made, and after this he treats symptoms and prevents complications. I feel sure this is the custom of most of the members of this Society, and I am reasonably sure the custom prevails with the general run of physicians throughout the country. I am no exception to the rule, though as years of experience are added to the date of my graduation I find I am adding less medicine to treatment and applying more thought to proper management and diet. Thus far I can safely say my patients have not suffered from the evolution in the method favorably employed in their behalf. There are certain drugs which, I feel sure, are favorably employed in the treatment of disease, but the majority of drugs extolled by the manufacturers are useless. Of the drugs most employed, I believe turpentine, in the form of a palatable emulsion, stands preëminent. Aside from this drug, given regularly throughout the disease, my treatment is symptomatic. No drastic cathartics, calomel as a type, should be given after the first week.

On foods I could dwell longer. Some years ago some member before this Society said the more he treated typhoid the more he was impressed with the fact that it was a "Ducro's Elixir" disease. No doubt he wanted to be understood as meaning that it was a stimulating liquid nourishment disease. In my opinion, he is right. I would certainly hesitate to imperil my patient with any food that would demand mastication for its digestion. Chicken broths, beef broths, milk, when it can be borne, and particularly buttermilk, with an occasional ounce of a proprietary beef and brandy elixir, constitute my approved diet, this diet to be given both day and night, though more often during the day than at night.

A few of you will recall that a few years ago we had Dr. Halsey, of the Tulane Faculty, as a guest of this Society at a meeting we held at Cottonport. The day we met it was my pleasure to drive the doctor out from Bunkie. Among other subjects discussed on the trip was typhoid fever. Among the dietetics mentioned, I told him of my habit of permitting my typhoid fever patients in the autumn to eat as much sugar-cane as they wanted. I let them eat it *ad libitum*. He became intensely interested, and with pencil and paper began at once to calculate calories or heat units. On his return to New Orleans he wrote me to continue the use of cane

juice and report to him that fall. Knowing that my limited practice would afford little opportunity to gather statistics, I selected the names of about twelve active practitioners from the registered physicians of the State living in the cane section and wrote them requesting them to cooperate with Dr. Halsey and me in gathering information. Some of the physicians responded nicely—one, in fact, so well, and his letter covers the physiological assimilation of cane juice so completely, that I take the liberty of reading the letter of Dr. A. R. Trahan, of Lafayette:

Lafayette, La., August 18, 1910.

E. STANLEY MATTHEWS, M. D.,
Bunkie, La.

Dear Doctor—I beg to acknowledge receipt of your letter of the 10th instant. It will afford me pleasure to assist you in the manner requested. This coming fall and winter I shall employ cane juice in my cases of typhoid, note the results on the kidneys and general body nutrition, and report to you. I may say now, however, that, carbohydrates forming the bulk of our usual diet, my practice has been to allow these patients cane sugar daily in such quantities as they were able to assimilate, which, of course, varies in each case. The body must have sugar to oxidize; if we fail to furnish it, it is obtained by breaking down the body protein itself. In typhoid, and in all diseases for that matter, we undoubtedly get the best results from our attempts to support our patients if we follow closely the means employed by nature to furnish energy and resistance in normal conditions of health. The energy provided by the oxidation of carbohydrates enables the muscles and other tissues to function normally, one of the results being that we do not have to resort so often to artificial stimulants. I think, doctor, that the practical results shall justify fully your expectations. With kindest regards and best wishes, I am,

Fraternally yours,

(Signed) A. R. TRAHAN.

Aside from adding an easily absorbable carbohydrate diet in largely diluted form, I will call your attention to this fact also: the process of mastication removes the accumulated sordes from the teeth, by trituration; removes the debris from the tongue, occupies the patient's mind by the eating process, and, best of all, adds to the systemic circulation a large amount of water, which dilutes the toxins of the disease—in other words, flushes the sewers of the body and causes the elimination through the kidneys. Half-filled blood vessels reeking with poisons are filled with a large amount of clean, sweetened water, which in a short time is filtered and excreted. My confreres, use cane juice in typhoid. The more you use it the fatter and stronger and better preserved will be your patient's tissues when he convalesces.

Louisiana State Medical Society Proceedings.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

DISCUSSION ON PAPER BY DRs. PARHAM AND MARTIN.

DR. F. W. PARHAM, New Orleans: I want to say that the idea of this instrument was suggested to my mind by the remarks of Dr. Milne, of London, at the meeting of the Southern Surgical and Gynecological Association held at Old Point Comfort, Virginia, last December. He had there an apparatus which he showed. It was a rod with a thread on it, on which a nut would work. He had another apparatus to pull that up tight through a ring at one end of the rod. He tightened that and ran the nut down to the bone and cut the rod outside the nut. This suggested to my mind the idea of using silver wire, and in carrying out that idea we doubled the silver wire, making a loop, through which the wire was drawn after being passed about the bone. The free end was attached to the apparatus and drawn tight, mashing a perforated shot placed between the apparatus and the bone. The wire was then cut. The trouble I found was that the wire would break or cut through the shot. Dr. Martin suggested a steel band in place of the wire, and when we applied it to a case it worked very well. The photograph of Dr. Martin's case shows the effectiveness of the band in holding the fragments together.

DR. DANNA, New Orleans: I want to congratulate Dr. Martin and Dr. Parham on the device they have shown. As I understand, it is to be used where we cannot use plates, which is often the case. A great many of these fractures are more or less oblique. I have been using, in the smaller bones particularly, where I could do with a little groove, two strands of kangaroo tendon. Very often that will do in the metatarsal bones or silver wire, double-jointed. I have had a good many of these cases to look after, more than my share lately. I have followed Dr. Martin's technic thoroughly in these cases, although I have never used this band, but I intend to do so when the opportunity presents itself. The screws are hard to use, and this carries out the same principle in larger bones. It is the logical way to treat these fractures.

DR. SMYTH, New Orleans: I had the pleasure of seeing a photograph of Dr. Martin's case on the train last evening. The two

points which strike me are the simplicity of the appliance and the practically perfect result obtained. I must say I think, from the description of the case walking around, the appliance is very efficient.

DR. ADOLPH HENRIQUES, New Orleans: As a worker with the X-ray, I have had the opportunity of seeing many cases of fractures both before and after treatment by the ordinary immobilization methods and by the newer methods—Lane plates, staples, etc. I am especially interested in this case, because I took the skiagraph and passed upon the plate afterwards. If I had not taken the skiagraph I might suspect the normal bone had been exposed and a band placed around it, as the apposition is so perfect. In the skiagraph itself it is difficult to notice any separation at all. I wish to compliment the gentlemen on their new achievement.

DR. ROBERT C. KEMP, Baton Rouge: These cases of ununited fractures are matters of great concern, and especially the choice of method of treating these cases. There is a great divergence of opinion in regard to the method of choice in handling them, and whether you should resort to the open method or the closed. Dr. Martin's device is ingenious and apparently efficient, and marks a great step in advance in handling oblique and spiral fractures by the open method. I am very glad to see Dr. Martin's device where we can get it and use it.

DR. MARTIN (closing the discussion): There are one or two points in connection with fractures which we should understand. This device is for oblique fractures. You can apply it where you use plates or some other device in connection with it. If you put this on a fracture that is not oblique it will not answer the purpose so well. You must have a fracture, on either side. Why? In oblique fractures there is a tendency to overriding. If you put a band around the bones, you are not carrying out this plan. With a band of this kind, with sufficient tensile strength, you have an ideal method.

In regard to the removal of the bands, probably every time you introduce a foreign body in this kind of work there is a possibility of it causing trouble, but my experience tells me that there is less likelihood of removing any foreign body that is immovable than one that is. What is our fear in the Lane plate? We have a fracture; here is a plate. A great many put screws only through a portion of it. What happens? If you move at this end you split the

fragment here, and the chances are the bones that screw will loosen the end of the screw. That is the great danger. To overcome that, I find it is better to put it through the two sides, and, in cases where I have done that, there is less trouble. There is a possibility of the fragment being moved in that way. In oblique fractures, what is the difficulty? There is the obliquity, and the chances are that you have an oblique fracture; you have a thinning of the fragment, you put a plate at this point, and you come near the edge here, which is weak. At any rate, one point is weak; if you put it across on the side, the chances are the same, and it is only in transverse fracture you can depend upon it.

Another important point is, if you want success in the open treatment of fractures, do an operation at once. I operated on this man three weeks after the injury, and had difficulty in reducing the fragments. If this case had been operated on immediately we could, by simple manipulation, put the fragments in place. If you open the fragments immediately you at once commit more trauma than you can commit at the time, with the new vessels and new tissues thrown out. If you go in three or four weeks after, you are breaking up all those conditions, and the thing is going through the process of evolution. In all cases where plates have been used, it causes a delay in union, and in a great many cases where you properly apply the plate no union at all occurs. Mr. Lane has taught us to never attempt to put in any one of these plates for at least six or eight months, in a case where you have a compound fracture or infection. This man was injured in a railroad wreck. He had two fractures of the tibia and fibula, which could not be held in position. I thought, after thinking over the matter, that I would take a chance on infection and try to give this man a good leg, because he was suffering constantly from the irritation of the sharp fragments pressing into the muscle. I took the chance, and I hope I have made no mistake.

DISCUSSION ON PAPER BY DR. KEMP.

DR. F. W. PARHAM, New Orleans: Dr. Kemp has pointed out the advisability and necessity of operation, and prompt operation, in such cases, and the inadvisability of doing nothing in other cases that he has detailed. I believe it is very necessary in these cases to do the operation as perfectly and promptly as possible.

Many years ago Dr. John B. Roberts called attention to the neces-

sity of making scalp incisions to determine, as soon as possible, whether there may not be some injury to the skull, and perhaps compression or other injury to the brain, and I believe it is a good plan to follow in these cases. I believe Dr. Kemp did not especially insist that, but it seems to me that is well illustrated in some cases where we may have serious injury from compression or actual injury of the brain from a depressed bone without any evidence of injury of the skin, except extravasation, and it will be well to make an incision through the skin and find out positively whether there is depression of the skull, rather than to allow the case to go until symptoms indicate serious cerebral damage.

I remember an interesting case some years ago in my practice, where it proved to be one of the branches of the middle meningeal artery which was injured, with no sign of injury, nor history of any. This man was kept in jail several days, supposing that he was intoxicated, when they became alarmed that he did not recover from the alcoholic drunk, and called in a physician, who called me. I became suspicious of some injury, and asked if he had been in any altercation. There was a positive statement made that nobody knew of any altercation that had taken place. He was found unconscious on the street and carried to jail as though he was drunk. They thought he was drunk. There was a little extravasation along the zygomatic arch and some temporal edema, that made me suspicious there might be some injury or blow of some kind, and I therefore studied the case more particularly, believing it was not due to intoxication. I became convinced, from the muscular movements, that there was some injury, and I concluded I was justified in doing an exploratory operation. I made an incision through the skin, took off a piece of the temporal bone, and found a clot of blood large enough to push the brain fully an inch and a half from the skull. I removed the clot, and the man finally made a recovery.

DR. E. M. ELLIS, Crowley: This discussion recalls to my mind the case of a little child I had some five years ago in which there was a punctured wound of the skull which did not present any grave symptoms at the time. The accident occurred while the children were at play. One of them accidentally struck the other in the head about the mid-portion of the parietal bone with a sharp-pointed file, which proved afterwards to be a penetrating wound of the skull, but at the time there were no symptoms indicative of such a wound. The little fellow did not seem to suffer any. He

presented no signs whatever of penetration of the skull; nor any extravasation. There were no pressure symptoms, so far as I could determine, and I simply dressed the wound externally, and the little fellow recovered very promptly from the injury; but in about ten days after the injury he began to develop septic symptoms. He developed temperature, headaches and signs of cerebral pressure, such as drowsiness, which immediately called my attention to the fact that there was at that time a penetrating wound of a small nature caused by the thrust of the file, so I made an exploration, opened the skull, and found a pinhole-like opening in the skull. I suspected the skull, at that time, had been penetrated, carrying with it infection, and would no doubt find an abscess in the brain. I made a free opening in the skull, opened the dura, and found about six drachms of pus in a well-localized abscess underneath the dura. I instituted drainage, and the recovery was very prompt.

DR. L. J. STIRLING, Baton Rouge: I wish to say I assisted Dr. Kemp in several of these cases he has reported, and there was one case especially that emphasizes the fact that no skull injury should be considered fatal until the patient is dead. I refer to the case that had an extensive comminuted fracture, depressed at the side of the brain, where an enormous amount of bone was removed. There was an enormous subdural clot removed, and yet the man recovered without any bad or unfavorable symptoms. It is one of the most remarkable recoveries I have seen in my professional life.

DR. J. A. DANNA, New Orleans: I would like to emphasize one or two of the points that have been made. One is, that wherever there is the least doubt as to the possibility of the skull being fractured, an incision should be made and that doubt removed. The other is the point Dr. Stirling has just made—that no case is too far gone for an operation. I make this point particularly in these fractures of the vault, where we know there is a fracture and where the skull has been shattered, more or less, and it is just merely a question of incising and removing a few fragments; but those cases are the ones that we have been in the habit of considering beyond surgical relief. In these cases of fracture at the base of the skull, where the patient is knocked out immediately by the blow, and where we have reason to believe that there has been so much cerebral injury done, it is useless to try and operate. If there is a fracture at the base of the skull the symptoms may be such that we cannot do anything for that patient. We will not save every

patient, but probably one out of every ten. Any procedure which will restore life to one man out of ten should be carefully considered.

Where there is no indication as to whether the fracture is on one or the other side, we should do a sub-temporal operation—that is, make an incision in the temporal region, straight up and down, about the middle of the zygoma, get down to the bone in the temporal fascia, remove a section of that bone about the size of half a dollar or a dollar, and if we find any extravasation outside of the dura, get inside the dura, and we will probably find a large quantity of blood and crushed brain tissue.

About four weeks ago a young man came into the hospital in such a condition that I was laughed at for trying to do anything for him in the way of operative intervention on him. He had no symptoms of a fracture of the vault at all. He had some ecchymosis of the conjunctiva on the right side. I did a right sub-temporal decompression on him, removed a button of bone about the size of a dollar, and when I opened the dura a large quantity of clotted blood and perforated brain tissue protruded from it, and even then I thought the man was too far gone, but he is well at this time.

There are two points in the technic I would call attention to— one is, never fail to drain any case in which you make an incision or in which you do a craniotomy; the other is, in these fractures, where the fracture is directly at the site of the injury, do not extend the incision already there, do not extend the scalp wound, but make a horseshoe incision around it. If you do not, you will get a part of the cerebral vein. If you can only preserve either the dura, bone or periosteum, you will not get a hernia; but if you had an incision through the scalp and extend that incision, removing fragments of bone at that point, when you get under that you will find the dura has been destroyed. There is nothing between the external layer and the brain, and you are going to have a condition that will give you a hernia of the brain. If, however, you make a large horseshoe incision around the bone, you can easily suture the incision afterwards and get an accurate line of incision that heals primarily and leaves a small scar. The periosteum comes together at the point where the original wound was, and you have, at least, periosteum to rely on. Then you can drain in each lower end of the horseshoe incision, or any one of them, and in that way avoid a sinus into the brain.

With reference to drainage, I want to emphasize this point, and I believe we never can learn so well as by our mistakes.

Early in my career, or experience, I operated on a young man who was having convulsions, and who had received an injury of the forehead when a child. There was a distinct depression, and I thought, by removing a portion of the depressed bone, I might remove the source of irritation and cure his convulsions. I removed a section of the bone, and as there was nothing but a little oozing from the edge of the bone, I sutured the skin of the forehead. I did not think drainage was necessary, but that mere pressure would be sufficient to stop any bleeding. Forty-eight hours later the boy had a convulsion; his temperature went up to 105° . I saw that something serious was taking place. I opened the scalp wound, and the left hemisphere of his brain had been almost completely compressed by the tremendous blood clot. He had sufficient hemorrhage from the bone to crush the brain to such an extent as to actually kill him. I could not give you a better argument in favor of drainage than that.

DR. KEMP (closing): All of the cases of fracture of the skull I have operated on were drained except one, and that was the case of this child. There was not much hemorrhage in that instance, and there did not seem as if there was going to be much hemorrhage from where the large fragment was removed. That is the only case in the series of cases we have had in which we did not drain, because neither infection or hemorrhage was anticipated.

I wish to thank Drs. L. G. Stirling and E. O. Powers for their able assistance in these cases, and for the privilege of reporting one case each from their service.

DISCUSSION ON PAPER BY DR. ROUSSEL.

DR. SALATICH, New Orleans: I have used a combination of serum occasionally, with lactic acid, to clear up some of these intestinal flora, with very good results.

DR. T. B. SINGLETARY, New Orleans: In defense of the phylacogen treatment referred to by Dr. Roussel, I will say, so far as the reaction is concerned, I usually administer it in 5 c. c. to the dose, especially in the treatment of rheumatism, and the reaction in rheumatism following its use is very slight. Recently I treated a young man for rheumatism with phylacogen, gave him 5 c. c. every second day, and he had six doses without confining him to bed and

without producing a local reaction. In larger doses I imagine you would not get much reaction.

DR. ROUSSEL (closing): I have very little more to say. I have never used the lactic acid, but I have no doubt it will do as well as nitrohydrochloric acid. What Dr. Singletary said about phylacogen and the large doses is probably true, but I was warned against giving large doses of phylacogen by the Parke Davis representative, and I cannot see very well how large doses will produce less dangerous results. I rather suspect the opposite. Ten c. c. doses ought to produce more distress than 2 c. c. doses. That is generally true of almost any drug.

DISCUSSION ON PAPER BY DR. UNSWORTH.

DR. ISADORE DYER, New Orleans: It was my hope that somebody who was engaged in more general lines of medical practice would discuss this interesting and most timely paper, but as no one has elected to do so, I shall be glad to say a few words. I believe that no one who had the privilege of visiting the East Louisiana Hospital for the Insane yesterday could sit quietly and listen to the paper just read without feeling that a large part of the suggestion which Dr. Unsworth has made is being carried out in that institution. As one of the visitors, I first had considerable pleasure in expressing appreciation of the opportunity of seeing the most excellent work which is being done in the care of patients by means of occupying them during their incarceration.

The main point, however, which interests me is the pedagogical side of nervous diseases, and I would say this is a matter which is concerning those who have the curricula of medical colleges in hand now. It is a fact that very little coördination as to instruction in nervous diseases is current in medical colleges, and the charge made in the body of the paper is correct. The average man who graduates in medicine receives but little instruction in nervous, and particularly in mental diseases, and not enough to make him sufficiently familiar to act as the law permits him in this State as a commissioner. He derives his chief education from the experience which he gains after he graduates, and his service, therefore, is discounted by his ignorance.

There is a strong movement instituted by the authorities in charge of the Hospital for the Insane in Washington towards coördinating instruction in nervous diseases throughout this country,

and I believe that if the matter of education in mental diseases was agitated more in State societies, after a time there would be no necessity for a paper such as Dr. Unsworth has read.

DR. UNSWORTH (closing): I wish to thank Dr. Dyer for his kind remarks on this paper, and my only reason for writing this article is to call the attention of the medical schools to a more thorough education in this line. Since writing this paper, however, I have been informed that there has been added to the curriculum of the Tulane University the study of mental diseases, which I consider a step forward. Since having charge of the Louisiana Retreat I find the greater necessity for the study of mental disease to the medical student, so he can at least make a probable diagnosis and prognosis. The doctor who knows nothing of insanity tells the family to send him or her to the Louisiana Retreat and he will be all right in two or three weeks, when, as a matter of fact, the patient is hopelessly insane. This kind of advice destroys the confidence of the family in both doctor and institution. So, gentlemen, I hope this article will have the effect of stimulating a more thorough study on these lines.

PARISH SOCIETY PROCEEDINGS.

AVOYELLES.—The Avozelles Parish Medical Society met at Moreauville on October 9, with the following members present: Dr. T. J. Couvillion, Dr. Leonard Chatelain, Dr. Philip Jeansonne, Dr. R. G. Ducoté, Dr. G. R. Fox, Dr. J. C. Parrott, Dr. W. A. Quirk and Dr. E. T. Matthews. The meeting had been postponed on account of the bad weather, and this partly accounted for the small attendance. Dr. Fred Mayer, our distinguished State president, was our guest, and after giving an interesting talk to the profession at the banquet he delivered an eloquent address to the public at the school house.

Dr. Adams, of the Rockefeller Commission, happening to be in town, was also invited, and he, too, gave to the public a talk on his specialty.

The meeting was one of the most interesting this society ever had, the only thing to be regretted being the small attendance. The next meeting will take place at Bordelonville in January. Yours truly,
(Signed) DR. J. E. BRAHIC, Secretary.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

"POSTGRADUATE MEDICAL EDUCATION IN THE UNITED STATES."

We have headed our disquisition of a subject of general interest with a caption between quotation marks, out of a desire to acknowledge a reminder from the *Journal of the A. M. A.*, which editorially discusses the question in the October 25th number.

The history of the development of schools for physicians in this country is recent, as most of these have come into existence within the past thirty years. Until a very recent period, no academic intention prevailed at such institutions; the chief purpose being to satisfy the demand of a large number of physicians to get a practical idea of modern views and procedures in medicine and surgery. With the development of a more scientific spirit in medicine, however, the necessity for the application of this postgraduate teaching became obvious, and several of the schools were affiliated with university teaching. Among these, Tulane took over the New Orleans Polyclinic; the University of the City of New York joined with the New York Postgraduate School; the Philadelphia Polyclinic (already doing scientific laboratory teaching on its own account) came closer to the University of Pennsylvania.

The schools of medicine in cities having no postgraduate schools had already developed courses for graduates, and with the demand for short periods of instruction there arose the provision, so that to-day several of the larger schools of medicine offer graduate instruction in practical as well as technical and laboratory subjects.

We have some time since prophesied that the flow of American students to European centers would stop as soon as our own medical institutions met the need of providing equal facilities.

It is gratifying to see that New York is at last awake to the need of organization of the great opportunities of so magnificent a field and that a central control will provide a plan for the student physician by which he may avail himself of the material afforded.

The greatest need, however, in a place like New York, is that the

opportunities should be arranged with such a degree of coördination and with such a spirit of Hippocratic comity that the men who need the field of study most may use it, without too great a sacrifice. We hear now and then of clinical privileges offered physicians in the larger cities, with a fee for such privileges which makes it impossible for any except the prosperous man to indulge his desire for such advantages. Fees should be charged, but they should be reasonable and within the reach of the average income of the practitioner of medicine.

New Orleans has no such opportunities as New York, but, for the men who find New York too far away, there are opportunities, and in some instances opportunities which New York and no other city in the United States can duplicate. The clinical material in New Orleans is concentrated in a few hospitals, and the physician who comes for postgraduate work has ample chance to study cases and methods.

There is a close relation of most of the hospitals with the only medical school in New Orleans—Tulane—through which the teachers and physicians may have access to wards, clinics and laboratories. The Tulane College of Medicine offers the physician not only the review in systematic courses, but practical short periods of instruction in the clinical branches.

More than this, laboratory courses in medicine, pathology, hygiene, operative surgery or gynecology, and even in modern physiologic methods, are offered to the graduate.

While the present facilities of the New Orleans medical school have not attracted the special notice of the *Journal of the A. M. A.*, we believe that the development of New Orleans as a medical center is none the less on the way, and with the special diseases for study here, under organized instruction, we may hope to hold our own when the summing-up of advantages is undertaken.

THE FIELD OF MEDICINE.

The rapidity with which the point of view changes in most things in this twentieth century makes us pause to consider to what reaches our purposes may carry us. It is not a decade since the revolution in medical ideas began, through which, from a purely practical view of medicine, there has come about an ultra laboratory

coloring of diagnosis and practise. The clinician of yesterday has no place in modern thought.

Physiology erstwhiles occupied a transitory place in the medical curriculum, as it does to-day, ostensibly, and yet almost every division of medical practise is intimately related with bio-physiological studies. The physician, out of the active current of medical advance, finds himself lost in a maze of new problems, associating new functions, or newly-discovered activities of organs with which he believed himself to have had some fairly familiar anatomical and physiological knowledge.

The mass of accumulated facts in medical science has demanded interpretation, and this has been undertaken by a further assignment of problems to specialists in research and in practise.

Formerly the surgeon and the general practitioner were supplemented by men specially trained in the eye, nose and throat, skin, genito-urinary, and perhaps in children's and nervous diseases. Now in each of these special divisions there are still further segregations of special fields, occupying the whole time of those devoting particular attention to them.

In the meantime the medical student in regular course gets a vista of a diversified prospect and already plans his future, long before it is imminent.

From the original seven branches essential to the medical curriculum there have gradually grown the satellite subjects of each, so that anatomy has broadened its special fields; physiology has concerned itself in metabolic problems relating directly to disease; chemistry has expanded into a mathematical and biological necessity; and out of surgery, medicine and obstetrics and gynecology have grown special laboratories engaging the questions of embryology, cytology, pathology, bacteriology and special serology, while the side lines of forensic medicine and neurology are growing into all parts of the curriculum and are running corollary to each subject.

Pedagogs propose new arrangements of instruction to meet the growing field, and most of them stand agape at the impossibility of adequately training the student in the time allotted. In the meantime both teacher and student struggle with the task of provoking assimilation of material under adverse circumstances. The lengthening of the preparatory year and the necessity of lengthening the medical course together make the future of medical education a great problem.

Abstracts, Extracts and Miscellany.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

NITROGEN ELIMINATION IN TUBERCULOSIS.—Labbe and Vitry state that the total nitrogen excreted in the urine of tuberculous patients is lower than normal; it averages 8 gm. in twenty-four hours. The urinary coefficient is lower than normal, which shows that more nitrogen than normal is being excreted in some other form than in urea. This is verified by studying the purins and the ammonia, which are both excreted in somewhat larger quantity than normal. The increase in purins is accounted for by the fact that the abnormal destruction of the patient's own tissues sets free an increased amount of nucleins. All these urinary findings increase in degree with the progress of the disease.—*Revue de Médecine* (Paris).
J. A. S.

THYMUS DEATH IN THE NEW-BORN.—David (*American Journal of Obstetrics*, May, 1913) reports the case of a child who died in a spasm of dyspnea twenty-four hours after birth, exhibiting nothing abnormal in the neck and thoracic regions. The post-mortem examination showed a greatly enlarged thymus in both lobes. The embryology and histology of the gland indicate that it is intimately concerned with the blood-making and metabolic processes of the fetus. Recent studies in relationship existing between the placenta and the thyroid gland suggest that the large thymus in the new-born must share in various disturbed conditions of maternal and fetal metabolism. In abnormal states it is reasonable to suppose that it adds a toxin to those formed in the placenta and in the ductless glands of the fetal body.

A possible reason for its sudden enlargement after birth may be found in the measures sometimes taken to establish respiration in the new-born. The most simple and universally employed method consists in folding and unfolding the body of the child in such a manner as to encourage the circulation of the blood through the lungs and thorax. A delicate lymphatic organ, like the thymus, composed of lymph follicles, and with a very rich blood supply, might easily become surcharged with blood during this manipula-

tion, and its sudden engorgement through mechanical pressure might bring about death.

These suggestions are based, first, upon analogy between altered condition of other ductless glands of the fetal body and sudden death; and, secondly, on reported results of treatment addressed to the relief of mechanical pressure.

J. A. S.

THE RELATION OF PHENOLSULPHONEPHTHALEIN EXCRETION TO THE UREA CONTENT OF THE BLOOD.—Agnew (*Physician and Surgeon*, March, 1913) points out that the phenolsulphonephthalein test as an index of kidney efficiency has to a great extent superseded all other methods, but that the estimation in the blood of retained nitrogenous products, particularly urea, as an index of renal efficiency has within the past few years received an impetus at the hands of the French school. Since both these methods are of comparatively simple application, a parallel series of determinations was made, the object being to determine whether there was a relationship between the phenolsulphonephthalein excretion and the amount of urea in the blood. As a result of this study it was found that the two methods run parallel and that with the decreased phtalein output there was an increased amount of urea in the blood. There are, however, some marked exceptions.

Agnew concludes that in general the urea content of the blood varies inversely as the excretion of phenolsulphonephthalein, but the relation is not an absolute one.

J. A. S.

BY-EFFECTS OF SODIUM BICARBONATE IN LARGE DOSES IN DIABETES.—Hanssen presents evidence to show that, while the bicarbonate may arrest coma in diabetes mellitus, yet this effect is only temporary. The coma is merely postponed, and it is sure to return sooner or later. The alkali has also a pronounced effect on the weight, probably from the following retention of water. He tabulates fifteen cases in which the weight increased from 0.1 to 12.4 kilos (27.28 pounds) in from one to eleven days. The details of eight coma cases are also tabulated, with the necropsy findings. Extreme hyperemia and edema in the meninges of the brain were found in every case, accompanied by hemorrhages in five cases. In three of the six cases in which the sodium bicarbonate had been given intravenously, clonic or tonic spasms followed. Albuminuria was a constant finding in all the severer cases of diabetes, but it regularly subsided under the alkali.—*Zeitschrift für Klinische Medizin* (Berlin).

J. A. S.

THE PARATHYROIDS IN NEPHRITIS.—In order to induce hyperfunctioning of the parathyroids, Georgopulos removed the thyroid in rabbits and then induced nephritis by injection of uranium nitrate. The results observed suggest that the parathyroids counteract the systemic intoxication in nephritis, and thus that an extract of these glands might prove useful in treatment of nephritis in man.—*Ibid.* J. A. S.

SUMMER DIARRHEA OF INFANTS.—Suner sets forth the chief cause of summer diarrhea of infants in his country, Spain, as (1) overfeeding in summer. The child needs less nourishment during the heated term, but the amount given is not generally reduced; (2) artificial feeding; (3) spoiling of food by the heat; (4) decreased capacity for intestinal digestion during the summer time; (5) decrease in the bactericidal strength of the intestinal secretion; (6) increased bacterial growth on account of outside heat; (7) transmission of pathogenic germs by flies. He especially emphasizes this latter factor. In prophylaxis he recommends (1) decrease in amount of nourishment given in summer; (2) propaganda for breast feeding; (3) aseptic care in bottle feeding; (4) avoidance of too great exposure to heat, and (5) screens to keep out flies.—*Jahrbuch für Kinderheilkunde* (Berlin). J. A. S.

TREATMENT OF THE DENGUE-FORM FEVER.—Kennedy details in the *Indian Medical Gazette* his plan of treatment. Many of the cases reporting sick with this disease were found to have enlarged spleens—a legacy of old-standing malarial infection. From all these, and from any other doubtful cases, blood-smears were taken and sent for examination for the malarial parasite; they were subsequently put on quinin, 10 grains, so as to be on the safe side. The quinin did not in any way shorten the fever.

Aspirin and phenacetin relieved the body pains and headache most effectively. Liquor morphinæ in frequent small doses had to be given in one or two cases in which the former failed, or to control vomiting. The routine treatment adopted was:

1. Initial purge.
2. Rest in bed, with light diet.
3. Diaphoretic mixture and aspirin, 5 grains, every four hours, when pains were bad.
4. Tonic mixture during convalescence.

J. A. S.

EFFECTS OF COLD AIR ON BLOOD-PRESSURE OF CHILDREN AND YOUNG ADULTS IN VARIOUS STAGES OF TUBERCULOSIS.—Hoobler, in the *American Journal of Diseases of Children*, presents this summary of his studies upon this subject:

1. Blood-pressure in children having tuberculosis is persistently low, as has been found to be the case in adults.

2. When a patient is transferred to the open air there is a gradual increase of blood-pressure within one or two hours.

3. If the patient is kept constantly in the open air, the pressure is raised to well within the normal limits, and sustained at that point as long as the patient remains in the open air.

4. The more advanced the case, the lower the pressure indoors, and the higher the rise when put in the open air.

5. After several days in the open air the blood-pressure does not fall as much when placed in the ward as it did previous to outdoor treatment.

J. A. S.

Department of Nervous and Mental Diseases.

In Charge of DR. R. M. VAN WART, New Orleans.

THE EXPERIMENTAL TRANSMISSION OF DISSEMINATED SCLEROSIS TO RABBITS.—Bullock (*Lancet*, October 25, 1913), after calling attention to the various theories concerning the cause of disseminated sclerosis, such as an inherent defect of the nervous system, syphilis, various acute infectious diseases, chronic poisoning with metals, the puerperium and trauma, describes an experiment on rabbits with the cerebro-spinal fluid obtained from a typical case. Thirteen days after injection a paralysis of the hind limbs, and on the sixteenth day a paralysis of all four limbs appeared. The animal was then killed and changes in the central nervous system similar to those seen in disseminated sclerosis were found. A fresh supply from the same case was divided into two portions, one of which was passed through unglazed porcelain. On the twenty-first day the rabbit which had received the filtered fluid became paralyzed, and on the twenty-second day the other animal became paralyzed. One of the animals recovered, with a spastic gait, and at the end of six weeks was killed and an emulsion of the spinal cord was injected into another animal. This animal died in seven days

without showing symptoms. The examination of the spinal cord in each of the cases showed changes similar to those found in the first animal. The cerebro-spinal fluid from another case was injected into a wild rabbit with negative results. From this he concludes there is a possibility that disseminated sclerosis is only a symptom complex, and may be due to more than one cause, and that one form at least is due to an organism that will pass through a Berkefield filter or to a special toxin.

VAN W.

INTRAVENOUS INJECTION OF SALVARSAN IN THE CHOREA OF SYDENHAM.—Marie and Chatelin (*Bull. de l'Acad. de Méd.*, December, 1912) draw attention to the value of salvarsan and neosalvarsan in this condition. Four injections, in doses of 20 to 35 cc., were given at eight days' interval. They have had no accident of any kind, or, at the most, a transient malaise, and, in some cases, a scarlatiniform eruption. This method of treatment is more rapid in its results than any other treatment, the duration of the disease being shortened to about a month from the commencement of the treatment. A marked feature in all cases was the rapid improvement of the general condition, more especially of nutrition, and this was so even when the choreic movements disappeared comparatively slowly. A certain number of the patients who had suffered severely from vomiting and almost complete anorexia developed an appetite and gained weight. The eutrophic action was one of the remarkable features of the treatment. The ages of the patients varied from eight to eleven years, and in a good many of the cases the Wassermann test was done on the cerebro-spinal fluid with negative results. The author quotes Von Bokay and Haines as being the first to use salvarsan subcutaneously in classical cases of chorea. Recently Weill and others have used "606" per rectum in chorea, and claim to have obtained an appreciable amelioration of the symptoms. The authors do not believe that the beneficial effects which follow the use of salvarsan in chorea are in any way proof that the disease is syphilitic in origin. The arsenic may quite well be supposed to act by increasing the leucocytes, and so adding to the resistance of the body toxins.

VAN W.

TREPONEMA IN THE BRAIN OF GENERAL PARALYTICS.—Levaditi, Marie and Bankowski (*Ann. de l'Inst. Pasteur*, July, 1913) show that by proper technic and systematic examination of each cerebral convolution the treponema can be found in the great majority, if not in every case, of general paralysis. Fresh brains should be used,

the necropsy having been performed as early as possible. Each convolution is examined, beginning with the posterior zones of the frontal. After dissection of the pia mater a small fragment of cerebral cortex is cut off and an emulsion made by adding a few drops of saline. The emulsion serves to make a preparation for the ultra-microscope and for smears, care being taken to first dilute it. The smears are colored (1) with Indian ink, (2) by Fontana's method (see *Pathologica*, 1913, No. 109), (3) by Loeffler's process. By the second method the spirochetes are colored brown-black on a yellow ground; it is easy to distinguish the nerve fibrils, which are colored clear yellow. Nine fresh brains of typical general paralytics were examined by the above processes, with eight positive results. On the other hand, sections impregnated with silver gave only one positive result, in one instance being negative when the rapid methods showed enormous quantities of spirochetes. Of the rapid methods, examination by the ultra-microscope appears to be the best, and the authors recommend beginning with an examination of the convolutions of the anterior region of the brain by this means, afterwards controlling by the other methods. All eight subjects died after apoplectiform seizures. It may, therefore, be concluded that treponema constantly exist in the cerebral cortex of general paralytics who die in ictus. The quantity varies sensibly, and a striking fact is the disposition of the parasites in more or less circumscribed foci. They are only found in the cortex proper, and an examination of the white matter immediately adjoining a rich focus gave negative results. In one case, spirochetes were found in the fluid from the left lateral ventricle. From these facts the authors deduce that general paralysis is a disease due to the pululation of the treponema in the cerebral cortex and to the lesions which this pululation engenders. The proliferation of the parasites appear to proceed by successive attacks; the localization varies, being most frequent in the anterior zones. When a parasitic focus is spontaneously sterilized after having caused indelible lesions, another forms in a convolution hitherto intact, which explains why the areas most affected macroscopically are not always the richest in parasites. It seems probable that the ictus apoplectiforme of paralytics corresponds to these acute treponemic attacks, especially when localized in the motor zones, for in the only case in which the parasite was not found, in spite of well-marked lesions, the patient had no apoplectiform attacks, but died of general enfeeblement.—

Miscellaneous.

THE NERVOUS AFFECTIONS OF TOBACCO-USERS.—Frankl-Hochwart states that he has encountered sciatica in 31 cases and neuralgia in the arm in 22 others, in all of which excessive smoking seemed to be the essential factor. Tobacco, also, he says, seems to render the motor nerves peculiarly susceptible to the effect of slight trauma, as in the case of a lawyer of 30 who had slight radial paralysis following a strained attitude kept up for several hours in order to see better during a theatrical performance. The man was otherwise healthy and not a drinking man. A merchant of 40 also had slight left peroneus paralysis after playing cards for an evening with his legs crossed. The paralysis subsided in a week under electric treatment. Diffuse pains are more common. Hochwart has had 110 cases of this kind, the pain a disagreeable gnawing sensation in the extremities, chest or back. Sometimes the knee-jerk was a little different on the two sides, otherwise the nerve and joint findings were normal. In others some joints were slightly enlarged; it is possible, he suggests, that nicotine poisoning might afford a predisposition for chronic arthritis. He rather doubts the existence of an actual nicotin polyneuritis, but is convinced that a superposed factor, otherwise harmless, might develop it, and cites three cases possibly of this origin, mentioning further Bury's case in which there was also tobacco amblyopia, and all the symptoms subsided when the man of 35 gave up smoking. Bury has stated that in two other cases of tobacco amblyopia the men did not have quite normal control of certain fingers, and there was some numbness and anesthesia. Hochwart says of intermittent claudication, in which tobacco certainly plays an important role, that there must be a pre-existing tendency to cardiovascular derangement. Persons affected with this angiosclerotic intermittent dyscrasia often present other anomalies in development, and Jews seem peculiarly predisposed to it. He has a patient who is an immoderate cigarette smoker, but seems healthy except for a vasomotor neurosis in the legs; they tire exceptionally easy as he walks, but the arterial system seems normal, as also in a second case of the kind, in a man of 24, the symptoms suggesting Dejerine's intermittent claudication of the spinal cord, with other symptoms indicating nicotin poisoning and the whole train subsiding on refraining from smoking. These patients

smoke 40 cigarettes a day or more, one having commenced to smoke at the age of 10. Tremor was noted in about a tenth of the total cases, suggesting nicotin poisoning. Among 28 patients with writer's cramps 18 were moderate and 7 excessive smokers, only 3 not using tobacco. His records contain 70 cases of anomalies in the genital functions in young men who smoked a great deal, generally cigarette smokers; in a certain proportion these sexual disturbances were the only manifestations of nervous trouble. A few had some inherited nervous taint. The disturbance disappeared in a number of these patients on abstinence from tobacco. He discusses further the action of the nicotin on the heart and respiration, and concludes his article by emphasizing the fact learned from his experience that the localization of the toxic action of nicotin is very much like that of syphilis. There may be changes in the optic nerve, weakness of memory, transient aphasia, vestibular vertigo, tremor, hemianesthesia or ataxia, This fact suggests that we should not be too hasty in classifying such symptoms in hard smokers as neurorecurrences of the syphilis. In 45 cases of apoplexy in syphilis, 44 per cent. were hard smokers, and 34 per cent. were great or immoderate smokers among his 353 patients with tabes or general paralysis. Frankl-Hochwart is privat-docent of neuropathology at Vienna, and he has been collecting data for 16 years on the nervous affections of tobacco-users. The present article is based on 1,500 cases from his private practice, but he excludes from consideration 700 patients in whom some other toxic element co-operated, especially diabetes, syphilis or alcoholism.—*Deutsche Medizinische Wochenschrift (Berlin)*.
J. A. S.

TUBERCULOSIS OF THE KIDNEY.—(*American Journal Obstetrics and Gynaecology*, September, 1913.) In quite a lengthy communication Kapsammer reviews the subject of renal tuberculosis. He states that the condition is generally unilateral and most frequent in men; it is found as often on one side as the other. Primary renal tuberculous infection is, as a rule, acquired through the blood route. The lymphatic and circulatory systems together with anatomical tissue continuity also offer avenues for the infection of the whole genito-urinary tract. Ascending infection is seldom encountered. Nephrectomy is the only therapeutic measure of avail and should not be delayed once diagnosis is established. In

event of ureteral involvement Kapsammer advises the removal of the kidney and ureter in one piece, thereby diminishing the post-operative dangers.

HOWARD D. KING.

THE DIAGNOSIS OF TUBERCULOSIS OF THE KIDNEY.—(*American Journal of Medical Sciences*, September, 1913.) F. E. Keene and J. L. Laird after a most conclusive study of this subject declare: The renal organ is the primary focus of disease in tuberculosis of the uro-genital tract of the female; the infection has its origin in some other organ and reaches the kidney by the blood route; the condition exhibits, in both kind and degree, a wide pathological variation. There are no characteristic subjective symptoms except those referable to deranged bladder functions; pyuria is the rule and hematuria the exception; the temperature is normal or but slightly elevated in the evening—a high temperature means a mixed infection; the palpatory findings are dependent upon the extent of the pathological changes; the tuberculin reaction is of uncertain value; the cystoscope is of the greatest importance in making the diagnosis; for diagnosis in suspected cases it is necessary to avail one's self of both a clinical and laboratory examination; animal inoculation should be done by the Bloch method, and the subcutaneous or intraperitoneal methods as controls; positive laboratory results by either method means tuberculous infection of the uro-genital tract—of renal tuberculosis in the female, in the male the exact site to be definitely established by further clinical and laboratory examinations; and, in conclusion, a single negative laboratory report does not necessarily mean the non-existence of renal tuberculosis. H. D. K.

A NEW METHOD FOR THE DIAGNOSIS OF RENAL TUBERCULOSIS.—(*Journal d'Urologie*, III, 1913.) Buerger states that an examination of an excised portion from the meatus of the ureter will reveal the presence of miliary tubercles at a time when all other diagnostic signs are wanting. This tissue may be the seat of miliary tubercles, when the only visible change will be the appearance of "oedema." Excision of the mucous membrane from the ureter offers a positive diagnosis, when other diagnostic aids, such as ureteral catheterization and animal inoculation, prove negative. It has, by this method, been shown that a clear urine and absence of symptoms do not negative a diagnosis of renal tuberculosis. In the incipient stages of renal tuberculosis, espe-

cially in the doubtful cases, a tuberculous focus may become established at the meatal opening of the ureter. The ureteral mouth may be the site of miliary tuberculosis whilst the remainder of the ureteral tract, and even the pelvis, be but slightly, if at all, diseased. This method of diagnosis should prove valuable when the usual signs of kidney tuberculosis are obscure or absent.

H. D. K.

Medical News Items.

STATE MEDICAL EXAMINERS.—At the examination held in New Orleans, October 27, 28 and 29, the following candidates for medical licenses were successful: James C. Walker, Clyde S. Wilson, Valentine Simmons, Stanley G. Odom, Robert E. Ellzey, Marion A. Kirklin, Paul K. Rand, Charles E. McWilliams, Frank F. Young, Jr., Brinsfield King, Arthur L. Duplantis, Joseph Raphiel, Lea B. Sartin, James F. Faith, Dandridge P. West and John G. Sanders. At the examination held October 28, the following midwives were successful: Matilda E. Berot, Mrs. Joseph Fals, Viola O. Dominique, Mrs. Belle Douglas and Hattie Wilson.

ITALIAN CLINIC.—An Italian clinic, which will provide for the medical treatment of poor Italians, and which is the first step towards the realization of a fully-equipped Italian hospital, was the result of a meeting held recently by Italian doctors. Dr. J. A. Danna is the president, and has announced that the clinic will open shortly in the building of the Italian Hall Association and receive patients from 8:30 a. m. to 9:30 p. m. for the present. In connection with the clinic a pharmacy will be operated, which will furnish medicine free to those who need it. The Italian doctors participating in the organization of the clinic, and who will each in turn devote a part of his time to this work, are: Drs. J. A. Danna, J. Cirino, J. Signorelli, A. B. Jannarelli, D. Merendino, E. F. Salerno, L. K. Canepa and A. Maestri.

TYPHOID AT CAPITAL.—During the recent spell of typhoid fever in Baton Rouge, it was thought that the cause was due to the contamination of the city water. After careful analysis and examination of both the milk and water received from Baton Rouge by G. B. Taylor, State analyst, and Dr. W. H. Seemann, State bac-

terio-logist, it was found that the cause was not due to water contamination, but more likely that the flies caused the fever.

THE TRI-STATE MEDICAL ASSOCIATION of Mississippi, Arkansas and Tennessee held a most successful meeting at Memphis, Tenn., on November 11, 12 and 13. Dr. J. Darrington, of Yazoo City, Miss., was elected president for the coming year, and Dr. J. L. Andrews, of Memphis, was elected secretary.

ROCKEFELLER GIFT.—The General Education Board, founded by John D. Rockefeller, announced the gift of nearly two millions, to be divided among the following colleges: Johns Hopkins Medical School, Baltimore, \$1,500,000; \$200,00 to Barnard College, New York City; \$200,000 to Wellesley College, Mass.; \$50,000 to Ripon College, Ripon, Wis., making a total of \$1,950,000. The big gift to Johns Hopkins Medical School, made with the sole condition that the income be used to permit the staff of professors to devote their entire time to their studies and classes, is the first donation ever made by the board to a medical school, and the largest single donation the board has ever made to any institution of learning. In honor of the eminent pathologist, whose work has long been identified with Johns Hopkins, it is to be called the William Welch Endowment for Clinical Education and Research.

MISSISSIPPI STATE BOARD EXAMINERS.—The following is a list of those who succeeded in passing the examination before the Mississippi State Board of Medical Examiners, held in Jackson, October 31: H. W. Lee, Heidelberg; W. C. Hays, Vernon, Ala.; L. F. Wilhorn, J. H. McLain, Gloster; T. E. Phillips, Tuscaloosa, Ala.; V. E. Fox, Weir, Miss.; W. J. Witt, Tupelo; E. B. Liddell, New Orleans; K. R. Cammacks, Allen, Ala.; Augustus Streit, Vicksburg; J. W. Brandon, Pinckneyville, Ala.; G. M. Streit, Vicksburg; H. M. Thaw, Osyka; D. C. Montgomery, Philadelphia; Pa.; W. A. Booth, Greenwood; F. H. Hollis, Gallman, Miss.; E. D. Butler, Lexington; J. M. Barr, Ellisville; J. C. Walker, Lambert, Miss.

AWARD BY THE SMITHSONIAN INSTITUTION OF HODGKINS PRIZE.—On the recommendation of the Committee on Award of the Hodgkins Prize of \$1,500 for the best treatise "On the Relation of Atmospheric Air to Tuberculosis," which was offered by the Smithsonian Institution in connection with the International Con-

gress on Tuberculosis held in Washington in 1908, the institution announces that the prize has been equally divided between Dr. Guy Hinsdale, of Hot Springs, Va., for his paper on "Tuberculosis in Relation to Atmospheric Air," and Dr. S. Adolphus Knopf, of New York City, for his treatise "On the Relation of Atmospheric Air to Tuberculosis."

THE UNITED STATES CIVIL SERVICE COMMISSION announces a competitive examination for chief mine surgeon, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Bureau of Mines, Pittsburgh, Pa., at a salary ranging from \$2,400 to \$3,600 per annum, and vacancies as they may occur in positions requiring similar qualifications. The duties of the person appointed to fill this position will be to investigate and report upon health conditions in mines and at mining towns, to outline and direct methods of first-aid instruction to miners, to attend mine disasters, and to direct and make pathological and physiological studies concerning the effect upon the human system of poisonous gases, death by shock at mines, and similar subjects. Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated: (1) General education and medical training, 20; (2) experience as surgeon and physician to industrial workers, 30; (3) postgraduate laboratory and hospital experience on pathological or physiological investigations, 30; (4) publications or thesis on surgery and sanitation, 20. Graduation from a medical college of recognized standing, and not less than three years' hospital experience among industrial workers, are prerequisites for consideration for this position. Applicants must not have reached their fortieth birthday on the date of the examination. This examination is open to all men who are citizens of the United States and who meet the requirements. Persons who meet the requirements and desire this examination should at once apply for Form 304, and special form, to the United States Civil Service Commission, Washington, D. C.; the secretary of the Board of Examiners, Custom House, New Orleans, La.

SPECIAL FRACTURE NUMBER.—The *American Journal of Surgery* will present in January an issue of their journal devoted exclusively to fractures and their treatment. A number of subjects will be presented by acknowledged authorities in this special branch of surgical work.

GIFTS TO TULANE.—President Robert Sharp, of Tulane University, has announced that two valuable donations have been made to Tulane, viz: a collection of 200 books presented by Mr. J. P. Blair, attorney for the Southern Pacific, many valuable law books being in the collection, and a collection of fine mineral specimens of all sorts, presented to the mineralogical department by Mrs. Judge Albert Price.

ORLEANS PARISH MEDICAL SOCIETY CENSURES ADVERTISING.—A special meeting of the Judiciary Committee of the Orleans Parish Medical Society was called on October 18 to take up the matter of the various appearances in the daily press of the names of members of the Orleans Parish Medical Society. The Judiciary Committee, in official session, conveys to the members of the Orleans Parish Medical Society the fact that the committee deprecates and censures the injudicious advertisements of members of this Society in the daily press, and that they discourage the practice of giving interviews to the public.

ORLEANS PARISH MEDICAL SOCIETY ADOPTS RESOLUTIONS.—At its regular meeting on November 10, 1913, the Orleans Parish Medical Society adopted the following resolutions:

Whereas, The Orleans Parish Medical Society has noted with satisfaction the action taken by the New Orleans "Item" in excluding from its columns untruthful, indecent and fraudulent advertising; and,

Whereas, This action, particularly as it relates to fraudulent medical advertising, is in the interest of the public health; therefore, be it

Resolved, That the Orleans Parish Medical Society recommends to all newspapers that they adopt a standard of advertising honesty consistent with their standard of news and editorials, and urge on other organizations throughout the country that they extend endorsements similar to this to all publications that will adopt and maintain a standard similar to that now being enforced by the New Orleans "Item."

SERUM FOR RABIES CAUSES PARALYSIS.—Paralysis of two Washington policemen which followed a serum treatment for rabies infection has sent the scientists of the Public Health Service on an investigation to determine if the popular treatment for the bite of a mad dog has harmful after-effects.

JOHNS HOPKINS TO GET RADIUM CLINIC.—In discussing the organization of the National Radium Institute and the plan to open two free radium clinics for the cure of cancer, which will eventually be closely affiliated with the Johns Hopkins Medical School, Dr. Howard Kelly said: "It will be necessary to erect a special building for the radium clinic—one large enough for about one hundred

beds. Before this can be done, further endowment will be necessary, but, while it will require considerable money, I am confident that it will be supplied."

OPENING OF A NEW EYE HOSPITAL.—The Herman Knapp Memorial Eye Hospital, formerly the New York Ophthalmic and Aural Institute, has opened its doors in a new location, at the southwest corner of Fifty-seventh street and Tenth avenue, New York. The hospital was founded in 1869 by the late Dr. Herman Knapp, and during the forty-four years of its existence has treated over 420,000 patients. The new building is a specially-constructed seven-story fireproof hospital building, with complete modern equipment for the treatment and study of diseases of the eye. The Board of Trustees took the occasion of the removal to a new building to change the name of the institute in honor of its distinguished founder.

CHARITY HOSPITAL RECEIVES GIFT.—By the will of Mrs. Louise Schwarty, the Charity Hospital of New Orleans will receive several thousand dollars.

FRIEDMAN SUIT AGAINST DOCTORS.—Three physicians of the Friedman Laboratory of New York City have brought libel actions for \$100,000 each against the American Medical Association. The complaints are based on articles in the Association's official journal. It was stated by the physicians that the *Journal* had gone beyond the bounds of fair criticism, in the connection of the physicians with the Friedmann preparation, and that they proposed to place themselves in the proper light before the medical profession.

TUBERCULOSIS HOSPITAL OPENED.—A new \$3,500,000 hospital for tuberculosis patients was opened on Staten Island on November 12. The hospital is at Castleton Corners, swept by the sea breezes, and it is called Sea View. Eighty patients have been admitted.

HOOKWORM CAMPAIGN.—Since the work began in 1911, there have been 797,440 persons tested microscopically for the hookworm in the South. The number of persons treated aggregates 517,823. A total of 417 counties in the Southern States have made appropriations for free dispensaries in connection with the hookworm crusade. The work not only embraces a crusade against hookworm, but equally as much against typhoid fever, diphtheria, dysentery and other diseases.

WOMAN PHYSICIAN WANTED.—A woman physician is needed for the Presbyterian Hospital and Dispensary at Tsinanfu, North

China. Correspondence may be addressed to Wilbert B. Smith, Candidate Secretary, Student Volunteer Movement for Foreign Missions, 600 Lexington Avenue, New York City.

PLAGUE AND FEVER AT GUAYAQUIL.—Presence of bubonic plague and yellow fever on the great trade routes from the South converging upon the Panama Canal is giving grave concern to health officials in America. Consul Baker recently reported at the State Department in Washington that during the month of October there were 112 cases of plague in Guayaquil and that yellow fever was on the increase there.

ANTI-TUBERCULOSIS LEAGUE.—At the meeting of the Louisiana Anti-Tuberculosis League, held November 13, all the present officers were nominated to succeed themselves. They are: Dr. George S. Brown, president; Dr. E. A. Robin, and Miss Kate Gordon, vice-presidents; Dr. A. I. Weil, secretary, and Dr. George Dempsey, treasurer. They will be elected at the next monthly meeting. Announcement was made that the League has 600,000 Red Cross stamps for sale for the benefit of the fight against the white plague, and it is intended to give them the widest circulation possible. It was decided to appoint a committee to confer with other organizations with a view of organizing a federation of charities.

CLINICAL CONGRESS OF SURGEONS.—At the annual election of the Clinical Congress of Surgeons of North America, Dr. John B. Murphy, of Chicago, was chosen president. London, England, was chosen for the 1914 meeting, which will begin July 26.

REMOVALS.—Dr. H. L. Sanders, from Orange, Texas, to Logansport, La.

Dr. R. C. Elliott, from Victoria, Mexico, to San Diego, Texas,

Dr. Joseph D. Martin, from 624 Gravier street, to 704 Audubon Building.

Dr. C. Grenes Cole, from Charity Hospital, to 1109 Maison Blanche Building.

Ophthalmic Literature, from 530 Metropolitan Building to 318 Majestic Building, Denver, Colo.

Dr. S. Porter, from Calin to Fay, La.

Dr. Philip Asher, from 4730 Prytania to 912 Broadway street.

Dr. Walter Tusson, from Avonmore Hotel, Asheville, N. C., to 922 Esplanade avenue.

Dr. G. F. Cocker, from 5941 Magazine street, to 715 Maison Blanche Building.

Dr. N. F. Thiberge, from 604 Machecha Building to 2021 Ursuline avenue.

MARRIED.—Dr. Isaac F. Littell and Miss Elizabeth Lockett, at Alexandria, La., November 3, 1913.

Dr. L. M. Boudreaux and Miss Lydia Trahan, at Abbeville, La., on November 26, 1913.

DIED.—On November 6, 1913, At Canton, Ohio, Dr. David A. Arter, aged 94. Dr. Arter is believed to be the last surviving delegate to the convention which nominated Abraham Lincoln, the first Republican candidate for president in 1860.

On October 21, at Baltimore, Md., Dr. Philip R. Uhler, for many years provost of the Peabody Institute of Baltimore, and widely known in scientific circles, aged 78 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

Gonorrhoea in Women. By Charles C. Norris. W. B. Saunders, Philadelphia and London.

Anyone wishing to review the above named subject in its various phases can do no better than consult this book. Dr. Norris has placed before us in this volume an exceedingly comprehensive study of every phase of the subject and, moreover, he has been able to present the subject matter in a most interesting and systematic manner. The book comprises over 500 pages and is profusely illustrated from original drawings and microscopic studies conducted in the pathologic laboratory of the Gynecologic Department of the University of Pennsylvania, and contains a complete compilation of the literature on the subject of gonorrhoea in women.

Some idea of the scope of the work may be obtained from the introductory, which was written by John G. Clark.

In the chapter on Bacteriology and the Pathogenesis of Gonorrhoea, the author has clearly described the best cultural and staining methods and traced the destructive effects of the gonococcus upon the pelvic organs and other tissues of the body.

In the chapter on Sociology, the relationship of gonorrhoea to sterility and abortion is shown, besides the havoc wrought in the destruction of the eyesight of the new born infant.

An exceedingly instructive chapter is that dealing with the methods adopted by the governments of Europe and the Orient for the limitation and suppression of the social evil and the situation as it exists in the United States. The entire subject of municipal control is reviewed up to the present date.

A chapter is devoted to the approved methods of examination and of the means of ascertaining with certainty the presence of the gonococcus.

The chapter devoted to the Operative Methods of Treatment is well worthy of special mention. The technic is explained in detail, both in the text and by illustrations, but the noteworthy feature is the author's remarks on conservative medical treatment before surgical intervention is undertaken. The inexperienced surgeon, who is prone to operate in gonorrhoeal infections, regardless of the stage of the disease, will find profitable reading in the part of this work devoted to the Medicinal Treatment of Gonorrhoea.

The following opinion of Dr. Norris' book by Dr. J. G. Clark is worthy of repetition:

"The careful student will find that the author has written a highly instructive treatise, in which he has most satisfactorily encompassed the many aspects of this complicated question. He has reviewed in detail the several divergent sociologic views concerning the colossal evil and, as a commentary, offers judicious suggestions that will be of value to those who are endeavoring to find the best solution for these problems. Because of the broad and comprehensive character of the book, it will be of great value to the physician, the surgeon, the specialist, the legislator and the sociologist."

MILLER.

Gray's Anatomy: The New American Edition. Again revised by Edward Antony Spitzka. Lea & Febiger, Philadelphia, 1913.

This comprises the 19th edition of this historically unique work. Its first edition (John W. Parker & Son, London, 1858) successfully competed with the then most popular works of Quain and Sharpey, of Wilson and Winslow, and with translations of the French authors, and quickly won precedence. For the years between 1860 and 1890, it has been referred to as the "Anatomist's Bible in English." Its hitherto unknown clearness of treatment was such that the several editions appearing during these years, save for additional facts, could improve it but little. Then came attempts to rewrite the work, the sale of some of which has been largely due to the prestige enjoyed by the name, "Gray."

The New American Edition is little more than the 18th edition, which was also revised and re-edited by Spitzka, into which a more or less complete insertion of the **Basle Nomina Anatomica** in Latin has been made. The Latin terms are placed in parenthesis after the names considered by Spitzka as sanctioned by usage and after names modified or introduced by him. Including some slight abbreviations of the text, the edition contains 17 more illustrations and 7 more pages than the previous edition, the latter chiefly resulting from the insertion of the B N A. The index has been remade with the B N A terms incorporated and italicized, thus decidedly improving it in making it a sort of glossary of the B N A System.

The chief objection or that most frequently heard against the 18th edition deals with the nomenclature. Not only was there often sad confusion in the use of the old terminology and the International B N A, but Spitzka, especially in the section of the Nervous System, frequently used names either modified or introduced by himself. Most of these names are retained and given preference in the New American Edition.

Necessity for uniform and universally used anatomical names is admitted by all. It is necessary in published books and researches, and lack of the use of such leads to unnecessary confusion and complaints among the students and teachers of the different years of the course in any medical school. The B N A is the only concerted and internationally accepted attempt to satisfy the need, and this nomenclature is now so generally adopted in all writings and modern texts that it has become the duty of the anatomist to teach it and of the student to learn it, and he who, raised upon an older or different terminology, refuses through prejudice of indolence to use and teach the B N A should no longer be taken into consideration. The names, differing from the B N A used by Spitzka in the new Gray are good names. One would be perfectly willing to use them had they been adopted instead of the B N A. Since they are **not** of the international list, their use is out of the question and they should not have prominent place in the text-books.

Lea and Febiger have just put out an English Edition, revised by Professor Robert Howden of the University of Durham, England, in which the above criticism is almost entirely met. This edition not only manifests greater brevity and clearness of style than the editions immediately preceding, but in it the B N A is more consistently and completely used than in probably and other text of gross anatomy now in English.

IRVING HARDESTY.

A Text-Book of General Biology for Students in Medical, Technical and General Courses. By W. M. Smallwood. Lea & Febiger, 1913.

In running through this book, one is immediately impressed with the excellence of its choice and arrangement of material for imparting the fundamental principles and processes underlying the phenomena of

life. More than usual for a book of its size does it recommend itself for use in those too frequently offered, so-called "general culture courses" in the science of life, and especially is it suitable for those short courses in Biology given prospective students of medicine during the period of their incomplete academic training so often permitted. Two of its chapters are incorporated avowedly for this latter purpose.

After defining an organism and movement in general, the treatment begins with the Biology of Animals, and, pedagogically wise, it first takes up the vertebrates, using, as a type, the frog with which all are more or less familiar and comparing this animal, chiefly by means of text figures, with other vertebrates, including man. The tissues and organ systems of the body with the functions these performed are briefly discussed together with the needs of the animal body. Then follows a very brief and excellently illustrated treatment of the processes of reproduction and growth, passing from the higher to the lower forms, including the protozoa. The biology of yeasts, moulds and bacteria is treated with illustrations of types. This leads naturally into mention of fermentation, enzymes and toxins, and the chemical composition and the nature of life.

Excellent tabulated modern classifications of both the animal and plant kingdoms are given with the accepted number of species belonging to each phylum. Six interesting photographs of oxy-hemoglobin crystals illustrate the physiologico-chemical relations of different groups of animals. The general biology is treated of representative animals and plants, and, in discussing the beneficial and destructive work of certain forms in their biological adaptations, a very excellently illustrated discussion of parasitism is given followed by some of the biological factors in disease. This latter chapter, especially for pre-medical students, contains illustrations of 3 varieties of mosquitoes thought to carry malaria, the male and female of that which transmits yellow fever, illustrations of the flies concerned with sleeping sickness and of that probably concerned with poliomyelitis. A colored plate showing malarial parasites in blood and one showing the growth stages of the spotted fever tick are also given here. Prevention of disease and immunity are mentioned in this chapter.

The final chapters deal with evolution, variation and heredity, types of animal behavior and the relation of animal behavior to "Mind."

In arrangement of material, the book differs considerably from the older and more usual texts, but this difference is hardly to be deplored. The illustrations, both in color and ordinary half-tones, are very fortunately selected and well done.

IRVING HARDESTY.

A Course in Normal Histology. A Guide for Practical Instruction in Histology and Microscopic Anatomy. By Rudolph Krause, Professor of Anatomy, University of Berlin. Translated from the German by Dr. P. J. K. Schmahl. Rebman Company, New York, 1913. Two parts, bound separately.

This work can hardly be called a text-book of Histology and Microscopic Anatomy, but rather an exceedingly elaborate and beautifully illustrated Laboratory Guide for the subject. Part II comprises 30 text-figures and 208 illustrations in color arranged upon 98 plates. It is these colored pictures that give value to the book. They are not only anatomically accurate in structural detail, but they are most beautifully executed. The text is brief and, instead of being a discussion of the subject of Histology, is practically nothing more than a description of the figures. Throughout, the pages consist of headings in large black-face type, giving the number of the figure and the subject it illustrates, followed by a reference to the method by which the specimen from which it was made was prepared and brief references to the structures

it shows. Reference letters are used wholly with the figures and the text little more than explains these. The part is thus a sort of Atlas of Histology and Microscopic Organology combining, in one volume, the text describing the plates, a plate being inserted among the leaves of the text referring to it.

To obtain emphasis of structural details, Prof. Krause does not confine himself to the human body nor even the mammalia, but draws upon the lower vertebrates and, in some cases, upon invertebrates for best illustrative examples. To one even slightly familiar with Histology as a subject, the work has hardly an equal as a reference book for use in appeals as to what structures are present in a given preparation and as to how they should appear.

A large proportion of the drawings represent preparations stained with anilin colors, most frequently the "Biondi mixture," and thus the colors reproduced are attractive. Throughout, remarkable skill is indicated in the technic employed. Part I (unlike the German Edition) is bound separately, and is devoted to the technical methods employed and to general laboratory apparatus and procedures. It gives a good working description of each of the methods of preparation used for Part II. Its discussion of the chemical principles involved in the nature and action of fixing fluids and stains, and its procedures in the impregnation and *intra-vitam* staining methods and those requiring evacuation are unusually good. In addition, it describes in considerable detail the construction, the physics and the efficient manipulation of the parts of the microscope and gives some attention to procedures for the drawing and for the measuring of microscopic preparations.

The translation from the German text by Dr. Schmahl is quite literal and at the same time the English is exceptionally good and the sentences short and clear. The cloth binding, size, construction and type of the volumes is excellent.

IRVING HARDESTY.

The Psychoneuroses and Their Treatment by Psychotherapy. By Professor J. Dejerine and Dr. E. Gauekler. Authorized translation by Smith Ely Jelliffe, M. D., Ph. D. J. B. Lippincott Company, Philadelphia and London.

This book is devoted to the study of the psychoneuroses and their treatment. By the psychoneuroses the authors include that large class of nervous affections whose symptomatology is caused solely by a primitive modification of the moral or mental state, followed by a series of secondary manifestations or symptoms. Thus separating them clearly from those nervous disease depending upon the association of physical organic disease.

The work is divided into three parts. The first of 213 pages is analytical in its scope and covers thoroughly the study of functional manifestations. That is the study of all the symptoms which are observed in the course of the psychoneuroses. Throughout the authors cite clinical observations, which are presented in a very clear manner, making the reading here very interesting and valuable. In the second part covering 58 pages the authors bring together these individual analyses and present their view of the psychoneuroses, the manner in which they are caused and the general mechanism which gives rise to the particular symptoms. The third part is devoted to the presentation of the psychotherapeutic proceedings and helps which are the proper measures which should be used in the treatment of the psychoneuroses. Here the authors insist that the only and proper way to help the neuropaths is first and above all to gain their confidence. When this is assured we may expect from them a full confession and thereby obtain a proper insight into the cause of their nervous condition. This can be better accomplished when once we have touched upon their feeling and sentiment and not by mere "reasoning and argument" as professed by others.

This excellent translation of the work of the French master should no doubt in this country prove of great value to the general practitioner as well as the specialist.

CAZENAVETTE.

The Catarrhal and Suppurative Diseases of the Accessory Sinuses of the Nose. By Ross Hall Skillern, M. D. J. P. Lippincott Company, London and Philadelphia, 1913.

“To set forth in the English language a thorough and exclusive treatment of this subject has been the inspiration of this work,” writes Dr. Skillern in his preface.

Certainly he is to be congratulated upon the fulfillment of his inspiration in its minutest detail and his English reading fraternity are to be congratulated upon being able to possess such a volume from a man whose fitness for this special task is beyond question and who has thus selected a subject that has heretofore been blank in our library, except for the isolated monographs, and the chapters contained in the textbooks devoted to the speciality as a whole, the work of Hajik alone excepted.

To dwell at length on all of the features of this volume is beyond the intention of this review. There are 247 illustrations almost all original and made from specimens in the authors collection or those at his disposal. Five colored plates also add to this wealth of accurate illustration.

This volume is not a luxury, but must be a necessity to every work-the accessory sinuses, up to the present time. While the German and French literature are quoted freely the work also includes our own references which are voluminous and exceptionally good.

This volume is not a luxury, but must be a necessity to every working rhinologist be he embryo student or graduate.

LYNCH.

Epidemic Cerebro-Spinal Meningitis. By Abraham Sophian, M. D. C. V. Mosby Company, St. Louis, 1913.

In the author's own words: “The purpose of the work throughout is to convey a thorough yet simple description of the clinical and laboratory findings in the disease and to so interpret the laboratory descriptions as to familiarize the reader with their application in treatment and in clinical analyses of the disease,”—and, he certainly has not failed in his purpose.

His observations and practical work in Dallas in 1912, also enabled him to control the epidemic in Texas. He describes the methods employed, which possibly may be somewhat modified; but, the fact remains that the record of his work is a valuable lesson, a most instructive guide for the general practitioners who have to face this dreadful disease.

The writer of this review knows whereof he speaks, and he certainly owes much to the author's instructions. Nowhere could we find a more substantial presentation of the subject in plainer language. There are twenty-three helpful illustrations.

That is a book to have and keep, even though the opportunity of personal observations may afford some slight modifications in practice, for it is fundamentally correct, exact.

DUPAQUIER.

International Clinics. Vols. I and II. Twenty-third series, 1913.

We note in the contents of this volume a number of valuable articles, namely, in diagnosis and treatment, the treatment of poliomyelitis; in medicine, intestinal auto-intoxication; in pediatrics, the psychological clinic as an inter-clinic; in surgery, transplantation of tissues; in ob-

stetrics, care of the woman during her thirty-nine weeks of gestation; in electrotherapeutics, general considerations for the selection and rational use of physiologic agents in the treatment of disease.

Finally, a review of the progress in medicine during the year 1912.

We note in Volume II some valuable articles, such as in diagnosis and therapeutics, diagnosis of diseases of the heart and therapeutic indications for antitoxins, serums and vaccines; in medicine, paroxysmal hemoglobinuria; its relation to syphilis, especially in the light of the Wasserman reaction; in neurology, a study of three thousand cases seen in private neurologic practice, and others in surgery, obstetrics, medicolegal and electro therapeutics.

DUPAQUIER.

Goldern Rules of Diagnosis and Treatment of Diseases. By Henry A. Cables. C. V. Mosby Company, St. Louis, 1913.

This is the second edition, revised and rewritten, of a valuable *vade mecum*, really furnishing, as the author intended it for, a quick means of ready reference for physicians that, at the moment, have not the time for more extensive reading. There has been new matter added and the whole carefully gone-over and proper corrections made.

DUPAQUIER.

Systematic Case-Taking. By Henry Lawrence McKisack. Paul B. Hoeber, New York, 1913.

This interesting little book is not only a scheme for recording, ordering and memorizing clinical facts and writing histories, but a short manual on the significance of the various clinical features, therefore, something more than the ordinary syllabus of case-taking.

No student, for that matter, no practitioner can get along in his work unless he has taken the habit of systematically ordering his observations. It is a routine that one must carry out and, even though a scheme be reduced to its simple expression, modified to suit each individual student, it is much better to have one than none at all. This is set as a model.

DUPAQUIER.

Malaria. By Graham E. Henson, M. D. C. V. Mosby Company, St. Louis, 1913.

Since the publication of Deaderick's original work on malaria, no book on the subject has been published that reflects, with more credit, the industry of our Southern people in this ever-present question of the day than the book now before us.

It covers the etiology, pathology, diagnosis, prophylaxis, and treatment of malaria, with an introduction by Prof. Bass (Tulane), twenty-seven illustrations and a glossary. It ought to amply gratify the general practitioners' quest not only for original views, but for practical helpful instructions in his daily work.

It is with great pleasure that we recommend the work and wish it the success it deserves.

DUPAQUIER.

Blood-Pressure in General Practice. By Percival Nicholson, M. D. J. B. Lippincott Company, Philadelphia and London.

As the author plainly states it, his object is merely to present a simple exposition of the subject in order to aid the general practitioner to a better understanding of the methods of using the instruments and determining some of the practical applications of blood-pressure in practice.

The book is certainly useful in introducing the beginners to the finer point of blood-pressure and to the approach of exhaustive treatises on the subject. A book easily read with profit.

DUPAQUIER.

A Reference Handbook of the Medical Sciences. Vol. II. William Wood and Company, New York, 1913.

This beautiful work in its scope, plan and execution deserves praise and support. This is the third edition, completely revised and rewritten.

It embraces the entire range of scientific and practical medicine and allied science by various writers, in eight volumes.

The illustrations are not only very numerous, but varied chromos and wood engravings, all instructive.

The pictures with short biographic notes of men who have contributed a share in making the history of medicine in the past and present, any where and everywhere, form some attractive reading.

DUPAQUIER.

Diseases of the Stomach, Including Dietetic and Medicinal Treatment.
By George Roe Lockwood, M. D. Lea & Febiger, Philadelphia.

As a matter of fact, there is a similarity in all text-books of this character, especially by American authors. A few bear the ear-marks of close compilation. While in Dr. Lockwood's book, there is a certain similarity with other American texts, still on many subjects he has made distinct departures from the groove, and on occasions has advanced his own ideas, even though they were at variance with path-beaten teachings.

The author's large and fortunate experience, added to close observation, permits him to advance some valuable ideas. The trend of the treatise, while progressive, is conservative.

Witness the following from the preface to which I think most physicians of experience will subscribe:

"The sections on Radiographic Diagnosis have been difficult to prepare, owing to radical differences of opinion between some of the leading radiologists as to the limitations or lack of limitations of their special art. Many minor points in radiographic diagnosis have not been given in the text simply because of differences at the present time between these experts as to their diagnostic value."

Dr. Lockwood acknowledges his indebtedness for assistance in various ways to Dr. Albert R. Lamb, Dr. Robert L. Hutton, Dr. Hoobler, Dr. Busby, Dr. LeWald, Dr. Edward Leaming and Dr. Bloodgood.

The treatment of the different subjects is ample, but terse; the style is readable, and all things considered, Dr. Lockwood's book, from our viewpoint, is good.

STORCK.

Therapeutics of the Gastro-Intestinal Tract. By Dr. Carl Wegele. Translated from the German by Maurice H. Gross, M. D., and J. W. Held, M. D. Rebman Company, New York.

Drs. Gross and Held have rendered a service to the English practitioner in their translation of "Therapie der Mager und Darm Erkrankungen," by Dr. C. Wegele.

In some respects, the translation is better than the original, as valuable additions have been made, particularly to diagnosis.

We believe that this treatise upon the "Therapy of Stomach and Intestinal Diseases" will find a place in the working library of the busy practitioner, comprising, as it does, many important facts which are

scattered throughout too exhaustive specialized works. When possible, precise points of diagnostic interest are stated in connection with each gastro-intestinal disease. The salient points in dietetics and the physical and hygienic treatment of gastro-intestinal diseases are succinctly stated.

We feel that the practitioner will be repaid by the proper perusal of this commendable book.

STORCK.

Massage, Manual Treatment, Remedial Movements, Etc. By Douglas Graham, M. D. Fourth Edition. J. B. Lippincott Company, Philadelphia and London.

There is an ever increasing argument that in our haste to find the small things we overlook so many large things in life. This is particularly brought home in this book of Dr. Graham, which demonstrates conclusively the great importance of mechanical art in the treatment of certain physical ills. He discusses all sides of the question of massage, giving a good outline of its origin, practise, and the usefulness at this time.

What strikes one most, on laying the book down, is the perfect appeal to the medical profession generally to make use of a practical therapeutic measure, which now is so largely employed by charlatans, under various terms, to exploit the victims of disease or infirmity.

As a text-book, too much may not be said for the work. There is a patient detail in descriptive methods, illustrated by graphic cuts, which must appeal to all who are serious in learning this subject. Moreover, particular groups of ailments are exemplified with the technical applications of massage, or movement indicated. More of such books are needed to eliminate the fakir elements in medical practices.

DYER.

Diseases of the Eye. By George E. de Schweinitz, M. D. Seventh edition, 979 pages. W. B. Saunders & Co., Philadelphia and London.

The author's preface to the seventh edition of this authoritative work announces the revision of the former texts with additions of whatever new may have come to ophthalmology in the past three years. The new matter includes articles on Schiötz's Tonometer; Ophthalmodiaphanoscopy; Cysts of the Retina; Blindness from the Aryolarsenates; Reese's Muscle Resection Operation; Toti's Operation, etc.

There are three hundred and seventy illustrations in the book, and the letter press and general make up conform to the usual care of the publishers.

DYER.

Massage, Its Principles and Technic. By Max Bohm, M. D. Edited by Charles F. Painter, M. D. W. B. Saunders Company, Philadelphia and London.

The interest in physical therapy grows and with the need of education in many of its details, any practical contribution is welcome. This the book of Dr. Bohm aims to satisfy. It is a handbook of method in massage and movements and is fully illustrated with practical indications for the usual practises in these fields. Whether the physician or the nurse follows the text the matter contained is simply put and readily understandable.

DYER.

Publications Received.

W. B. SAUNDERS & CO., Philadelphia and London, 1913.

The Surgical Clinics of John B. Murphy, M. D., October, 1913.

LEA & FEBIGER, Philadelphia and New York, 1913.

"Pathology," by John Stenhouse, M. A., B. Sc. Second edition, revised and enlarged, including a selected list of State Board Examination Questions.

"Medical Diagnosis," by John H. Musser, M. D., LL. D. Sixth edition, revised by John H. Musser, Jr., B. S., M. D.

THE SHAKESPEARE PRESS, New York, 1913.

"The Problem," by Charles Percy, B. Sc., M. D.

P. BLAKISTON'S SON & CO., Philadelphia, 1913.

"A Compend of Diseases of the Skin," by Jay F. Schamberg, A. B., M. D.

"Modern Problems of Biology," by Charles Sedgwick Minot.

"The Physician's Visiting List for 1914."

WORLD BOOK COMPANY, Yonkers, New York, 1913.

"The Human Body and Its Enemies," by Carl Hartman, B. A., M. A., and Lewis Bradley Bibb, B. A., M. D.

"First Book of Health," by Carl Hartman, B. A., M. A., and Lewis Bradley Bibb, B. A., M. D.

MISCELLANEOUS.

"Eleventh Annual Report of the Mortality Statistics." (Washington Government Printing Office, 1913.)

"Public Health Reports." Volume XXVII, Nos. 42, 33, 44, 45. (Washington Government Printing Office, 1913.)

"School Hygiene," by J. W. Schereschewsky. (Washington Government Printing Office, 1913.)

"Trachoma," by Louis Schwartz. (Washington Government Printing Office, 1913.)

"Monthly Report of the Health Department of the City of New Orleans." September, 1913. (Brandao Printing Co., New Orleans, 1913.)

"Report of the Department of Sanitation of the Isthmian Canal Commission, August and September, 1913." (Washington Government Printing Office, 1913.)

Reprints.

"Economic Influence on the Medical Profession of the Periodic Examination of Insured Lives," by Eugene Lyman Fisk, M. D.

"Les Congres Internationaux de Medicine et la Commission permanente Internationale," per le docteur Ph. M. van der Haer.

"Exophthalmic Goiter Cured by Ligating One Superior Thyroid Artery; Abolishing Pain After Operations With Nerve Block a Distance," by Leigh F. Watson, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.
FOR OCTOBER, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....	4	—	4
Intermittent Fever (Malarial Cachexia).....	1	2	3
Smallpox.....	—	—	—
Measles.....	—	—	—
Scarlet Fever.....	—	1	1
Whooping Cough.....	—	1	1
Diphtheria and Croup.....	8	3	11
Influenza.....	2	—	2
Eholera Nostras.....	—	1	1
Pyemia and Septicemia.....	3	1	4
Tuberculosis.....	21	36	57
Cancer.....	22	9	31
Rheumatism and Gout.....	1	1	2
Diabetes.....	—	—	—
Alcoholism.....	2	1	3
Encephalitis and Meningitis.....	3	2	5
Locomotor Ataxia.....	2	—	2
Congestion, Hemorrhage and Softening of Brain.....	20	11	31
Paralysis.....	2	1	3
Convulsions of Infancy.....	—	—	—
Other Diseases of Infancy.....	11	7	18
Tetanus.....	—	1	1
Other Nervous Diseases.....	—	—	—
Heart Diseases.....	55	32	87
Bronchitis.....	2	5	7
Pneumonia and Broncho Pneumonia.....	13	21	34
Other Respiratory Diseases.....	2	—	2
Ulcer of Stomach.....	2	3	5
Other Diseases of the Stomach.....	2	3	5
Diarrhea, Dysentery and Enteritis.....	18	18	36
Hernia, Intestinal Obstruction.....	4	—	4
Cirrhosis of Liver.....	7	4	11
Other Diseases of the Liver.....	2	1	3
Simple Peritonitis.....	—	1	1
Appendicitis.....	6	1	7
Bright's Disease.....	34	19	53
Other Genito-Urinary Diseases.....	9	7	16
Puerperal Diseases.....	—	3	3
Senile Debility.....	4	—	4
Suicide.....	4	—	4
Injuries.....	26	16	42
All Other Causes.....	32	12	44
TOTAL	324	224	548

Still-born Children—White, 23; colored, 18. Total, 41.

Population of City (estimated)—White, 272,000; colored, 101,000.
Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 14.30; colored,
26.61. Total, 17.63.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure30.05
 Mean temperature68.
 Total precipitation5.53 inches
 Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

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JANUARY, 1914.

No. 7

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

OBESITY AND ITS TREATMENT.*

By A. E. FOSSIER, A. M., M. D., New Orleans.

A fat person arouses admiration and envy whilst young, healthy and firm; pity and derision when old, flabby and decrepit. Yet, strange to say, to accumulate adiposity is a condition sought, encouraged and desired by a vast number of doctors for their patients. Those who appreciate the inconvenience and danger of their infirmity are found in hordes at the various springs and sanitariums which are scattered over both this country and Europe.

Unfortunately, ignorance and poverty throw many in the clutches of the quacks and faddists, who reduce the fat to the detriment of the health of these unfortunates, frequently substituting more serious organic diseases for the obesity.

In order to successfully treat these cases the disease should be considered from its incipiency, for the increasing accumulation of fat undermines the vitality, weakens the heart, damages the organs and taxes the knowledge, acumen and skill of the physician, to add a few years to the life of his patient.

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

Whilst it is important and necessary that the obese be reduced, we must not forget that, unless they are properly treated and frequently and carefully observed, a great deal of harm can be done. Obesity should be considered a disease, and a serious one. The patient should be warned of that fact, and encouraged to persevere in its tedious treatment. Every ounce and pound lost helps, provided the patient feels better. His muscles grow stronger and his general condition improves; he feels better, breathes easier and is encouraged to further efforts. Loss of fat and wasting is dangerous. Unfortunately, many do not wish to sacrifice their habits and appetites. They persevere for a while, but with these, as with the drunkard, they tire and relapse, and in spite of repeated warnings they return to the same mode of living, drinking and eating, and in a short while all the efforts of the doctor and the good accomplished have been lost.

Those treated in sanitariums, who are constantly under the supervision of a specialist, whose diet is carefully watched (both as to the quantity and quality), whose exercise is properly regulated, who have cast business cares aside and come with the determined purpose of accomplishing their wish, are comparatively easy to treat successfully; but those under unfavorable conditions, whose time is limited, whose work interferes with the proper observance of directions, who cannot properly diet, and who cannot regularly exercise, must make great sacrifices in their quest for health, and these are the cases which exhaust the patience, skill and knowledge of the physician in the aim to be successful.

Volumes on obesity, many diet schemes recommending various caloric values, different articles of food and forms of exercise, have been written, yet, with all this conflicting material and all the enthusiastic reports of the high percentage of cures by various men in sanitariums and at springs, the family physician is confused, and, as a rule, the more he reads the more he thinks, the more he studies the more obscure the subject.

I do not disparage or belittle any of these modes of treatment, but I do claim that they have been devised for certain conditions and localities, and whilst they may be successful in these, they are of little benefit in others.

Routine treatment in obesity, as in any other disease, is doomed to failure. It is well to advocate a cure in a sanitarium, where all conditions are alike, and where the patient must adapt himself to

treatment, but quite different in general practice, where the doctor is a victim of the circumstances surrounding his patient. No diet scheme can be universal, yet some are endowed with the dogma of infallibility. They are no doubt good, and the enthusiasm of the author justifiable, and they act well at a particular place and climate and with a certain class of patients.

Yet the amount of calories you may allow in these cases must not only depend on the location, altitude and climate, but especially on the ability of the individual to assimilate fat.

Each case must be treated individually. Each patient must be carefully studied; the cause must be sought for, the habits, heredity and physical condition must be investigated, for very frequently a careful examination of the patient may be the key to success. The calculation of the amount of calories may be based on scientific principles. The patient may be furnished with a card showing the proper caloric value of various articles of food, directing him as to the amount he may take. Yet, two individuals with the same diet and with equal amount will give different results; one may reduce rapidly and the other remain unaffected by the same regime. We must not neglect the assimilative powers and fat-making tendency, which greatly varies in different individuals, depending on activity of various glands, especially thyroid, ovaries and testicles.

This can only be determined by the use of the scales. After instructing the patient as to his regime, he should be regularly weighed. If the weight is stationary or increased, the ingestion of food is too great, and, from the amount of loss, we know that the diet is ample or not sufficient. Frequent examinations are necessary. Too great and rapid loss must be prevented. As the patient reduces he should feel better, healthier and stronger. The reduction is better accomplished by easy stages. The amount of loss depends on the facility with which the patient reduces, and the condition we find him and his ability to stand the reduction. The system must accustom itself to its diminished burden. Time should be given for the organs to adapt themselves to new conditions.

If the reduction is too rapid and severe, the starvation too great, any slight increase in nourishment will cause a rapid gain of fat, the former weight may be regained, and even surpassed. Nevertheless, with all these pitfalls we can lead our patients back to health,

the loss of weight be retained, and, with proper care and guidance, may be permanent. As in any other disease, it is often necessary to resort to drugs, especially in cases where there is an inactivity of the thyroid, ovaries, etc. These extracts must be given, as they are indispensable, and may have to be continued for a long time. The necessary amount is gauged by the deficiency of the gland, and shown by improvement. Over-action must be carefully avoided.

As my time-limit to read this paper has already been encroached upon, I am sorry that I cannot go more thoroughly into the matter.

These few cases that I am reporting (in the treatment of which I had the good fortune to assist) are taken from the clinical records of Dr. Lerch; they are of interest. The first shows a great reduction—in two years about eighty pounds; the second, a loss of sixty-seven pounds, in which there has been no relapse; the third, a loss of forty pounds in three months; while the fourth graphically illustrates the danger and risks of those who are obese, but think themselves healthy and robust.

Case 1. A lady, single, 55 years of age, born in St. Louis. Has lived in Denver 27 years, during which time she was in charge of a large establishment, doing a great deal of active executive work, which kept her indoors and prevented any outdoor exercise. Hearty and slow eater, had three copious meals composed principally of soups, breads and meats, very little vegetables, some desserts.

The family history is negative except for the obesity, which is a family characteristic. She had scarlet fever, diphtheria, typhoid and articular rheumatism during the brief period of her 20th and 21st year. She claims that she then escaped heart affections. Always suffered from constipation. Had an attack of peritonitis 15 years ago. Was operated on about 7 years ago for appendicitis. In 1910 had grippe and pneumonia, which was followed by a dilatation of the heart and attacks of angina pectoris. In March, 1911, the following conditions were found: Complained of shortness of breath and swelling of feet and ankles after exertion.

She is 4 feet 11 inches tall, weight 250 pounds. The venules of the face are distended, pulse 90, irregular; blood pressure 144 m.m. Hg.; sounds pure. A short while after this examination, after a shock, a systolic blow at the apex could be heard, which again later disappeared. Urine free.

The patient was treated off and on, has gained in health and strength. All shortness of breath has disappeared and to-day she can walk and climb stairs without effort. She has been able to return to Denver from where she was exiled. The life has not only been prolonged, but she is living in perfect comfort. To-day she weighs 170 pounds.

Case 2. Man, age 51. Born in New Orleans. Butcher for occupation. Married. Does not smoke, but takes two drinks of whiskey every morning.

His occupation makes him an early riser. Hearty eater, takes two copious meals daily, composed of fat producing foods, bread, soup, butter and gravies. Drinks three and four glasses of water with each meal.

Father died at 78 of apoplexy, mother at 51 of a fat heart. Both parents obese.

Has had usual diseases of childhood, otherwise has always been healthy. In December, 1911, the following was found: Patient obese, complexion bluish and ruddy. 5 feet 7 inches tall, 234 pounds.

Pulse 100, arteries tense, blood pressure 160 m.m. Hg., heart enlarged, abdomen enormously fat. Organs otherwise normal. Urine free. The patient was again examined in March, 1912: Very much improved, lost 50 pounds, pulse 92, blood pressure 112, all tension in arteries disappeared. To-day the patient is well; has lost in all 64 pounds; has increased his diet; practically eats what he wishes and shows no disposition to accumulate fat.

Case 3. Woman, 58 years of age. Born in Missouri. Has lived in Colorado 24 years. Single. Lives a sedentary life, no outdoor exercise. A hearty eater, three meals daily, composed principally of soups, meats and vegetables. Sweets once a day and cream three times daily.

Father was very stout and died of pneumonia when 64 years of age. Mother at 70 of unknown causes.

The patient had the various diseases of childhood, typhoid when 37 years old. Erysipelas of the face eleven years ago. She is a constant sufferer of eczema, especially on hands and fingers.

In January, 1913, the patient presented the following conditions: Very stout and very nervous. Color of face ruddy, rather cyanotic. 5 feet 3 inches tall, weighed 208 pounds. Pulse 90, blood pressure 190 m.m. Hg. Arteries contracted. Heart normal, lungs free, urine normal.

There was edema on both shin bones and above ankles. To-day the patient has lost 40 pounds. The edema has disappeared; she is feeling well and in better health.

Case 4. Man, age 48, born in Germany, in New Orleans 28 years, single, applied for treatment in 1908.

Had a good appetite. Heavy eater and drinker. Drinks beer and wine with meals and during evenings, claims that he drinks over a gallon of beer.

Mother died of heart disease when 72 years old, father of pneumonia at 50. The patient had typhoid and pneumonia 20 years ago. Gives a doubtful history of syphilis. Complained of dyspnea; noticed it 5 years before and was treated for same. Urinates frequently at night, especially after imbibing a great deal of beer. His usual weight was 165 pounds, but at the time of examination weighed 197 pounds. Heart slightly enlarged, sounds pure, except for the accentuation of the second aortic sound. Lungs, emphysematous. He had a very large protruding abdomen, urine free.

The patient was treated for a short while and the reduction easily accomplished, but unfortunately the abstinence from food and drink was stronger than the will. He ceased treatment and soon gained what he lost. Three years after I heard that he died suddenly of apoplexy.

Had he taken care of himself and reduced his weight, improved his physical condition I do not doubt but that he would be living to-day and enjoying health.

THE DIAGNOSIS OF GONORRHEAL INFECTIONS BY THE FIXATION OF COMPLEMENT.*

By JOHN A. LANFORD, M. D., New Orleans.

The fixation of complement in the diagnosis of gonorrhoeal infection is one of the most recently perfected laboratory aids to the clinician. It is an application of the Bordet-Gengou phenomenon,

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

the principle of which is that complement, when mixed with an antigen in the presence of its specific antibody, will be bound or fixed, and sensitized red-blood cells added later will remain unchanged.

It was in 1906, shortly after Wassermann had published his technic of the fixation of complement for the detection of syphilitic antibodies in the blood serum of suspected luetics, that Müller and Oppenheim applied the same principle in the diagnosis of gonorrhoeal infections. They succeeded in getting binding of complement by the serum from a case suffering with gonorrhoeal arthritis when using an antigen made from a single strain of the gonococcus, but failed to obtain a positive reaction when using the serum from other cases which were as clearly gonorrhoeal in origin. These facts led other investigators to study the subject, and, in 1907, Meakins, Wollstein, Teague and Terry, working independently, proved, by the immunization of rabbits to cultures of the gonococcus obtained from various sources, that the gonococcus family was made up of twelve different strains or varieties, which differed principally in the antibodies produced, although morphologically and culturally they were the same, which explained the cause of failure to obtain a positive result in cases clearly gonorrhoeal when using an antigen made from a single strain of organisms. They then used as antigen a polyvalent mixture of the twelve varieties with splendid results.

Schwartz and McNeil have developed the technic which is now in general use, and which is, briefly, as follows: .15 c. c. of patient's serum (which has been heated to 55° C. for inactivation) is mixed in a test tube with .2 c. c. of 10 per cent. guinea-pig serum, .02 c. c. of polyvalent gonorrhoeal antigen and .1 c. c. of saline, and, after incubating for one-half hour, .1 c. c. of 5 per cent. sheep corpuscles suspension and one unit of hemolysin are added to each tube and the whole returned to the incubator for one-half hour. If the tube shows no hemolysis it indicates that the complement has been bound or fixed by the interaction of the polyvalent gonorrhoeal antigen and the gonorrhoeal immune bodies in the tested serum, and we may say that the reaction is positive. This reaction is a true antigen-antibody reaction, and is absolutely specific; it does not occur except in the blood serum of individuals who, at the time of testing, had an active focus of gonococci, or had been cured of the condition within five weeks of the time that the blood was taken.

The reaction does not appear before the beginning of the fourth

week of the condition, or until the system has had sufficient time to generate specific immune bodies; at that time the diagnosis, at least in males, on account of the characteristic discharge, presents no difficulties. It persists, regardless of treatment instituted during the entire course of the infection, and for five or six weeks after all evidence of the disease has disappeared, and it does not recur, except following a new infection. In this respect it differs from the Wassermann reaction in syphilis, which is affected by treatment, and which does recur after having been absent for six or more months.

THE VALUE OR IMPORTANCE OF THE REACTION.—The reaction is of value in those cases of deep-seated and long-standing inflammatory conditions of the urethra and contiguous anatomical structures in which smears and bacteriological tests have failed to give definite or exact results, and in cases in which the suspicion of gonorrhea is extreme, and yet the material examined by stained smear and cultural methods leave a doubt in the mind of the conscientious physician. In the case of women, where it is rarely possible to determine by cultural or smear methods whether the discharge is gonorrheal in origin or whether the pus-tube or chronic inflammatory condition of the pelvis is due to other than gonorrheal infection, the serological test is of special value; and again in pregnant women the test would tell us whether an active focus of gonococcus is present, in which event the precautionary measures would be taken to protect both mother and child. Again, the young man contemplating matrimony, remembering that he has occasionally a morning drop, desires to know whether he is free from the infection, and if the diagnosis of gonorrhea cannot be made by smear preparation the physician owes it to his patient, the prospective mother and their unborn children to have a serological examination made for gonorrheal antibodies before pronouncing him free from infection. Another important field is the so-called rheumatic condition of joints in patients giving a history of previous gonorrheal infection to determine if these symptoms are produced by the gonococcus or some other toxic process.

The test has a value from a medico-legal standpoint which is both interesting and important. To illustrate this point I will mention a case reported by Dr. Keyes:

“The patient was a married man who had infected his wife with gonorrhea some months previously; both were treated and finally declared cured and the blood examinations made some months later were

negative. Two weeks later he returned with a fresh gonorrhoea two weeks old. Both he and his wife had the blood test made again and both were negative. Four weeks later another examination was made on both, and he was positive and she was negative, and she remained clinically cured. The development of a positive reaction in him showed the infection to be a fresh one due to extra marital exposure in spite of his fervent denial."

To illustrate further I will report from a recent article by Dr. Gradwohl. He says:

"We can all of us well imagine cases where the arch female enemy stamped with a suspicion of gonorrhoeal infection which she naturally indignantly denies may be haled before a serological tribunal to be judged and accurately condemned or acquitted, according to the positive or negative character of the reaction. We can substitute actual scientific evidence instead of the circumstantial which has heretofore been used."

Through the kindness of Drs. Kahle, Nelken, Scharff, Gessner and Eshleman, by supplying me with patients during the past six weeks, I have been able to test the blood of thirty-five individuals who gave a history of gonorrhoeal infection, and fifteen or more normal individuals as controls, and without going into detail will say that in no case of twenty days' standing or longer did I fail to obtain a positive result, except in those cases which had been proven cured by clinical and laboratory means. The normal cases were all negative. In this series of tests I attempted to determine if the syphilitic antibody would affect the complement in the presence of gonorrhoeal antigen, and examined the blood for the syphilitic antibodies by using both the original Wassermann technic and the Tschernogubow modification, and while some sera gave a positive reading, both for syphilis and gonorrhoea, it was determined by history and clinical evidence that both conditions were present. I proved to my entire satisfaction that the antibodies of gonococcus would not be affected by the syphilitic antigen, and *vice-versa*. This point has also been proven by Gardner and Clowes.

CONCLUSIONS.—The fixation of complement is a valuable test for occult gonorrhoeal infection. A positive reaction means that there is a living focus of gonococci or a very recently-cured infection, since it has been determined that the specific antibodies are eliminated within six weeks after cure.

The test is particularly advantageous in females, where the demonstration of the gonococcus is exceedingly difficult, and at times is a matter of grave importance to the physician, the patient and the family happiness, and in all cases of males, except the very early, since it is almost impossible to arrive at an absolute diagnosis by smear or cultural methods.

A blood which has been positive, and after treatment becomes negative, and remains negative, may be assumed to represent a cured case of gonorrhœal infection.

The test is of particular value in certain medico-legal cases.

The test, to be reliable and of any value, requires the utmost skill and experience in its technic, and should be done only by a skilled laboratory worker, who constantly does serological work, and who, by series of controls, assures himself that there is no mistake in the reading of his result.

FLAT-FEET, AND WHAT THEY LEAD TO.*

By PAUL A. MCI LHENNY, M. D., New Orleans.

Having recently had quite a number of cases with discomforts and malpositions secondary to flat-feet, and realizing that there are very few general practitioners who do not see cases of a similar nature, I have ventured to attempt an explanation of a series of conditions the effects of which are far-reaching and very annoying. Before studying the end-results of flat or weak feet we must first consider the normal foot and its shape. In a normal foot there are four distinct arches, but it is only necessary that we consider two at the present; these are the internal longitudinal arch, running from the os calcis forward to the phalangeal bones, the highest point of which is at the astragalo-scaphoid articulation, and the anterior or metatarsal arch, which runs across the foot from the first to the last metatarsal-phalangeal articulation, the highest point being at the second of that group. These arches act as springs, and supply the elasticity of the foot; therefore, when an arch becomes weak or depressed, the foot naturally loses its elasticity, and after a time is gradually forced into a deformed position by the superincumbent weight of the body or by the use of improper shoes.

As the internal longitudinal arch depresses, the foot becomes elongated upon the inside, causing an abduction and pronation of the fore-foot, which eventually assumes a position of valgus; at the same time the os calcis rotates inwards and downwards, carrying the astragalus with it. This depression and rotation produce a separation of the articular surface at the astragalo-scaphoid, astragalo-cuneiform and astragalo-tibial articulations, and a con-

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

sequent stretching of all their ligaments, which in time causes excessive pains through the foot and spasmodic contractions of several groups of muscles.

With the anterior arch, depression causes still another set of discomforts. As more weight is thrown upon the heads of the metatarsal bones by elevation of the heels (high heels), or a weakness of the muscles supporting the arch, a chronic depression finally results, causing pain and discomforts, first described by Morton and now understood as Morton's neuralgia or metatarsalgia. This pain seems to pierce the foot and radiates from the point of greatest depression, which is most frequently at the third or fourth metatarsal-phalangeal articulation. To relieve the pressure, the patient extends the toes, in some instances to such an extent that there may develop a subluxation at the more greatly depressed joint. When this condition has existed for some time, thick callous pads form beneath the depressed heads, and may even go so far as the formation of bursæ. Pain is naturally extreme, and pressure unendurable; cramps through the calf muscles, especially at night, are frequent in these cases. To relieve these discomforts, especially those of the longitudinal depression, the patient involuntarily abducts the whole foot far beyond the normal weight-bearing angle until the whole leg is rotated outward, producing a stretching of the capsule and ligaments on the inner side of the knee joint, a rotation outwards of the tibia upon the femur, and increased pressure upon the external condyle of the femur, therefore pain through the inside of the knee, radiating upwards from the tibial head, and occasionally through the outside of the knee, with an accompanying sensation of tightness back of the knee, results, which the patient endeavors to relieve by bending the knee and assuming the position of genu valgum. Since the whole leg is rotated outward, changes at the hip joint also occur; the femoral head is rotated forward, throwing the line of weight to the anterior portion of the acetabulum, and producing a laxity of the posterior portion of the capsule and the ileo-femoral ligaments, while at the same time those of the anterior portion are stretched. In time, simply from fatigue from supporting the body in a badly-balanced posture, the patient allows the pelvis to sag or drop backward until its superior plane occupies more of a longitudinal position than the normal angle of about 30 degrees. As the pelvis sags, the sacrum is carried backwards and downwards, and with it the whole lumbar spine, causing a flatten-

ing or obliteration of the normal lordosis in that region, and throwing the whole trunk out of balance. For compensation, the dorsal spine and the shoulders are bent forward and the sternum and chest wall are depressed; in other words, the whole body balance is thrown out, and, to equalize it, postural deformity must take place. In these cases the part of the body in which we find the most persistent troubles, in by far the majority of cases, is the lumbar spine and lumbo-sacral spine. Let us consider what happens there: as the pelvis sags, the sacrum is carried backward and downward, and with it the whole lumbar section, which straightens or flattens, and in extreme cases completely obliterates the normal lordosis of that region; the anterior portion of the vertebral bodies receive more weight and the intervertebral discs are pinched or mashed; in the posterior portion of the column the articular processes are separated and the muscles, bands and ligaments are stretched. When this occurs, not only is the axis of the abdominal cavity changed, but that of the pelvis also. When such a position has existed for a length of time, pain through the lumbar region develops, due simply to pressure in the anterior portion and to separation with stretching, which strains and weakens the ligaments in the posterior portion of the lumbar and lumbo-sacral spine. These pains finally become chronic in character, and may run forward to the sides or down the legs, simulating sciatica; at night there is a sense of weakness through the back, and in old cases pain, which is only relieved by the prone position or by lying on the back with a small pillow under the lumbar region. After rising there is pain and stiffness until the patient "limbers up," and he is half-way comfortable for a while, but after standing for a time the discomforts return and are as annoying as ever.

To go on a point further: we must consider the effect produced upon the abdominal viscera. When the forward curve of the lumbar region is lessened or obliterated, the normal shelves or planes, upon which certain portions of the viscera are somewhat supported, are lessened, and more weight is consequently thrown upon their respective mesenteric and peritoneal attachments, which sooner or later become stretched, and enteroptosis results, with chronic constipation, in the majority of cases, as a secondary evil. As the habitual or postural deformity increases, the anterior-posterior diameters of the thorax are decreased. This diminishes thoracic and increases abdominal breathing, thereby applying more down-

ward pressure upon the abdominal viscera, especially the stomach and liver, interfering with their functioning. Many of these patients do not complain of any foot troubles, and on first thought we would naturally expect to find some derangement in the lumbar section, or possibly in the sacro-iliac synchondroses, but a careful examination reveals that the motions of the spine are normal, or possibly slightly guarded, and that there is no actual pain or pressure over the lumbar region or over the sacro-iliac joints; a tightness back of the knee and pain along the inside of the knee are occasional, but not always. The most prominent symptoms are chronic back-ache, chronic constipation, nervous irritability, and sometimes digestive disturbances. A further examination will show markedly pronated feet, with depressed longitudinal arches, and often a complication of anterior arch depression. But these cases do not consult the physician because of discomforts in their feet, and cases having static foot deformities which cause them great discomfort do not necessarily have the other complications, possibly because they seek relief before they have had time to develop; but the remarkable fact is that the feet may be so markedly out of balance as to cause postural deformities in other parts of the body, and yet do not draw the sufferer's attention to the feet themselves. The painful flat-foot is so generally well understood to-day that I need not dwell upon its immediate symptoms, but the treatment of both is practically the same and demands a general outline.

These patients generally come to the specialist after having tried various antirheumatic remedies in vain themselves, or because their family physician had found that, as long as he kept up the salicylates and general laxatives, the troubles grew less, but that they returned with equal vigor very shortly after the remedies had been discontinued, and he therefore seeks the aid of some one possibly more familiar with certain conditions. To restore the normal position of the feet, and in that way enable the body to resume its normal posture, must be our principal aim; the other complications may be met as it becomes necessary. If we have the simple weak foot which, when at rest, has a high arch, and only when weight is borne upon it does it depress, we can treat it by strapping the longitudinal arch with the foot adducted and supinated, and if the anterior arch is depressed by strapping a small pad of felt to the sole just back of the most depressed metatarsal head; if there is marked depression of one or both arches, with tendinous contrac-

tions which hold the foot in the deformed position, daily manipulations with the idea of stretching the contractions may be carried out with relief; or the deformity may be corrected under an anesthetic and the foot held in the adducted position for a sufficient length of time to overcome the tendency toward pronation. If the deformity is of long standing, with great contractions of the abductors, it may be necessary to tenotomize some of that group in order to obtain the desired position. Having put the foot in the normal position, we finally come to the question, "Are steel arches necessary?" This depends greatly upon the individual; if the foot is simply weak, it is possible to strengthen it with proper exercises, if the patient is of a type that can do exercises well, otherwise exercises are not sufficient, and corrective shoes or arches must be supplied.

With those cases which demand a more energetic preliminary treatment than mere strapping, arches are necessary as soon as the foot can be put in the proper position. The arches must be raised from time to time till the proper height has been obtained; they are then tempered and nickle-plated; it is then time to give the exercises, which are simple and are designed to develop the plantar and adductor muscles. It is a great mistake to allow patients to go without exercises, as it means, for those who need arches, a legacy of arch-wearing for the rest of their lives. If patients are conscientious about taking their exercises they can generally discard the arches in about six months, but few of them do it. For the simple weak cases a corrective shoe may be all that is necessary, but too much reliance should not be placed in them as the condition is liable to progress. In those who have feet discomforts the improvement is almost immediate, and the back pains of the other type respond to treatment as readily; the chronic constipation demands appropriate treatment for such a condition, and as it diminishes the digestive disturbances and nervous irritability will subside. In those cases where postural deformity in the dorsal region has existed for a long time it may be advisable to devise some simple form of back brace to hold the back and shoulders erect until the patient can overcome the weakness which is readily accomplished when the feet have been replaced in their normal relationship to the body.

Case 1. Mrs. S., age 67. Came to me on October 17, 1911. Began having pains through calf and back of right knee in 1910. Since then has been unable to walk any great distance because of pain through

right knee. Examination showed knee motions free and painless, no pain on pressure, no crepitation, measurements about same. Right foot felt weak, marked pronation, and depression of anterior arch with thick callous under arch. Foot strapped and anterior arch padded. October 21, improved, restrapped, also on 26, when cast for plates were taken. November 1, plates delivered; 5th, raised; 15th, raised, tempered and nickeled. Discharged cured. Could not take exercises. Reported April 7, 1913. Has had no further discomforts.

Case 2. Miss B., age 27, stenographer. Was first seen January 12, 1912. Had been suffering with pains through lumbar region for two years, more intense just after retiring, but gradually passed off during the night; felt discomfort on rising, but was better after taking bending exercises; pains came on again about middle of day. Had suffered from indigestion and constipation; never had had pains through feet, but got tired after walking a short distance; no trouble at periods. Examination showed all motions of spine normal, but guarded; when standing there was a seeming flatness of the lumbar curve; both feet pronated with both arches depressed. Feet padded and strapped; pluto ordered. January 14, slight improvement, restrapped; 19, no pain since; 17, restrapped; 27, menstrual period just passed during which pains returned, restrapped; February 1, no pains; casts taken, restrapped; 6, plates delivered, plate continued, no pains; 16, plates raised, tempered and nickeled, exercises given; 22, no pains since plates have been worn. Discharged. Report April 4, 1913. Has no pains for a year, takes exercises, does not wear plates, has gained 11 pounds.

Case 3. Mr. T., age 31, leather worker. Referred by Dr. Friedrichs, February 29, 1912. Previous history negative. Had had pains through lower portion of back for several months; unable to sleep at night; very restless; constipated for long time; has suffered with digestive disturbances from time to time; stands bent slightly forward; lumbar curve shallow; back motions limited on forward bending, otherwise good; sense of tightness back of knees, especially right; has never had any trouble with feet; marked pronation of both feet, more so on right; anterior arches also depressed. Feet strapped and padded. March 4, some improvement, restrapped, plate ordered; 7, casts taken, restrapped, no pain since 4th; 11, plates delivered, and on 16 raised, tempered and nickeled, exercises given; 23, has had no pains since wearing the plates; discharged. Reported on April 2, 1913. No pains, still does exercises and only wears plates occasionally.

Case 4. Mr. E. L., age 40, school and music teacher. Referred by Drs. Hume and Logan, October 18, 1912. Family History: Grandfather died of T. B., also grand uncle. Previous History negative. Had had pains through lower portion of back for six years; worse at times than at others; nervous for same length of time; digestive disturbances and occasional diarrhea; three years ago noticed that right leg was a little shorter than left; no pain through hip or sacral region, no accident; pain at night excessive at times; can rest better on side, or on back with pillow under lumbar spine. Examination shows right leg to be $\frac{1}{2}$ inch shorter than left; lumbar spine flat, but all motions good; no pain on pressure; double flat-foot and depressed anterior arches; no pains through feet, but they get tired very easily. Heel of right shoe raised $\frac{1}{2}$ inch to equalize length of legs. Salol and phenacetin ordered for three days; 25, was better while taking medicine; pains returned next day; feet strapped and anterior arches padded; medicine repeated; 28, slight improvement, restrapped, same treatment; November 5, improvement, same treatment, casts taken; 12, plates delivered; medicine discontinued; 30, decided improvement, plates raised, exercises given; December 9, plates raised, tempered and nickeled; no pain since using plates. January 6, 1913. Has gained 9 pounds, can walk as much as

desired; discharged. April 2. Still wearing plates, does not do exercises regularly.

Case 5. Mrs. C., age 37, stenographer. Consulted me October 27, 1912. Family history negative. Previous history negative, except a fever of four weeks' duration, but which did not keep her in bed all the time. About twelve years ago began having pains through the back after standing for a long time; has had pains through lower spine ever since, worse during early part of night after retiring. About eight years ago had a severe attack of indigestion, after which pains in back increased; menstrual periods always regular, but pains seem worse during period; has been constipated for years, had to take purgatives every 48 hours; has been treated for different maladies without relief; about a year previous to consulting me she had had a plaster jacket applied and consecutive ones for nearly nine months, no relief from them; never can remember having had pains through her feet, but knees have troubled her after walking a long distance; tires easily; has been very nervous for a long time. Examination shows pain on pressure over lumbar region, and all motions guarded, though not painful; lumbar spine flat; marked pronation of both feet with double hallux valgus and depressed anterior arches with calluses. Feet strapped and padded, plate ordered. Was re strapped four times by November 6. Was then much improved; 8, casts taken, re strapped; 13, plates delivered, improvement continued; 25, plates raised, tempered and nicked; 30, no pains, exercises given; December 12, has had no further pains, constipation better; January 7, 1913, reported feeling perfectly well; light shoulder brace of canvas ordered to assist in holding the shoulders erect when she was working.

ARTERIAL TRANSPLANTATION, WITH TECHNIC EMPLOYED.*

By S. L. CHRISTIAN, M. D., AND E. L. SANDERSON, M. D.,

Visiting Surgeons to the Schumpert Memorial and Charity Hospitals, Shreveport, La.

In attempting to transplant arteries and veins we were confronted with a more formidable problem than men working under the favorable surroundings of specially fitted up laboratories and resources that would supply anything necessary for the furtherance of the work.

We attempted to do this work under ordinary conditions and to work out a technic that other men working under ordinary conditions could employ, both in experimental and human surgery.

Whether we have succeeded in working out a technic that will be applicable to human surgery and to the average surgeon, we do not know, but would advise that any surgeon, no matter how skilled, before attempting to anastomose human blood vessels should practice anastomosis on lower animals.

It is our purpose to give in this article the technic we have suc-

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

cessfully employed and to point out some of the danger rocks we have encountered in this kind of vascular surgery.

Our first attempt to suture the abdominal aorta failed; and we had not intended doing more than simply suturing the divided ends of that vessel.

A medium longitudinal incision was made and the intestines packed off, after which the artery was located and dissected free from its attachments for the distance of about four centimeters. Two lead clamps were then applied to the aorta and the vessel cut between them.

These clamps are simple lead plates two and one-half centimeters long, one centimeter wide, and one millimeter in thickness. They seemed at first to be ideal, in that they were small and would be out of the way during the time of suturing the cut vessels, and again any amount of desired pressure could be put on them. As before stated, we applied these clamps and cut between them, but had not figured on the remarkable contractile powers of a divided aorta, and found that the ends of the vessel retracted flush with the edges of the clamp. In attempting to slip the upper clamp up the aorta towards the heart, thus giving room to suture the vessel, the clamp became disengaged and the dog bled to death before it could be reapplied.

In this operation we learned several things: First, that a larger opening is necessary than is given by a median incision, the viscera giving considerable trouble even in clearing away four centimeters of the vessel, by slipping in the field and necessitating the hands of several assistants to keep them retracted, and even then the view of the field was very limited, and the field itself entirely too small to do the accurate work necessary in suturing blood vessels. Second, that the clamps should be larger and more easily gotten hold of in case of emergency. Third, that a large artery like the aorta will retract fully three centimeters, and that tension is too great to ever bring its ends back together with the suture material used, as it will either break or cut through the vessel, hence the necessity of having a segment to insert when a straight artery of considerable size has been completely divided from any cause.

From this dog we removed the thoracic aorta and put it in a test tube of sterile hydrocarbon oil and deposited it in a refrigerator with a temperature of three degrees F. above freezing. The next day we attempted to transplant it into another dog. The second

dog being much smaller than the first, and also the thoracic aorta being naturally larger than the abdominal aorta, these two factors, taken together, we were attempting to transplant a segment nearly twice as large as the vessel being operated on.

Our incision in this case was a median longitudinal one with a transverse cut through the recti muscles, thus giving a much more open field.

Before dividing the aorta and removing the segment we ligated four lumbar branches on each side, beginning just below the renal arteries. A segment two centimeters long was sutured in by the Carrel method, in which three guide sutures hold the ends together, while the main continuous suture is being put in. (These are the clamps used in this operation, and were made by us after the calamity of the preceding day.)

Our field was bloodless and the suturing was done under no more difficulty than is necessary with the triangular suture method.

The disproportion between the size of the segment and the artery necessitated the puckering of the segment, but it was not as much as had been expected. After the suturing was completed, which took nearly ten minutes, and the blood-current turned on, there was some leakage, which stopped in two or three minutes. The abdomen was closed with four planes of catgut and silkworm sutures.

This dog lived fourteen hours. The autopsy showed that a clot had formed in the segment, seemingly due to the fact that blood poured easily into the enlarged segment, but, on striking the constricted distal end, clotted on the puckered edges and suture line.

From this operation we learned that our technic could be again modified advantageously. We thought that if a method could be devised whereby the circulation would not be interrupted for so great a length of time, and if suturing could be made more accurate, the practicability of the operation would be greatly enhanced. These indications were met in the next operation by the use of glass tubes.

Third Operation: Incision as in second. Ligation of four lumbar branches and segment removed between clamps. A human femoral segment to be inserted was put on the tube as illustrated here, the tube having been first prepared by thinly coating with paraffin, both inside and out, and kept in a sterile container until

ready for use. The ends of the tube were then inserted into the ends of the divided aorta, as shown in this rubber, and the artery tied with umbilical tape, over slight constrictions in the tube. The clamps were then removed and the circulation re-established. In this way the circulation is not interrupted for over one or two minutes, and the subsequent suturing of the vessel can be done at leisure, and absolute and accurate approximation is gotten. No guide sutures are necessary, as the ends of the vessel are always in apposition.

After the suturing was completed the clamps were reapplied and a small longitudinal slit was made in the vessel, below the tube, and the tube fed through it. This incision was then closed and the abdomen closed as in the preceding case.

This case lived forty-eight hours. Death, in our opinion, was due to two factors: we accidentally wounded the receptaculum chyli, which lies just to the left and behind the abdominal aorta. This is a most delicate structure and requires extreme caution in dissecting it free from the aorta. An assistant also cut the right ureter; being unable to pick up the distal end for anastomosis, we removed the kidney, as we feared hydronephrosis more than entire absence of the kidney.

From this dog we removed the unwounded part of the abdominal aorta, noting at the time that the transplanted segment had taken on a normal, healthy appearance, the intima was smooth and glistening; the adventitia had become agglutinated to the surrounding tissues, showing that the segment was living.

The removed portion was put in cold storage for five days, and at the end of this time was transplanted to another dog, which dog you now see.

As this case represents a perfect result, we will give the exact technic used.

A medium-sized white female dog. After careful preparation, under ether anesthesia, a median incision with a transverse cut through the recti muscles was made. The larger part of the viscera was delivered and wrapped in hot towels, and the rest packed off and retracted. The aorta was located and dissected free from its attachments from the renal branches to its bifurcation. Three lateral branches on each side were ligated and cut. Again, in this case, we experienced considerable difficulty in avoiding wounding the receptaculum chyli.

The clamps were now applied to the aorta above and below, and a small segment excised. The preserved segment having previously been warmed and put on, the parafined tube was now inserted. The ends of the aorta were now tied over the constrictions in the tube, clamps removed and circulation re-established. The suturing was done with the finest curved cambric needles and No. 1 black surgeon's silk. The suture was continuous, and included only the two outer coats. These sutures were first prepared by sterilizing the threaded needles in heated vaselin for one and one-half hours.

The clamps were reapplied and a small slit made in the vessel below the tube and the tube fed through it. This incision was then closed by a whip-stitch and the clamps again removed. Approximation was accurate and there was no leakage, and the pulse was easily felt in the femoral arteries. Abdomen was closed with four planes of catgut and silkworm sutures. The dog made an uneventful recovery.

While our experiments have not been very extensive, yet we feel justified in drawing the following conclusions:

1. In this work an especially large incision and clear field is essential.

2. A large artery, when completely divided, will retract at least three times the distance of its diameter.

3. The clamps used in blood-vessel anastomosis should be of the spring type and just powerful enough to occlude the vessel without injuring the intima, and of such design that their displacement will not occur under ordinary circumstances.

4. The elements influencing results, in the order of their importance, are: Asepsis, preservation of the tissue, accuracy of approximation, length of time circulation is suspended, avoidance of including intima in suture, size of suture material, and general dexterity.

5. That the same work on man would be easier, because of the slower coagulability of the blood, and that it will soon be applied to hitherto inoperable arterial lesions.

6. That tissues may be easily kept in stock for future operation.

We are deeply indebted to Drs. Slicer and Sentell, interns of the Charity Hospital, for valuable assistance in this work.

VICIOUS CIRCLE FOLLOWING SHORT NO-LOOP OPERATION RELIEVED BY SECONDARY JEJUNO-JEJUNOSTOMY WITH MURPHY BUTTON.*

By JOHN SMYTH, M. D., New Orleans.

Male, white, age 41 years, married.

Family History: Father died, pneumonia, 38. Mother died 65, some stomach trouble. Three (3) brothers and sister died in infancy.

Previous History: Measles, whooping cough, mumps before 12 years of age; "malarial fever at intervals all of his life;" no venereal diseases.

Present Trouble: Four years ago, weight 155, at time of operation 97. In July, 1908, was taken ill suddenly after a hearty meal, pains in abdomen, lasting about one hour. Similar attacks occurred every day. These pains would come on about four hours after eating and gradually become worse, until he resorted to

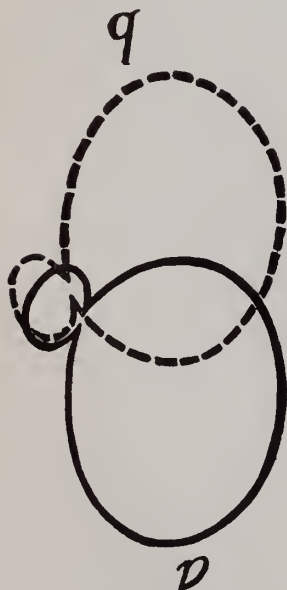


Fig. 1.

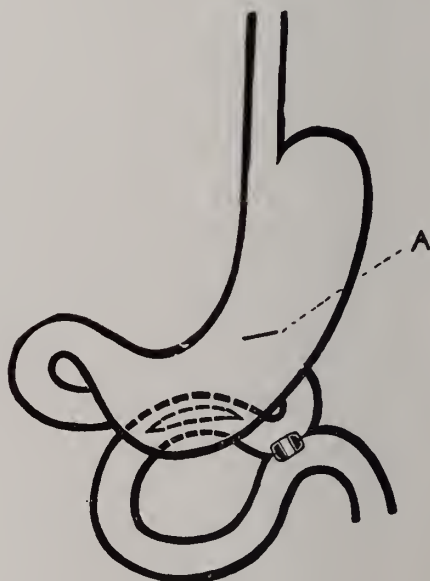
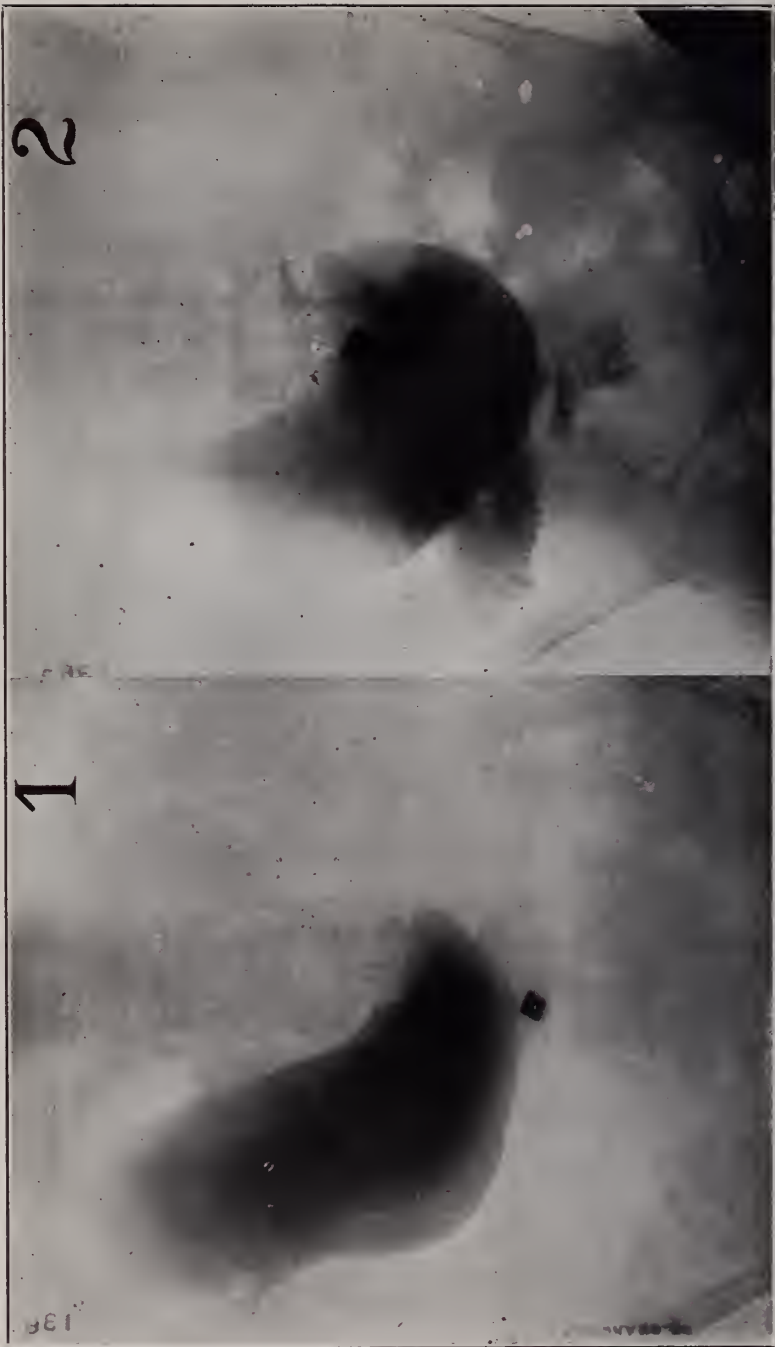


Fig. 2.

stomach tube, which afforded immediate relief, pain recurring after next meal. Operated July, 1911, in Mississippi, for appendicitis; appendix removed, but found, according to his statement, practical-

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.



ILLUSTRATING DR. SMYTH'S ARTICLE.

ly normal. Has had no pain since operation, but discomfort after eating, followed in 3 to 6 hours by vomiting without pain or nausea, vomitus very acid at times, and very bitter at others. Sometimes blood in stools.

Retains evening meal at times, provided he retires soon after eating, indicating kinking obstruction in pylorus in upright posture. Constipated most of his life until the past year, during which bowels have acted better. X-ray Bismuth test shows pyloric obstruction and gastric dilatation, with gastropnoxis (Fig. 1 and 2) and stasis terminal ilium.

Patient entered the Presbyterian Hospital, January 21, 1913, and was operated by me, January 23, incision through old scar right rectus muscle, kink similar to Lane's was found with adhesions at site of old appendectomy, these were relieved and sterile vaselin applied. Incision extended upward and adhesions around pylorus were so firm and extensive as to render unwise any attempt at the modified Finny pyloroplasty as was first intended.

Gastro-jejunostomy Moynihan-Mayo method was then done, making the opening in the jejunum as close as practicable to the ligament of Trice. The patient left the table in fair condition (pulse 120, good volume) the usual post-operative treatment was adopted.

Condition was very encouraging up to the evening of the sixth day, when patient vomited about one-half hour after supper, following this, vomiting of bile commenced.

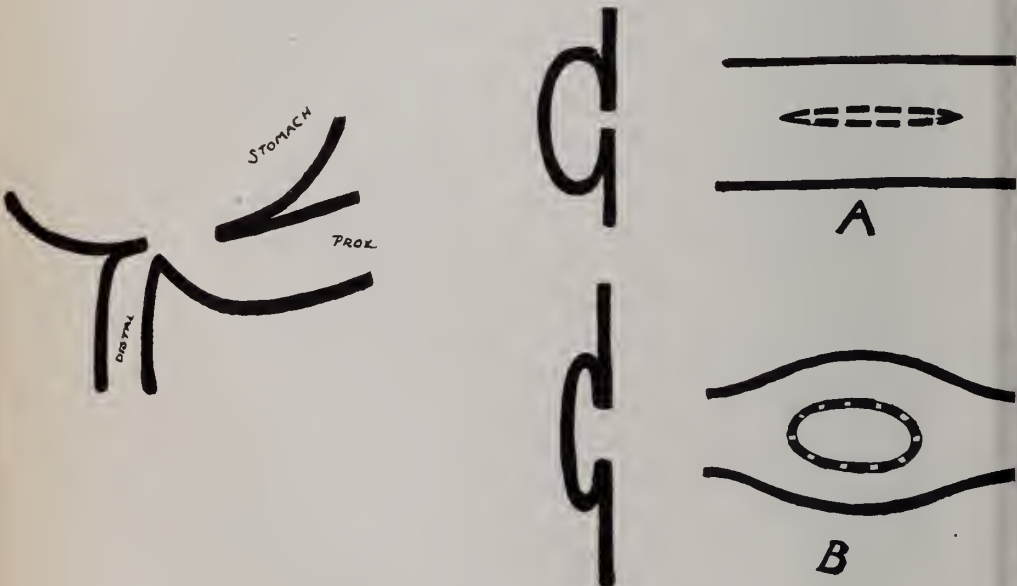
Subcutaneous hemorrhage from abdominal wound occurred February 1, the wound was partly opened and packed. Systematic lavage every 12 hours was followed by considerable temporary improvement until evening of February 8, when vomiting recurred and condition grew rapidly worse. February 9, old incision site of hemotoma opened, clot cleaned out, surface swabbed with tincture iodine and sutured with silk worm gut. New incision through left rectus was made and the anterior wall of the stomach was grasped by forceps and an incision sufficient to pass one-half of the small Murphy Button made. ("A" Fig. 3.)

One part of the button, held by forceps, was introduced through this opening and through the gastro-enterostomy into the proximal portion of the jejunum and held by an assistant. An attempt was made to pass the other half into the distal jejunum, but, owing to a flattening of the gut, it was deemed unsafe, dangerous trauma might have resulted, this half of the button was introduced by the

usual method into the jejunum, a sufficient distance from the gastro-jejunal junction to give an easy loop and avoid kinking. A very small opening in the proximal jejunum was then made, the shank of the button forced through, and the two halves pushed together and one line of Lembert sutures put in.

The patient did not vomit after the secondary operation. He improved continuously and left the hospital on February 19, just ten (10) days after. All stitches removed and wounds thoroughly healed. Last report, by letter from his physician in the country, stated that he feels well and is inclined to eat too much, but has had no discomfort whatever from his stomach.

Some points of interest noted at the second operation were the marked dilatation of the proximal jejunum, with free opening into the stomach. Tendency to kinking of jejunum increased by the dilatation (Fig. 4) above not prevented by the fixation suture.



Figs. 3, 4 and 5.

CONCLUSIONS.

(1) Safety in anastomosis demands at least two (2) rows of sutures and at times three (3) rows, which flattens the gut at this point (Fig. 5 "A") rendering partial obstruction very probable, resulting in dilatation of the proximal jejunum.

(2) This dilatation of proximal jejunum may cause kinking of

the distal loop, at its junction with the stomach (Fig. 4), increasing obstruction and facilitating flow of bile into the stomach from proximal loop, the dilatation alone of which increases its tendency to empty bile into the stomach.

(3) The change from the straight cut opening (Fig. 5 "A") to the elliptical one (Fig. 5 "B"), which soon follows the operation, causes further flattening and greater obstruction.

(4) The so-called no-loop operation will, in my opinion, result in a "no-loop" in the majority of cases, yet in at least a small percentage of these cases the "no-loop" would likely do more harm than good. For many of these stomachs with ulcers near the pylorus, either purely gastric or purely duodenal, or those saddle ulcers, obstructive in character, cause more or less dilatation of the stomach. Now, if the so-called "no-loop" operation is accomplished, the result looks good in the recumbent posture (Fig. 6 "A"), but, when the patient assumes the upright position, the markedly dilated stomach drops downward, rotates forward with the lower posterior portion attached to and fixed by the very short portion of jejunum and high position in transverse Meso Colon, and the fenestrum assumes a position relatively on the upper posterior stomach (Fig. 6 "B"), resulting in a greater tendency to bile inflow into the stomach, and the lesser ability of the stomach to get rid of this bile except by vomiting.

It is contended by many that the opening in the stomach should be in the most dependent part and posteriorly.

Now, the most dependent part of the stomach, before the suture to the bowel in a "no-loop" operation, is not always the most dependent part after the suture. This is governed largely by the mobility and dilatation of the stomach. If the position of the gastro-jejunal opening is of importance, then it is imperative that the position of the opening should not be fixed by a short proximal jejunum, in case of dilated and movable stomach.

(5) Again, I believe that there are cases that will have regurgitation of bile into the stomach sufficient to produce vicious circle vomit irrespective of the mechanical conditions resulting from the simple gastro-jejunosomy. We see constantly bile regurgitation from the normal duodenum into the normal stomach during the protracted vomiting, from any cause, such as ether nausea, etc. It would seem, therefore, reasonable to suppose that, should vomiting result from another cause than bile regurgitation in a case of

gastro-jejunostomy, this vomiting alone could cause bile regurgitation, thus inaugurating a vicious circle which, when once established, is difficult to control. This may account for some of the cases which *are relieved* after persistent systematic lavage, where the stomach becomes accustomed to or is less irritated by the small amount of bile, or the distal loop of the jejunum becomes gradually dilated sufficient to establish proper function.

(6) Further, reverse peristalsis is a factor at times of no little importance in gastro-intestinal surgery. This is not infrequently increased by the Murphy drip, that great aid in the early post-operative treatment of gastro-jejunostomy, thus tending to produce regurgitation into the stomach from the distal jejunum.

(7) The ease with which the Murphy button may be introduced into the jejunum at the time of the gastro-jejunostomy, by opening the forceps in the gut and introducing one-half of the button into the proximal and the other half into the distal jejunum at once commends this plan. After completing the gastro-jejunostomy, the two halves of the button are brought into proper position, allowing a sufficient distance on each side of the opening into the stomach to secure an easy loop, a small hole is then made with a knife through the gut wall into the lumen of each half of the button and its shank pushed through, that two halves of the button are then forced together (Fig. 7), it not being necessary to put in any purse string or Lembert suture. This part of the operation (i. e., the jejuno-jejunostomy) being completed by the Murphy button in a very little time, adds practically nothing to the risk of the operation and secures an enormous factor of safety in insuring against the possibility of bile regurgitation into the stomach. This secondary operation was first done by Dr. Matas, May 28, 1910. It has been done in five cases since and the combined operation (Fig. 7), that of the jejuno-jejunostomy and gastro-jejunostomy at one sitting is now adopted by him as a routine.

It may be an admission on the part of those who advocate this method as a routine procedure that their technic is imperfect or inferior to that of those who are adopting the Moynihan-Mayo operation exclusively, or it may be that they, too, have their troubles; be that as it may, I believe that at least in marked dilation or great mobility of the stomach or in the presence of extensive adhesions the jejuno-jejunostomy, at the time the gastro-jejunostomy is done is the safest plan.

TETANY.*

By M. S. PICARD, M. D., New Orleans.

Up to 1900, the intimate relation between infantile tetany and the tetany of later life was not known. It was Eserich, of Vienna, who first showed that infantile tetany and the tetany of later life were analogous; it was he, also, who grouped and classified all symptoms as they now exist, proving that laryngo-spasm was not an independent disease, but one of its symptoms complex. Previous to Eserich's classic classification Erb showed that in both infantile and the tetany of later life there was a similar hyperexcitability.

In comparison to Europe—for at certain seasons 30 per cent. of infants show symptoms—it is much rarer here. Perhaps it is due to the better social conditions, the greater number of children fed on the breast, or the nearly universal use of condensed milk outside of the clinics. In Europe the number of infants fed on condensed milk are practically nil; practically all artificial feeding is from cow milk dilutions, and as the close relation between cow's milk and tetany, etiologically will be shown, it will only be mentioned here. Perhaps, as a reason for less tetany appearing on condensed milk than on cow's milk dilution, is that in the preparation of the former certain chemic or thermic changes take place.

Tetany may be defined as a condition of irritability of the nervous system, occurring chiefly in infants and characterized by galvanic and mechanical hyperexcitability of the peripheral nerves, with a tendency to tonic and clonic convulsions.

The symptoms of tetany may be divided into latent and manifest tetany. To the latent symptoms belong the famous triad, Chvostek's or facial phenomenon, produced by striking the facial nerve 2-3 c. c. in front of the lobe of the ear, causing a contracting of the facial muscle; Trousseau's phenomenon, or the production of the obstetrical hand by constricting the nerves and vessels of the arm at the bicipital groove, and the most diagnostic symptom, Erbs' phenomenon, the increase of the electrical excitability, a condition in which its cathodal opening contractions is less than five milliamperes. The technic for testing the electrical excitability is extremely simple: the child must be quiet; the hand must not be balled. The median or peroneal nerves are the ones usually chosen. If the median nerve is tested, which is most commonly done, the

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indifferent pole is placed on the breast, the active one on the median nerve, where it is most exposed, at the elbow. In tetany the cathodal opening contracting sinks under five milliamperes, 4-3-2-1, and sometimes even the weakest current is sufficient.

The principal symptoms of manifest tetany are the laryngo-spasm, the eclampsia, and the tonic convulsive condition of carpo-pedal spasm. As a rule, infants do not suffer from this group of symptoms collectively, often only one of these being the characteristic symptom. What the cause of this anomalous condition is has never been explained. The reflexes are exaggerated—almost as characteristic as the facial phenomena is the increased peroneal reflex as pointed out by Hamburger. The physical condition of the child is altered; it is easily frightened, nervous, ill-humored, often permitting only certain persons to approach it. The laryngo-spasm, which is a mild attack of spasm of the glottis, often produces the most alarming symptoms, but is rarely fatal, death usually occurring from tetany of the heart. There can easily be between twenty and twenty-four attacks of laryngo-spasm, varying in intensity. These may be due to psychological excitement, crying, awakening from sleep, or to rapid overfilling the stomach with food.

A very dangerous form of convulsion of respiration is the expiratory apnea, or a convulsive arresting of respiration in expiration, leading quickly and unnoticed to death. The crowing inspiration is absent, there being nothing to awaken one's suspicion of this dread condition. The carpo-pedal spasm of infants do not assume the typical obstetrical hand which one sees in later life; instead of this, the fingers are closed tightly, covering the thumb. The teeth enter also into the symptom complex; there is a melting or destruction of the lower half. Changes in the lenses of the eye have been mentioned, the lenses becoming clouded. Uffenheimer describes a peculiar expression of the face from which he is able to recognize tetany.

That parts of the body other than those described can be involved has been often mentioned. Finklestein and Ibrahim have seen convulsions of the pharyngeal and esophageal muscle; Koeppel has described convulsive-like contractions of the sphincter ani muscle; tetany of the ciliary muscle of the eye has been mentioned by Kuhn; contractions of the dilator and contractor muscles of the pupils have been reported by Feer, Eserich. Falta and Kuhn have demonstrated in adults that, after the appearance of acute tetany,

the gastro-intestinal tract can be involved, as well as other organs supplied by the vegetative nerves. That the heart can take part in the symptom complex of tetany is believed by Ibrahim, who thinks that the sudden deaths which one sees in tetany are due to a tetany of the heart. Churchman, Falta and Rudinger have proven that the blood vessels take part in the general tetanic condition. Hagenbach, Burchardt, Sachs and Eserich have described sphincter contractions of the bladder. That the flow of tears, the amount of saliva, increased perspiration can enter into it was described by Falta and Kuhn, Fleiner and Krukenheim. The latest parts described to be involved in the general tetanic condition is that of the smallest bronchioles, as described by Lederer in the last number of the *Zeitschrift für Kinderheilkunde*.

DIAGNOSIS: The diagnosis of tetany is light, the presence of Chvostek's and Trousseau's phenomena, with the increased electrical reaction, is sufficient. Too much stress cannot be laid on the examination of every case of convulsions, to see if latent tetany does not exist, for many of the cases of sudden deaths, where no autopsies are held, and which are said to be status lymphaticus, are really tetany of the heart. Every infant over three months old should be examined for the facial phenomena.

ETIOLOGY: Aside from the etiological factors of tetany which have already been mentioned, the cause of tetany is still obscure. Many theories have been brought forward as causative factors, but up till today no single one has been confirmed. One thing is certain, that there is a marked relation between the quality of food and tetany. This is shown by the fact that breast-fed children are much more seldom attacked than artificially fed infants; the possibility of diminishing the symptoms of manifest tetany by certain change of diet and to again increase them by a return to the old regime. Gregor and Finklestein have shown that the nourishment of children with manifest tetany with breast milk and different kind of flours, such as oatmeal and barley flour, caused the convulsions and symptoms of hyperexcitability to disappear while the administration of cow's milk at once increased the excitability. In Prof. Finklestein's hospital I have seen as small a quantity as 20 drops of cow's milk produce laryngo-spasm in an infant who, under the respective treatment, remained free from the symptoms. These facts justify the conclusion that there is something in the metabolism of cow's milk that produces the

attack. It has been clearly established that cow's milk as a whole increases the excitability, while the addition of proteid fat and sugar produced no change or reaction. The addition of cow's milk whey produced the reaction just as whole cow's milk. From this Finklestein drew his conclusions that there is something in the whey that produces the disease.

Investigations in the mineral metabolism have shown that certain individual ions, as sodium, produce hyperexcitability while calcium has an inhibitory action. Stolzner showed that the addition of calcium to children with tetany increased the electrical excitability. Stoltzner's last experiments were with the lenses of the eye. He proved that the addition of calcium and magnesium to the lenses of the eye from rabbits and guinea pigs produced a cloudiness of the lenses just as one sees in cataracts from tetany, while the other salts gave negative results. Rosenstern observed that in the administration of large doses of calcium, 100 grams of a 3 per cent. solution, there was at first a marked increase in the electrical reaction, which, after a few hours, was followed by a marked diminution of the same. A constant influencing by calcium was not found. Yanse and Eserich believed that the cause of tetany was to be found in a demonstrable pathological lesion of the parathyroid, hemorrhages, cysts or disease. Both surgical and experimental tetany have been produced by removing the parathyroid. Yet, in spite of this, how is one to explain the predominance of the disease in artificially fed children over those breast-fed? That changes in the parathyroid do not occur in all cases has been frequently observed, fully as many children dying with a negative finding as a positive. Later Eserich believed that the parathyroid had an internal secretion which had the power to remove certain poisons from the intermediary metabolism; and that even if there was no distinctive pathological finding there could be a congenital absence of the secretion. In experimental removal of the parathyroid changes take place in the metabolism as one sees in tetany. McCullum and Nugheim have found that in the brain and blood of dogs with tetany produced by removal of the parathyroid there was a diminished amount of calcium. There exists, without a doubt, a close relation between experimentally produced tetany and the tetany of infancy. Fuchs believes that tetany is a condition analogous to ergotism or a condition produced by prolonged use of ergot as a cause. He believed the condition was brought about by milk from cattle which were fed largely on rye

from which ergot is derived. Other causes for tetany may be mentioned as certain seasons of the year, it being most common in spring and autumn; heredity also plays its part. Whether there is a relation between tetany and rickets has never been shown. In both, the calcium and metabolism are at fault. Yet, rickets is such a universal disease that it would not be uncommon for one to find it and tetany coincidentally.

PROGNOSIS: The prognosis of tetany depends on its onset. Every acute onset with convulsions and laryngo-spasm makes the condition dangerous. But after the acute symptoms have passed the disease is one so amenable to treatment that the prognosis is good.

THERAPY: As cow's milk is known to produce the disease, it is best to withdraw it from the diet. An initial dose of calomel or castor oil will give much benefit. The infant is starved for 24 hours, which relieves many of the most threatening symptoms; then breast milk is given. Breast milk *per se* does not cure the disease as the facial phenomenon is present long after its administration, but it prevents the occurrence of those grave symptoms and is therefore a preventative. In again returning to cow's milk, great caution must be observed. It is best to start with teaspoonful doses and increase slowly under the closest clinical observation. If breast milk cannot be obtained, then one of the different flour preparations should be used, such as oat meal or barley flour or the numerous infants' foods that do not contain milk, as Nestle's, Mellin's, etc. The one used by Prof. Finklestein is "Kufeke," a German preparation. Care must be observed not to use them over too long a period for fear of producing a carbohydrate injury.

For controlling the convulsions chloral is necessary, 10 grs. by rectum. Sleep as a rule occurs 20 minutes after its administration. If it does not occur in half an hour, then half the dose is repeated. Not only is chloral to be used to control the convulsions, but for the laryngo-spasm as well. Cod-liver oil works almost as a specific, but the treatment must be extended over weeks and months. Birk and Shabad in studies of the action of cod-liver oil in rickets and osteomalacia have shown that there is a marked retention of calcium and magnesium, which can to some extent explain the beneficial effects of cod-liver oil.

The following case appeared in the Charity Hospital recently:

Lucille Isadore, aged 6 months, admitted April 16, 1913, second child, normal birth, no history of miscarriages, breast fed one month then put

on magnolia condensed milk without any regularity of feeding. No history of previous convulsions could be obtained. On the day of admission the child took suddenly sick with inspiratory crowing, convulsions, loss of consciousness. Mother said she thought the child had whooping cough.

Status *præsens*: The child on admission was fairly well nourished, slightly under weight, skin clear, temperature sub-normal on admission, but soon rose to 102° and later 104°. The temperature then vacillating between 101° and 103° for three weeks. The head measured 39 c. c.m. in circumference, the posterior fontanelle closed, no evidence of cranio-tabea, the anterior fontanelle is 2 c.c. by 2 c.c. open. The chest is 37 c.c. in circumference, showing some beading. The feet and hands show marked carpo-pedal spasm. Owing to the hypertonicity, the patellar and the peroneal reflexes could not be incited. Marked facial phenomena on both sides. Pupils were normal and reacted to light. There was continual cough and nasal alae breathing. Percussion of the chest, anterior normal; posterior, slight dullness, both sides and a few small and middle sized rales. Heart normal; liver and spleen showed nothing special; from the side of the gastro-intestinal, there was constant vomiting, the stools fairly good. The vomiting took place usually immediately after eating, rarely later than 10 minutes. Leucocyte count showed 12,000. Differential blood count:

Large mon., 10; small mon., 9; transitional, 3; poly., 78.

Widal and plasmodia negative; urine free from albumen and sugar. Nourishment: milk 2 oz., water 2 oz., 5 per cent. maltose, every three hours. From April 16 till May 25 child lost two pounds. From April 20 to 27, high temperature, ranging as high as 104°. From April 28, less temperature; but at this time vomiting commenced and continued until May 19. On May 19 the child was put on cod liver oil and Mellin's food. On account of the rapid loss of weight on Mellin's food, three days later the first diet was continued. On returning to the old diet the child commenced at once to improve until now it has regained its original weight.

In analyzing the symptoms the first thing that attracts one's attention is the mother saying the child had whooping cough. This inspiratory whoop was no doubt laryngo spasm. The vomiting can be explained as a tetanic contraction of the muscles of the stomach, especially of the upper part, for at no time was there a gastrointestinal disease which could account for this vomiting.

The lung condition was a long time obscure. At one time a miliary tuberculosis was suspected; but Von Pirquet's reaction was negative. An empyema was thought of, but the white blood count eliminated that. The diagnosis vacillated between broncho-pneumonia and what was lately described as tetany of the bronchioles. The symptoms and signs in this child were so similar to those described by Leder that I am inclined to think that this child had tetany of the bronchioles rather than a broncho-pneumonia. All of his cases were marked by dulness and rales, the autopsies showing no evidence of pneumonia. This case is interesting for (1) the typical carpo-pedal spasm; (2) for its rarer complications—the gastric and respiratory symptoms.

TRYPANOSOMA AMERICANUM.*

By FOSTER M. JOHNS, M. D., New Orleans.

The recent recognition of the importance of the role played by the protozoan parasites of this type in the production of disease in man and lower animals, in both tropical and sub-tropical countries, together with the finding of a very prevalent and hitherto unrecognized trypanosome, gives me a pretext for bringing this somewhat unusual paper before the Society.

In 1907 Miyajima, while endeavoring to cultivate the organism of a piroplasmiasis of Japanese cattle, observed the development of trypanosomes in his cultures, and concluded that these were the forms taken by the piroplasma in culture. Crawley, of the U. S. Department of Agriculture, in 1907, repeated Miyajima's work and found that trypanosomes similar to those developing from the Japanese cattle also developed in cultures from American cattle infected with Texas cattle tick fever. In 1912 he found that this trypanosome had no relationship to *Piroplasma bigeminum*, the causative parasite of Texas cattle tick fever, by cultivating trypanosomes from the blood of cattle beyond the endemic range of tick fever, and that the same cattle could be subsequently inoculated fatally with piroplasma. Similar trypanosomes were then cultivated by various workers in Germany, France, England, Spain, Russia, Northern Africa and the Philippines. Various conjectures were made as to the form existing in the living animal, but this was not cleared up until this summer. While engaged with Dr. C. C. Bass in a series of experiments upon the cultivation of *Piroplasma bigeminum* I encountered a trypanosome in a fresh blood smear from one of the calves under experimentation. The occurrence of a trypanosome in cattle blood was so unusual, and the morphology so different from the large number of closely resembling trypanosomes that my attention was immediately drawn to it.

Forty-three adult cattle and two yearlings were found to be infected. Five yearlings were negative to direct examination, also giving negative cultures.

The technic of examination consists of drawing 5 cubic centimeters of blood from the jugular vein; the addition of 2 cubic centimeters of a solution of sodium citrate 1.5 per cent., sodium chlorid 0.85; centrifugalization to complete separation of the leu-

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cocytes from the red cells. The leucocyte layer is removed with a very coarse capillary pipette, fairly thick cover glass preparations made and examined with the low, dry objective. The trypanosomes may readily be detected by the disturbance imparted to the surrounding cells by their active motions.

Trypanosoma americanum is probably the largest variety of mammalian trypanosomes, averaging 90 microns long by 10 microns wide. It consists of a spindle-shaped body with a full, undulating membrane produced beyond the body upon the flagellum for approximately one-half of its length. A large band-shaped nucleus extending across the body is situated near the middle of the body. The kinetonucleus appears in a well-defined vacuole midway between the nucleus and posterior extremity. The protoplasm is coarsely alveolar and contains quite a number of granules. In fresh preparations the trypanosome is very active, dashing from side to side with flagellum and bending of the body. Progressive motion is very slow, but may be either anteriorly or posteriorly.

From an economic viewpoint, this trypanosome is probably of no importance, as the course of infection gives no clinical symptoms that can ordinarily be detected. A large and easily obtainable trypanosome such as this is extremely valuable to afford many workers the opportunity to study the great problem of trypanosomiasis. As an example of this, it may be of interest to note, in the series of cultural experiments now being conducted by Doctor Bass and myself, that we have been able to cultivate these trypanosomes much more certainly in defibrinated cow's blood to which has been added one-half of 1 per cent. dextrose, and incubate at any temperature between the limits of 27° and 40° C. By working with these cultures in whole blood we have been able to clear up another point of great importance. Among the tsetse fly transmission experiments a great deal of inco-ordination in the results has always been noted. In our cultures, if after the first twenty-four hours any fresh complement containing serum is added, the culture is invariably destroyed—showing that if the feeding of the insect, after the infective feed, takes place before the developing trypanosomes reach the hind gut of the insect, that insect remains non-infected. Also insects that do not have favorable feeding habits may be ruled out in search of possible transmitters of other similar diseases. This fact may also pertain to other diseases carried by blood-sucking insects, such as malaria, poliomyelitis and yellow fever.

MISCEGENATION: AN OLD SOCIAL PROBLEM REVIVED.*By HOWARD D. KING, M. D., *New Orleans.*

New Orleans has passed through flood and fire, fever and famine, the sword and misrule, and has emerged triumphant; but there now looms clearly on her horizon a social-economic problem which may prove her undoing—the problem of racial purity—the problem of untainted blood—the problem of her very people's existence—unless sentimentalism and suggestions of perverted legislation are peremptorily checked. The problem is "Miscegenation."

To-day the problem of miscegenation is at its most acute yet subtle stage, the city facing and feeling the cumulated effects of more than a century's experience. As evidence of this statement, consider the recent serious proposal to destroy that portion of the records of vital statistics of the New Orleans Board of Health containing information as to the race or "color" of many of its population. The recent gubernatorial primary, with its murder, growing out of questioned color, is still a fresh memory, and its moral should not go unheeded. Those who would save the white race—those who would continue indefinitely the germ plasma of the Caucasian race—those who would prevent mongrelization—those who would not see blood defiled, cry aloud in protest at any destruction or alteration in the records of the vital statistics of New Orleans. The answer to any proposal for change in this most important branch of our municipal health service should be that whatsoever means the perpetuation and safeguarding of *pure blood* shall not ever be changed or destroyed.

The problem of race amalgamation is not purely a medical or physical one, but of far-reaching social, economic, political and cultural importance. We are to-day acquainted with the evils which have arisen as a result of the infusion of white or Aryan blood into the negro. On every hand, no matter where we turn, we see the awful consequences of mixed breeding. With the original type of pure negro, this paper will not deal, save briefly with those points necessary for the appreciation of the discussion. We are directly and distinctly concerned with the mulatto—nay, the so-called "white negro"—the octoroon, the quadroon, or in short, those types which, if permitted, would override all legal and social barriers, intermarry and interbreed. Unlike most discussions

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growing out of the broad "race question," we are not now dealing with a "negro" problem; it is a mulatto problem.

The mulatto has appeared through the white man's acts. It is the Southland's disgrace, misfortune or punishment, that libidinousness has poured white blood into black veins largely because human slavery existed; but, to our salvation, there has been, so far, no appreciable rivulet of negro blood into the veins of the whites. The concupiscence of Southern white men is not to be condoned. The mulatto, as a type, varies in degree as to the amount of blood of either race entering into the physical composition. The mulatto exhibits, in more or less degree, the external and readily recognizable characteristics of both races, and in nearly equal proportions. Despite the inheritance of certain of the characteristics of the parent, however, the influence of the blood admixture for evil and injury as seen in the mulatto is far-reaching, and perhaps rarely, if ever, relaxed; this influence is almost entirely independent of the parental traits and characteristics. Notwithstanding the criticisms and counter-arguments which have been visited upon Agassiz for declaring that the negro and the Caucasian are actually different man species, the writer believes the views of Agassiz entirely correct. It is difficult to understand how they can be regarded as otherwise. Six thousand years' of planet experimentation lends additional weight to this theory. The anatomical argument, which, in the opinion of Darwin, would lead the naturalist to classify the negro and Caucasian as distinct species, is already, I presume, a matter of common knowledge, and need not be dwelt upon in detail. The cranial, facial and appendicular skeletons of the dolichocephalic West African (a pure type) are appreciably different from that of the highest type human of the quadrumanal type. Anthropological opinion, as a result of comparative study of pure types, is nearly unanimous in awarding to the pure negro the lowest place in the evolutionary scale. Thus we can say with almost scientific accuracy that the mulatto is not racially identical, but only racially or most broadly related to the Caucasian.

The physiological disparity between the two races is one of the reasons why intermixture is bad. Hybridization means inferiority—in physical strength. Hybrids would die out if they did not marry back into one or other of the parent races—usually they marry back into the lower and disappear by absorption. Therefore, if mankind is to be preserved for mankind's future good, it is vitally

necessary that blood shall not be diluted by the intermarriage of races of such marked physical dissimilarity as those outlined above.

It is well known that mulattoes of Anglo-Saxon crossing have not the strength of either of the pure races. They are liable to hereditary diseases, especially tuberculosis and syphilis. The destructive inroads of malaria, uncinariasis, pellagra and the other constitutional and degenerative diseases on this race do not need recounting at my hands. Loose and promiscuous sexual relationship has left its indelible imprint upon the race. Disease, vice and discouragement tend to the doom of the negro. "No," my critics may say, "not to-day, perhaps not to-morrow"; but the ultimate doom of the negro as a race is foreordained under the law of the survival of the fittest.

By reason of the interest of the subject, I fear I have wandered rather far afield from the main argument. To return, it is only necessary to say that within recent date we have seen the Recorder of Vital Statistics of the New Orleans Board of Health ordered by judicial decree to erase from the records the name of one shown to be a negro. If my recollection be correct, the suggestion to destroy the records of the Board of Health followed this or a similar litigation. While all inscriptions upon public records are, of course, subject to proper judicial cancellation or change, if the courts are hereafter to be flooded with suits of this character, a peculiar and insidious danger will be presented. It may be assumed that the courts or the judges are impartial, but lawyers are admittedly partisan and present only the side of their clients, and the fearless and militant assistance and support of the medical profession should be given the Board save only in the face of patent error on its part. The Board of Health is not above the law, but the profession believes its records are generally accurate and honest, and, while we should not in court or elsewhere deviate from our duty as citizens, when that duty is plain we should, on the other hand, be active defenders and supporters of the Board and its splendid and vitally necessary work, in order to minimize the chances of success of those who honestly or otherwise may come to be enemies of the public's welfare. Shall judicial decree take precedence over heredity? Shall sentimentalism and romance be the instruments of blood dilution? Shall pettifogging lawyers, untrained juries and yellow journals set at naught the admirable work of the New Orleans Board of Health? Shall he or she with

the barest taint of negro blood in his or her veins defy the laws of man and the canons of biology? Shall the negro or the mulatto intermarry with the Caucasian, and make of a superior race the inferior race? These are questions to ponder over.

Atavism and reversion seem to be the principal defenses in the cases of racial purity now pending before the courts. Before dealing with this phase of the subject it may be well to discuss the question of color growing out of cross-breeding.

As a result of the many indiscernible gradations of mixture between the white and black races it is almost impossible to classify the various degrees of color. However, we now know that skin color follows in general the Mendelian laws of inheritance, frequently giving rise to white and black "spots" in every large family of mulatto children. It was once believed that mulattoes generally bred true and became progressively lighter with successive generations. We now know this to be incorrect. I know of a family in which the oldest, a daughter, is a pronounced blonde of great beauty, while the two younger children, boy and girl, are very dark, and are typical "negroes." According to the principles laid down by Mendel, the result of a white-negro cross is always brown-skinned, the dark-skin color being generally predominant. "White" and "black" skin color are a pair of *unit characters*. White skin color denotes the absence of the *determiner* for deep pigmentation in the germ plasm; dark skin is due to the presence of such *determiner*. In large families where the intermarriage of hybrids occur there will appear almost invariably one or several children lighter than either parent, and one or several darker—that is, the lighter and the darker have both reverted to a grandparental character for skin color. This is evidence of a segregation of the determiners of skin color in the germ cells producing a *purity of gametes*.

Reverting to the general defense in these cases of racial purity, it might be well to consider the differences between atavism and reversion. In atavism there is no necessary degeneration; the return may be to a better type. This does not occur where there is an admixture of inferior with superior blood; especially does this hold true where the racial superiority is maternal. What we do see in these cases is reversion. Unfortunately there has been a confounding of the terms atavism and reversion. By reversion is meant a loss of properties common to the stock or race, usually the

superior, and the reproduction of the characteristics of the lower type in the line of descent. Thus, if ontogeny be an abbreviated phylogeny, reversion is individual development to some point short of the completed phylogeny. The intermarriage of races clearly brings about reversionary changes. At this juncture it is well to remember that reversion is recessive.

Nor can we pass over the question of eugenics when discussing the intermarriage of races. Many States now demand certificates of health for the contract of marriage. To-day the question of proper mating is of more than academic interest—it is a problem of vital magnitude for all mankind. If the procreation of defectives is subject to prohibitory legislation, then why should we at this time relax our laws dealing with miscegenation?

So patent are many of the facts concerning the inferiority of the negro and mulatto that I will not longer dwell on this phase of the problem.

The social, economic and political aspects of the mulatto problem are of the greatest import to New Orleans, but the fundamental aspect, however, is the biologic, which has, for all immediate practical purposes, been sufficiently discussed. The 1910 census returns gave New Orleans a population of 339,075, of which number 249,403 were whites and 89,672 negroes. To-day the City Health Officer estimates the population to be 373,000, of which number 272,000 are white and 101,000 negroes. The question now arises, What percentage of this 101,000 are mongrelized? The percentage of mulattoes among the colored population is very difficult of estimation. However, it is believed that about one-fifth of the negroes have varying percentages of white blood in their veins. If this estimate be anywhere near correct, then New Orleans has 33,666 mulattoes and 67,334 pure negroes. This leaves unaccounted for that vast number of mulattoes which actually passes for white, and, through some occult influence, enjoys a social recognition far removed from that accorded the remainder of their class. May not this vast group of negroes, nearly one-third of our population, yet prove to be the cause of our economic stagnation?

What are we to do with the mulatto? He aspires to be white, and is rejected. The pure negro views him with suspicions, and often repels his advances. Can the mulatto be used as leaven with which to "lift" the negro race? This last is the suggestion advanced by Professor H. E. Jordan, of the University of Virginia,

for the solution of the negro problem. Despite his affiliations with a Southern university, the same observer hints that by a crossing of the two races a superior race may be evolved. It is possible that Professor Jordan has not studied the problem at close range. The mulatto will not only not help the pure negro, but will surely tend to hasten the physical doom of the pure negro. The latter will survive much longer by a commingling with those of his own type. Leave the negro strictly alone, and he will make better physical progress than by fancied re-enforcement through the mulatto. Leave the mulatto alone, and soon there will be no mulatto problem. A pure race can exist; a mongrelized race cannot survive.

The many State laws which have to do with the negro are not for his oppression—they are, in the last analysis, for his good as a race. These laws are absolutely necessary for the preservation of the white race. Once the social barriers are broken down, there would commence the general establishment of sexual relations between the two races. This racial sex intercourse would make itself felt at first in the submerged tenth of the white population; next, the middle class would be encroached upon; and, in time, the very highest of white society would not be immune to negro invasion.

The negro should be treated with justice and compassion. Let his reward be industrial, not social. And in this fight for pure white blood, thoughtful and patriotic citizens will render all aid possible to the Recorder of Vital Statistics of the New Orleans Board of Health, heeding not false arguments addressed to sentiment rather than to reason.

In conclusion, I would have you, in discussing miscegenation, hark back to the Book of Holy Writ, wherein, in the first book of the Corinthians, it is said:

“All flesh is not the same flesh;

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“Star differeth from star in glory.”

AN UNUSUAL CASE OF ECHINOCOCCUS INFECTION, WITH RUPTURE OF THE DIAPHRAGM; OPERATION AND RECOVERY.*

By PETER B. SALATICH, M. D., New Orleans.

Mrs. N. P., aged 38, born in Dalmatia, Austria, has been living in New Orleans since August, 1893. As is the rule among these people, she is of robust constitution. She always enjoyed good health until August, 1907, when she complained of severe pains in the epigastric region, with marked constipation, requiring several doses of purgatives to overcome. After this attack, which lasted about three days, she suffered very often from indigestion, and a feeling of distress about the gastric region. In September of the same year she returned to her home in Austria, remaining away until September, 1908. While away she had one severe attack of what she thought was indigestion and constipation. She remained free from these attacks until October, 1911, nearly three and a half years.

I was then called to see her and found her in what seemed to be a typical attack of cholecystitis: vomiting, severe pain on pressure, and Murphy's sign over gallbladder, pain in right shoulder, temperature of 102° and marked constipation. This acute attack lasted twelve days. The pain in the shoulder and a harsh dry cough continued for seventeen days longer, after which patient felt perfectly well.

I was again called to see her in March, 1912. This attack was of a milder character than the previous one. After this she had pain more or less continuously in the epigastric region and the right shoulder anteriorly. The last attack, just previous to operating, was the worst one experienced. It commenced as did the others, but increased in severity until vomiting became almost incessant. Twenty-four hours after beginning of attack she became jaundiced. This was the first time this symptom appeared. The urine was highly colored and the stools light-gray. Her condition remaining unchanged after a week, an operation was advised. Each attack has been studied in detail with a hope of arriving at the probable time that this trouble first began. Whether she received this infection in this country or before she came here the first time would be interesting to know. The length of time between 1893, when she came here, and her first attack in 1907, makes it seem

* Read before the Orleans Parish Medical Society, October 27, 1913.

hardly possible that she could have had these cysts in her liver that long without the appearance of symptoms. Peiper, of Greifswald, says the hydatid echinococcus cysts occur very often in Dalmatia, but the multilocularis very rarely or not at all. The majority of infections occur between the twentieth and fortieth year of life. Probably, in consequence of the slow development of the echinococcus in the human organism, the infections acquired in youth, as a rule, produce definite symptoms only in later years. This patient remembered having had trouble, probably indigestion, at different times while a young girl. Was this the beginning of the trouble, or some error in diet? Or, on the other hand, was she infected on her return to her home? This was possible, as her worst attack commenced three years after returning.

She was transferred to the Hotel Dieu, March 7, 1913, and remained six days before operation.

Operation, March 13, 1913. I made an incision in the gallbladder region and found it distended to nearly twice its normal size, and of a grayish hue. The walls were very much thickened, although there were no adhesions to the surrounding structures. Upon opening, it was found to contain, besides fluid bile, two pieces of curled-up membrane that looked much like the ruptured cortex of large grapes. I thought at first that they were exfoliations of the inner coat, but, on account of their peculiar consistency and tendency to curl, decided that they probably were echinococcus cyst walls. This was later confirmed by the laboratory report. I was very anxious to know how they entered the gallbladder. Knowing that the presence of bile meant immediate death to the *Tenia Echinococcus*, it was not considered possible that they entered the gallbladder as embryos and developed into cysts. Did they enter the gallbladder by rupturing through the walls of the liver and gallbladder? This hardly seems to be the way, for surely, with a liver so full of cysts, there would either have been more cysts found or a fistulous opening would have probably continued. Did they enter as entire cysts by way of the hepatic and cystic ducts, or empty as they were found? The latter is probable, since full cysts of the size indicated by the "shells" found could scarcely have passed through the ducts; certainly not without causing marked obstruction.

At the time of the operation Dr. Charles Mayo was in the city, and I mentioned the case to him. He remarked that it was of great

interest, and that in all their experience they had never seen a case of echinococcic cysts of the gallbladder, nor did he ever remember reading of one.

The operation gave the patient considerable relief. She felt better until March 29, when her temperature began to rise. Examination of the bile at this time revealed numerous pus-cells, *B. coli* and streptococci. Thinking that probably infection was the cause of the temperature, I irrigated the gallbladder daily with a double-current catheter. This had little effect.

Examination of the blood for plasmodia was reported negative. On April 4, her temperature continuing higher, I asked for a Widal. This was reported positive. The temperature being unlike that of typhoid, another request was made on April 7. Widal still positive. I questioned her about having had fever before, but she did not remember of ever having had any for more than a day or two. Her temperature fluctuated between 100° and 102° until April 11, when it dropped to 97.2°. It remained normal for that day only, then rising until it reached 105° on April 16. About this time she developed a harsh, dry cough. This seemed to come from the larynx. Her cough persisting, I asked Dr. Scheppegezell to see her. He could not find any condition of the larynx or upper trachea to account for the violent coughing. Examination of her lungs showed some coarse, moist râles, that would be expected in congested bronchi caused by the almost continuous coughing. Sputum examination revealed masses of diplococci, apparently pneumococci, also streptococci and staphylococci, but no tubercle bacilli. Total white cell count showed 10,950 leucocytes. Patient now complained of the right side, in the scapular and posterior axillary lines. Her temperature continued high, 104°, until the night of April 20. On this night she had several violent coughing spells; in one she suddenly had an excruciating pain under her sternum, with marked dyspnea, and then coughed up eight or nine cyst walls, ranging in size between that of a pea and a walnut.

The next morning, recollecting the cyst found in gallbladder and the marked coughing spells, I felt sure that these cysts must have come from the rupturing of a cavity in the liver into a large bronchus. Percussion of the liver, however, showed very little increase in the liver dulness. Laboratory examination of material expectorated showed echinococcic cysts, bile-stained pus and cholesterol crystals, but no hooklets. I then explored the right lobe of

the liver and withdrew about two drachms of clear material containing a few pus flakes. The pleural cavity was explored and about one ounce of bloody fluid withdrawn.

Operation: Nitrous oxid was administered and the liver reached through a transpleural incision in the right mid-axillary line. The pleural and peritoneal surfaces were found to be free and were sutured together. A cavitation of the liver was opened and about two and a half pints of gelatinous material, containing an enormous number of both empty and full cysts, and many pus flakes were scooped out. None of the cysts were above two inches in diameter. Careful search failed to show anything having the characteristics of a mother cyst. The cavity was so large I could not feel the walls with my finger. A sponge-holder introduced showed the wall of the cavity towards the left to be nearly eight inches away from the incision. With each inspiration a considerable amount of air passed out of the opening in the liver. Two large rubber tubes were introduced and gauze packed around.

After the operation her temperature gradually dropped, and was normal at the end of a week. Between this day, April 27, and May 10, her temperature was of a typical picket-fence or septic variety. For four days after operation, empty cyst walls were found on the dressings. At no time was there pus in the wound. About ten days after operation, or the time when I thought the walls were granulating and no more in communication with the lung, I filled the cavity with sterile vaselin, introducing it through the tubes. This was continued, at first every other day, later every third or fourth day. This treatment, I feel sure, was the reason of the rapid healing of the enormous cavity. In forty days the cavity had entirely healed, only the skin wound remaining. On May 25, 1913, the Widal reaction was still positive. For some time after the wound had healed the patient complained of a distressing and embarrassing feeling, on deep inspiration, about incision, probably due to adhesions. Increasing doses of iodid of potash were given, and this condition was greatly relieved. At the present time the patient is entirely free of pain or interference with respiration. Digestion is very good, and the bowels move every day. The liver extends about one-half inch below costal arch, and moves freely with each respiration.

A point to be considered is whether or not this condition will recur in the liver or some other organ. Osler and others contend

that this form is almost exclusively confined to the liver. If this is true, and feeling reasonably certain that all of the infectious material has been removed, a fairly good prognosis can be given.

THE TYPE OF INFECTION IN DR. SALATICH'S CASE.*

By H. W. WADE, M. D., New Orleans.

This case of tenia echinococcus infection offers ground for study with regard to its particular type. The course of infection in echinococcus granulosus is well known. The habitat is the small intestine of the dog. The mature worm is about four or five m. m. long and is composed of a head furnished with hooklets, a neck and a body of three segments. Only the last of these, which is the largest, is gravid. The intermediate hosts are the hog, horse and sheep, more rarely man. Freed of its shell by digestion in the stomach, the ovum develops into a tiny embryo, which pierces the intestinal wall and is carried to some solid organ, most frequently the liver. Here the well-known echinococcus cyst develops, having a characteristic, clear, transparent lamellated wall. It may be (1) single and rarely larger than an egg or apple, or (2) daughter cysts may develop from the wall of the primary cyst, (a) *within* the mother cyst (endogenous), forming the more common large *hydatid* cyst, or (b), more rarely, by exogenous budding, the daughter cysts lie outside of the primary cyst and within the substance of the containing organ.

These types, or variations, may apparently all occur in the development of the larvæ of one species of echinococcus. They resemble each other in certain important particulars. The content of the cyst is fluid, and the production of echinococcus hooklets and scolices is almost constant. Experimental propagation of this tenia in dogs is easily accomplished by feeding the animals with material from the cysts.

Specimens of cysts from the case under consideration were received at the Pathological Laboratory of the Hotel Dieu on several dates. They were of various sizes, ranging from six m. m. to eight c. m., the greater number measuring from three to five c. m. in diameter. None of those which were unruptured was under tension; to the contrary, they were all quite flaccid. The smallest

* Read before the Orleans Parish Medical Society, November 10, 1913.

were clear, fairly transparent, and had a slight yellowish tinge. Those somewhat larger showed a white opacity over the entire surface or over but a part of it, the transparent portions revealing a deep yellow or amber-colored material within. The majority of the cysts were entirely opaque.

This opacity was seen microscopically to be due to a granular, chalky deposit, apparently firm and brittle in consistence, within the parenchymatous layer. Small, firm, warty excrescences, of a porcelain whiteness, were seen on the inner surface of many of the larger cysts, at times in considerable numbers, but none of those which were examined showed evidence of scolices or secondary budding.

The cyst content was a peculiar amber-colored, gelatinous substance. In some it was clear, but in more it was studded by white, chalky flecks, which microscopically were finely granular. Very numerous highly refractile globules, shown by the Scharlach R. stain to be fat, were seen throughout. Many curious small, round and ovoid bodies were also encountered. These were colorless and contained fine granules and globules of fat. They were sharply outlined, apparently by an extremely thin containing membrane. Hooklets and scolices were found with difficulty, after prolonged search of cyst contents and of scrapings from cyst walls. One small, curious body, possibly an atypical brood capsule, was found in the mixed mass composed of material from ruptured cysts, degenerated liver tissue and pus. These findings differ considerably from the descriptions of the common hydatid echinococcus cyst, but agree very fully with Ziegler's detailed description of the *Echinococcus multilocularis*, a condition originally called alveolar colloid carcinoma, on account of its peculiar gross appearance. It seems to occur only in certain small parts of Switzerland, South Germany, Austria and Russia. This form of echinococcus disease is extremely rare in the United States, and apparently, as in the present instance, occurs only in imported cases. I have found in the literature a total of four, possibly six, cases reported in the United States.

The laboratory evidence alone very strongly indicates that our case is one of this rare type. The exact character of the liver tumor is not so easily established, but to the surgeon it appeared as if the cysts occurred in a cavitation of the liver tissue. This agrees with Ziegler's statement that the usual course in the disease

is the formation of what he calls ulcerative cavities. This process extended, probably on account of infection, through the diaphragm, and caused its rupture. Involvement of the lung later caused the ejection of a number of cysts through the respiratory channels. None of the tissues which were removed had the characters of a mother cyst.

The large number of comparatively small cysts, the purulent material about them, the gelatinous content, the occurrence of chalky particles in this, the great scarcity of hooklets and heads, the presence of the peculiar oval granular encapsulated bodies, possibly embryos, and the failure to find anything having the appearance of a primary cyst, agree entirely with the descriptions of *Echinococcus multilocularis* available to the writer.

Louisiana State Medical Society Proceedings.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

THIRTY-FOURTH ANNUAL MEETING.

DISCUSSION ON PAPER OF DRs. CHRISTIAN AND SANDERSON.

DR. CARROLL W. ALLEN, New Orleans: It was my misfortune to come in just as Dr. Christian was finishing his paper. I gathered enough of it to appreciate the value of the work he has done, and I feel that this line of work cannot be encouraged too much. It is only by efforts in this direction that we make progress in many of our recognized successful operative procedures of to-day.

The operation that Dr. Smyth is to discuss was worked out on the animal, the dog, and then we tried it on man, and gradually, through a process of evolution, it has reached its present stage. Dr. Smyth will bring out the additional feature, which is an improved gastroenterostomy worked out on animals.

Through the guidance and suggestions of Dr. Matas I have been engaged in operations on dogs for years past. We work particularly on the thorax and I have done some 300 thoracotomies, much of the work being done on the aorta and the heart, and I appreciate the difficulties that attend that work and any successful work in that direction deserves encouragement. The technic is difficult; it has got to be accurate and precise. Working on blood vessels is different from working on other organs. The advantages which may

come from experimental work may be applied to great advantage to the human subject. The young dogs are nearly all healthy. Unhealthy dogs do not survive; we have not yet reported our results, while all of our human subjects are pathologic.

Let us take an old man with arteriosclerotic arteries—they are so friable that you cannot suture them, and the difficulties there are great. That is the only unpleasant feature in connection with this experimental work, the possibility that when we come to apply it to the human subject we will find conditions that are not such as will enable us to apply this experimental work to the human being.

We have been particularly interested in the work high up in the thorax, almost entirely, with a view of relieving or curing aneurysmal conditions of the aorta, and where we have arteries that are badly diseased, the difficulties we have to contend with have been almost insurmountable. Few men in this country, and only those who have devoted their entire time to the work, have made any decided progress in it, such men as Carrel, who has been phenomenal in what he has accomplished and others following in his footsteps independently, such as Guthrie and others.

The most promising fields in experimental work on the vascular system is the fact that tissue can be transplanted, and not only sections of the aorta or vena cava transplanted from one animal to another, but sections of foreign tissue, rubber, pieces of aorta can be cut out, a window cut in the aorta, and a rubber section sewed in there, and if done according to a certain technic it will unite. It will be lined inside with endothelium, and possibly with adventitia, and eventually cannot be distinguished from a healthy aorta.

We feel we have just now reached an era where we are invading the last great cavity of the body, these yielding to the advance of surgery, particularly the thoracic cavity with its hidden mysteries in a pathologic way, and hope that in the next few years we will be able to accomplish considerable in that direction.

DR. L. J. GENELLA, New Orleans: I think we owe to these gentlemen thanks for this experimental work. Those who have not done experimental work do not realize the enormous expense attached to it. If you undertake experiments on five or six dogs it means a lot of expense and hard work to watch and care for the animals. While I have not consulted Dr. Sanderson, I venture to say one of these experiments must have cost him \$60.

DR. JOSEPH A. DANNA, New Orleans: I do not think such a

brilliant procedure as this by two of the younger members of the profession ought to go unnoticed. While they have given us a resume of what can be done up to this time, we ought to congratulate ourselves and congratulate the Society on the fact that we have two young men with us that have accomplished such a feat as transplanting a section of the aorta after being kept for a great length of time, as they kept that section, from one animal to another. I think this demonstrates to us this kind of work is no longer merely the work of one man who has had splendid facilities, who has spent a whole lifetime in the work, but it is a work many of us will be able to take up in such a way as to make it eventually applicable to the human being. We will be able to take it out of the experimental laboratory and bring it into the modern operating room. The thing is stupendous to me.

I remember in 1908, when the American Medical Association met in Chicago, I saw some of the results of Carrel's work, and it impressed me at that time as almost supernatural. I do not know of anything Carrel did that was any more wonderful than to see this dog walking around with a section of the aorta in the heart for four days, taken out of the laboratory and put into the heart. I like the idea of a glass tube, which overcomes some of the serious difficulties urged against doing any work on the aorta, and particularly the thoracic aorta, but we could not see any way of suturing the aorta without stopping the circulation, and we could not very well stop the circulation in the aorta for any great length of time without endangering the life of the animal.

I hope that the work of Dr. Sanderson and Dr. Christian will merely be the beginning of a large work along this line, and I hope in the near future we will be able to have one of them come down to the Charity Hospital and help me transplant a piece of blood vessel into a man.

DR. CHRISTIAN (closing the discussion on his part): I want to thank the gentlemen for their remarks. There is only one other thing I want to add, and that is, we found we could do more accurate suturing with the use of the tubes than without them. In the dogs that died, we found in nearly every case death was due to the suture penetrating the intima. If one or more sutures penetrate the intima the blood has a tendency to clot in the section you put in. We devised this method of tubing because we thought if we could get some way by which the circulation would not be sus-

pended for so long a time, the chances of the recovery would be greater. You can tell almost immediately when clotting begins. The dog becomes paralyzed.

The necessity of ligating some half-dozen lateral branches of the aorta, undoubtedly adds to the gravity, in many ways, of transplanting this vessel.

DR. SANDERSON (closing the discussion): There is one point that Dr. Christian did not mention, which is more interesting to me than the success of the operation; and that is the fact that transplanted vessels failed to live when such vessels were secured from bodies coming to death from natural causes.

Dr. Carrel seems to think that true or elemental death does not take place for some time after disassociation of the organs, or medico-legal death; and that this latent life becomes extinct only when cadaveric changes take place. And that the lower the order of the tissue the longer this latent life exists.

In view of his theory we tried with vessels taken from bodies coming to death naturally, immediately after death. In one of these cases the dog lived two days and nights, the autopsy showing a dead segment, the probable cause of death. Another taken from a man dying of pneumonia seemed to live, death resulting apparently from the great difference in the size of the vessel transplanted and the one resected.

I am forced to believe that when death comes on gradually that the call made by the vital centers for the life principle, with which to keep their fires burning, draws from the less important structures to such an extent that when disassociation takes place elemental death is too near to be revived by transplantation. The pneumonia case, being more sudden and thereby more on the order of death by violence, left his lower tissues better nourished; hence the strong tendency for his arterial tissue to grow when transplanted.

DISCUSSION ON PAPER OF DR. SMYTH.

DR. P. B. SALATICH, New Orleans: I had the pleasure of assisting Dr. Smyth in this operation and watched the patient afterwards, and I agree with him in saying I think it would be a good plan to follow in all of these cases in doing gastro-jejunosomy, but also in doing jejuno-jejunosomy. I have had the good fortune of doing two or three, but the operation did not give me any trouble after seeing the second operation, but I would make it a rule after this, having seen this case, to do all my cases with both operations.

DR. ADOLPH HENRIQUES, New Orleans: An X-ray examination of the stomach, to my mind, ought to precede all of these cases for the reason it offers considerable aid, due to the advance made in the past two or three years, and gives more information than any other single measure next to an exploratory laparotomy. The advances in X-ray work have shown several things, and among them, when a patient is in the normal standing position, the stomach is in the position of a tube, the walls of which are nearly parallel, and the stomach is nearly vertical instead of oblique. In addition to the position of the stomach and its shape, we can also recognize, as in this case, the presence of dilatation which is shown by the stomach which is ptosed and which is increased in its transverse diameter. In addition to this, the X-ray shows in a good many cases the location of the lesion. For instance, the ulcer may and does frequently occur here on the lesser curvature. In these cases we can put our finger, so to speak, on the site of the ulcer and assist the surgeon in that way. We recognize ulcer in this position by a little niche on the lesser curvature and by the contraction, and in some cases spasmodic contraction, due to the contraction of the circular muscular fibers. In others by the formation of adhesions, and the persistence of the contraction which then becomes organic indicating hour glass stomach. Again, very often we can recognize the location of a tumor in the stomach, whether situated at the pylorus or elsewhere. This is recognized by defects in the filling of the stomach as observed by the fluoroscope. If the tumor is at the pylorus, we get a sort of serrated appearance, such as that, instead of the normal appearance we find here. If the tumor is on the greater curvature, we get an appearance such as this, depending upon the inroads made into the lumen of the organ. This is a great help to the surgeon, but the skiagraph alone is not sufficient in these cases. These cases should all be examined with the fluoroscope, the method of filling the stomach observed, and the changes in the persistalsis, which we can observe with the fluoroscope, and any abnormal depressions or prolongations may be observed in that way.

Orleans Parish Medical Society Proceedings.

MEETING OF OCTOBER 13, 1913.

DISCUSSIONS. *

DISCUSSION ON DR. JOHNS' PAPER ON *TRYPANOSOMA AMERICANUM*.

DR. CHAILLE JAMISON: Dr. Johns told me that in examining the blood of cows he found the trypanosomes only after a prolonged search. May it not be so as regards patients? This might explain many cases which we do not diagnose.

DR. BASS: The point made by Dr. Johns is worth emphasizing. The widespread distribution of a trypanosome is not of economic, but of scientific importance. The study of this trypanosome may lead to important discoveries regarding other ones. Its presence in a large animal is advantageous as we get plenty of blood and can use larger apparatus. It is not generally known how widespread is this trypanosome, but we do know that it is all over the United States and perhaps all over the world. Again I would emphasize the marked action of fresh normal blood in the destruction of pathological organisms. The blood may be drawn and so treated as to kill this active principle and organisms can then be grown in it, but if the blood is not inactivated, it kills organisms. Parasites may grow in the inactivated blood. Dr. Johns has grown various trypanosomes in this way. Blood circulating and blood drawn are entirely different. Dr. Johns' work is also an important suggestion as to possible carriers of protozoan diseases. It is not probable that a fly feeding oftener than every twenty-four hours can transmit trypanosomes; it is possible that only mosquitoes that feed five or six days apart are the mosquitoes transmitting malaria. This may explain why only one mosquito carries yellow fever.

DR. DUPAQUIER: Two workers of Hamburg have shown the transmission of the trypanosome *gambiensi* by the *stegomya* mosquito, but the inoculation had to be immediate.

DISCUSSION ON DR. HOWARD D. KING'S PAPER ON MISCEGENATION.

DR. ASHER: Dr. King has touched on a very important subject. The Supreme Court of the United States has decided that any proportion of negro blood makes that person a negro.

DR. KING, in closing: My object in reading this paper was not

* The Papers are Published in Another Part of this Issue of the JOURNAL.

for the promotion of discussion, but to have the society go on record as having occasionally discussed social and economic questions. We should recognize and encourage the work being done by the City Board of Health along this line. The work of Mr. Henry Lanauze, City Registrar of Vital Statistics, deserves our hearty commendation—he is doing a great work in behalf of the unborn. This society should thank him to-night for the stand he has taken in these cases of social purity. The safety of our institutions and the preservation of racial integrity is in the hands of Mr. Lanauze and we should aid him in this all important undertaking.

MEETING OF OCTOBER 27, 1913.

DISCUSSION OF THE PAPERS OF DRs. SALATICH AND WADE ON
ECCHINOCOCCUS INFECTION.

DR. LEMANN: There are several points of interest in this case. In the first place the occurrence of this infection is so rare that diagnostic errors are common. I remember one case at Touro five or six years ago. It was seen in the clinic and the diagnosis made of tumor of the liver. Others thought it to be some stomach condition. The operation was performed with the latter diagnosis in mind, but they found ecchinococcus infection of the liver. It may be confounded with syphilis of the liver or malignant disease of the stomach. This case at Touro had no doubt carried the infection for a long time, as he had been in this country for many years. I wish to ask whether the tumor found at Dr. Salatich's first operation might not be a cyst containing bile and smaller cysts instead of the gall bladder as he supposed.

DR. JOHNS: While in Panama I saw several cases at autopsy, in one of which there was the same characteristic gelatinous fluid; also many hooklets and small cysts.

DR. SALATICH (in closing): In answer to Dr. Lemann would say that I am certain that the cavity opened at the first operation was the gall bladder and not a cyst. One reason for my saying so is that had it been a cyst it would have been covered by liver tissue.

DR. WADE (in closing): The particles of tissue from the first operation were deeply bile stained and I feel sure that they came from the gall bladder. There are two types of ecchinococcus disease, one fairly common; the other considerably rarer. We have not absolutely established this case to be one of the rarer cases; we cannot do this without a careful examination of the whole liver; but we are as sure of it as we can be from consideration of the material found.

REPORT OF THE SECTION ON MEDICINE OF THE SOUTHERN
MEDICAL ASSOCIATION.

By C. C. BASS, M. D., New Orleans.

The program of this section consisted of sixty-one papers. There was a fortunate absence of a considerable number of essayists; otherwise it would have been impossible to have completed the program in the time available.

It was decided to limit the number of papers in this and all other sections in the future to thirty papers in each section. Another recommendation from the council which will contribute to improvement of the scientific program and proceedings in the future is that anyone who promises a paper and allows it to be announced on the program and does not present the paper will not be allowed to appear on the program for the following meeting.

There was a symposium on "Epidemic Cerebro-Spinal Meningitis"; one on "The School Child," and one on "Malaria" held jointly with the section on Hygiene and Preventive Medicine.

In addition, there was a symposium on "Rheumatism in Childhood" and one on "Tuberculosis."

The attendance at all the sessions of the section on medicine was good. It was very gratifying to those who are especially interested in the improvement of the medical profession of the South to see the high class of the papers and discussions in this and other sections.

The following were elected officers of the section: Chairman, Robert Wilson, Jr., Charleston, S. C.; vice-chairman, W. T. Dunn, Asheville, N. C.; secretary, Randolph Lyons, New Orleans, La.

Communications.

HOSPITAL ABUSE IN NEW ORLEANS.

By HOWARD D. KING, M. D., New Orleans.

Aversion to change is, proverbially, a characteristic of institutions which exist for the purposes of medical philanthropy. If it were not so, we might feel wonder that certain grave abuses in the administration of New Orleans medical charities, and particularly in the administration of their out-patient departments, should have survived the popular and professional disapproval to which free ut-

terance has been given in the press, lay and medical, on the platform of the Orleans Parish Medical Society, and which has also in this organization taken practical shape in the formation of powerful committees for purposes of consideration and remonstrance.

The tenacious vitality of a system which has been loudly denounced as obsolete in principle and mischievous in practice, by no means, however, demonstrates the futility of continued agitation on the subject. To-day in New Orleans gratuitous medical service is dispensed by the Charity Hospital, Touro Infirmary, Presbyterian Hospital, Eye, Ear, Nose and Throat Hospital, Female Dispensary, Lying-in Hospital, Louisiana Anti-Tuberculosis League, French Hospital, and the Polyclinic, and while valuable reforms in a few of these institutions have taken place, there still remain for correction many grave abuses.

Hospital abuse, by those persons who are able to pay for medical treatment, is an infringement upon the rights and privileges of the worthy poor. If it were not for the undeserving cases and impostors treated in the local institutions more time, more skill and more attention would be devoted to the actually needy and destitute. Hospital abuse tends to the creation of one of the gravest of social problems, namely, pauperization.

Corporational hospital abuse is also increasing. Large corporations, such as railroads, steamship lines and huge industrial plants, should be forced to take care of those injured in their employ. Several of the railroads operating in and out of New Orleans impose on their employees a tax for support of hospitals at certain terminal points outside of the State, but, withal, dump every accident case into the local Charity Hospital. Foreign steamship lines impose upon our charitable institutions, despite the fact that by the law of the ship's articles their seamen are guaranteed the best of medical treatment by port medical officers and, if necessary, confinement in private institutions. With a little care and inquiry these evils could be remedied.

However, the greatest of all problems connected with hospital abuse is the imposition practiced by our neighboring States, particularly Mississippi. For what, if any, reason should New Orleans be selected as the dumping ground for the maimed and injured of other States! Have we not many keen and poignant social and medical problems awaiting solution? Are not our manifold and vital health problems of sufficient import to keep us busily

engaged? The writer protests, in the interest of the welfare of the community, against any additional social, economic or medical problems being thrust upon New Orleans. That the importation of the sick and injured from other States has an appreciable influence on the increase of our death rate has already been noted by the City Health Officer, Dr. O'Reilly.

Unrestricted hospital abuse means increased expense for our local medical institutions, which indirectly, but surely, affects the tax-payer; it means annual deficits for all institutions, thus retarding or curtailing many needed hospital improvements; it means an increased death rate, which is a very poor advertisement for New Orleans; it means that the worthy poor and destitute of our population are not the recipients of the time, skill and attention to which they are so justly entitled; it means pauperization; and it means the abandonment of those healthy traits, pride and independence, which are so necessary for civic progress. It is to be hoped, in view of the importance of this grave social and medical problem, to not only New Orleans, but the whole South, that its solution will not be long delayed.

THE NON-TEACHING MEMBERS OF THE VISITING STAFF OF THE CHARITY HOSPITAL.

[The following letter was sent to the Board of Administrators of the Charity Hospital upon the motion of the members of the newly organized society of the non-teaching members of the visiting staff of this institution.]

NOVEMBER 20, 1913.

*To the President and Members of the Board of Administrators of
the Charity Hospital:*

GENTLEMEN—Acting on the suggestion of the late chairman of your Board, Mr. J. P. Blair, the non-teaching members of the visiting staff of the Charity Hospital met on Wednesday, the 12th inst., formed themselves into a society, elected officers and adopted a charter, declaring objects and purposes of the society to be:

To aid and assist the Board of Administrators of the Charity Hospital in assigning physicians and surgeons to the various wards and clinics of the hospital;

To foster and promote the interests of its members in their relation to the Charity Hospital;

To obtain the adoption and enforcement of just rules and regula-

tions, insuring to its members opportunities and advantages in the hospital equal to those granted to the members of other corporations or associations.

Assuring the Board of our deep interest in the hospital, and sincerely hoping that the Board will avail themselves of the assistance which we hereby formally pledge to them, we beg to remain, very respectfully,

(Signed) G. W. STAFFORD, M. D., President.
L. M. PROVOSTY, M. D., Secretary.

IMPORTANT NOTICE.

To the Members of the Louisiana State Medical Society:

The annual dues are \$4.00, payable in advance.

Your attention is called to the fact that the fiscal year of the Society begins January 1, and you are urgently requested to remit your 1914 dues at once. Members not paying by January 1, 1914, are suspended.

Members in arrears will be automatically dropped on January 31, 1914, and will only be reinstated upon payment of all delinquencies.

If your Society is organized, remit direct to your local secretary. If not organized, send check direct to Dr. E. W. Mahler, treasurer, 141 Elk Place, New Orleans. Do it now and be in good standing.

The January issue of the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* will be sent to all members, but the *JOURNAL* will be discontinued after January 31, 1914, if dues are not paid.

E. W. MAHLER, M. D., Treasurer.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

THE A. M. A. AND THE LAW.

All men engaged in the regular practise of medicine must be interested in the recent legal opinion uttered by the Appellate Court in Illinois regarding the status of the organization of the American Medical Association. The pity of it all is that there should have been any reason to have *forced* the judicial opinion upon the constituted directors of the organization, now representative of the American medical profession.

So much good has been gained in the establishment of an united profession during the past few years that now it seems regrettable that any controversial position should arise in a matter which ought to be of easy solution.

There are always merits and demerits in the factional control of large bodies, but wherever large bodies have to be managed, either one or another predominant party or faction assumes the direction of policy, and it would seem that this must be so to keep the activities going.

We are interested in the honest association of medical men in the United States for the betterment of the profession, and for the consummation of the ideals which were born with the calling of medicine. With that declaration of principle, we can express the opinion that all of the earnest men in the American Medical Association, with the sole purpose of justifying the status of the Association, should get together, so as to bring order into the management, and the sort of management which will hereafter place the A. M. A. above reproach or attack in any particular of its organization.

There seems to be an immediate need of meeting the main issue of importance brought out by the decision, namely, that a formal meeting of the A. M. A. in the State of Illinois should be held to establish the present government of the Association. The Association itself should decide whether any further legal opinion is

desirable, necessary or demanded. There has been need for some clearance of the atmosphere of unrest in a considerable part of the A. M. A. membership, and if the work of one active revolutionist has helped to this end he should deserve credit for this work. We are not, however, either iconoclasts or chauvinists, and we believe that, with a basis for a comprehensive reorganization of the A. M. A. as a truly democratic body, we should before long arrive at that content which usually comes after a storm.

In the meantime, it would be the part of both wisdom and justice for the *Journal* of the A. M. A. to publish the story of the legal procedures, as they have occurred, without animus and for the instruction of all the members, who otherwise may have to depend upon other sources for the information which it is their right to know.

The main points in the discussion seem to be that, thru the present method of electing delegates from various States with power of vote and representation at meetings from year to year held in various parts of the country, the Association and its managers have violated the laws of Illinois, in which the A. M. A. is incorporated. The particular point of decision is that no *official* business of the Association, elections, etc., may take place legally or authoritatively except in the State of Illinois, where the corporation has status, and without which State the law has no jurisdiction. In the language of the Court: "Certainly it cannot be presumed, * * * that the Legislature intended to refer to places beyond the limits of its own jurisdiction, where its laws could have no operative force and effect." The further point considers the regulation in the by-laws of the Association, by which members, "in person or by proxy," shall vote for trustees, officers, etc., and the judicial decision denies the organization the privilege of removing the right of the individual member thru associated bodies sending delegates to vote, instead of members.

In all this there should arise no occasion for any other change in the body of the Association than the sane disposal of the points at issue, and we are sure that there are enough men with level heads to reach the proper conclusions and to propose the remedy.

THE SOURCE.

"The gift of \$4,350,000 to the Cornell Medical School is now officially announced."

This statement in *Science*, of November 21, causes us to pause, out of respect to the unknown donor who, in the midst of a cosmopolis or sordid seekers after wealth, can see the greatest need of modern times—the labor for the health of the people. What opportunity such munificence heralds! What achievement now finds an open way? What chance for the glow of genius to brighten into effulgent flame!

Where millions are but the checkers of the wealthy in the great game of life in the metropolis of this continent, such a gift may be commonplace, but among educators everywhere, struggling with small means to meet the exigencies of their much-taxed schedules, such a gift seems indeed the mutation of a fairy god, touching the soul of a great institution with the spirit of possibilities.

There are so many colleges which need large-hearted benefactors that no envy can come in the glorious benefits to one, which has stood, and which now stands for progress, as does Cornell; but we who cherish the traditions of an Alma Mater, coming out of the darkness of mediocrity into the ranks of the vanguard of success and of virtuous endeavor, fervently beseech the same spirit of giving, so that it may become widespread and far-reaching enough to come to our own Tulane.

Men make fortunes for themselves and their children, but there is always enough to spare a tithe for the public good.

There is a wave of education spreading over the civilized and the intellectual world, which is carrying a broad view of morality and of hygiene, if the two may be divorced at all.

States are making laws protecting the public against itself in matters of living and in matters of conduct. The economic value of health is growing into importance as a factor in human life itself, and even the statesmen are tending to put a higher value upon a single human being.

Much of this has been common knowledge and frequent practise among the better-thinking men in the medical profession, and for many years gone by. It has been so hopeless for so long to get others to see our points of view that we have been satisfied to wait for time and the momentum of public need to develop an interest,

and so long as the end is attained it makes no difference who thought about it first.

But now that the public has arrived at the real need of knowledge in public health, and in a proper protection in its maintenance, the medical profession and the medical college must be the media for the dissemination of the new propaganda and for the inculcation of the new spirit.

The duty really lies with the State to provide the means, but this, too, is bound to depend upon the pleasure of the public, after the period of education has sufficiently advanced. Meantime we must appeal to the broad philanthropy of those who may have the means and the will to give it.

Look at the great things which have come from our own Tulane. No other three medical schools in the United States have been as productive in original scientific work during the past five years, and what has been accomplished has been done more with genius than with money!

One of the greatest students of education in this country has declared New Orleans the strategic center of medical education in America, but of what advantage if wealth does not open its treasures and pour in enough to satisfy the outlying forces and the centers of development?

Abstracts, Extracts and Miscellany.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

THE NEWER THEORIES IN THE DIETETIC TREATMENT OF DIABETES MELLITUS.—Tansz (*Med. Klinikk.*, 1913) emphasizes the necessity of determining the point of tolerance for protein as well as for carbohydrates in each individual case of diabetes. In diabetes associated with nephritis, the diet should be regulated for nephritis as well as for diabetes, and especially with regard to the tolerance of sodium chloride. The good results obtained from oat-meal and vegetable days is probably due to their increased alkali content and the consequent neutralization of acidosis. Tansz says that Abderhalden's researches have proved that albumin, fat and

carbohydrates develop protective ferments. Animal experiments have shown that it is possible for the body to produce ferments that aid in the splitting of the polysaccharids. In diabetes the metabolism is distributed by an overaccumulation of carbohydrates, and if it were possible to increase the amount of the activity of soluble ferments the carbohydrates might be oxidized to a greater extent. Tansz says that experiments are being conducted with this idea in view.

J. A. S.

GASTRIC JUICE IN MALIGNANT AND NON-MALIGNANT DISEASES OF STOMACH AND DUODENUM.—Schryver and Singer (*Quarterly Jour. Med.*, 1913, vi, 309) conclude that there are no pathognomonic signs available in the gastric juice. No type of gastric juice is the exclusive or invariable accompaniment of any clinical condition. However, systematic gastric analysis helps to throw light on a number of pathological conditions. In the analyses, Schryver and Singer, after a critical review of various indicators and methods, made use of the following:

1. For free hydrochloric acid: Dimethyl titration, appreciating that absence of dimethyl acidity may be due to either true achylia or a combination of secreted hydrochloric acid by amino-acid groups.

2. For "secreted" chloride: Subtraction from the total chloride of the chlorine determined in the ash after incineration (separation of the chlorine as hydrochloric acid and in combination with organic substances from the chlorine as sodium chloride).

3. For the peptic activity: The method of Fuld-Levison, apparently proving that pepsin secretion can be influenced independently of the hydrochloric acid secretion.

4. For the "nitrogen factor": The proportion of the difference between the titration value with phenolphthalein and that with dimethyl to the amount of nitrogen present in amino-acids, multiplied by ten. (In estimating the acidity of gastric juice to indicators, the amount of nitrogen present must be taken into account. In healthy gastric juice the "nitrogen factor tends to approximate to figures 2.4. It seldom falls below, but with diminution of the digestive power it may rise greatly above. Schryver and Singer feel, from their application of tests, that "secreted chloride"—*i. e.*, total chloride less inorganic chloride—is the best available index of gastric efficiency as regards hydrochloric acid. The latter, as it is secreted, enters either partly or wholly into combination with the products of digestion. The amount combined depends upon the

amount and character of these products, index of which is furnished by the nitrogen estimations and the determination of the "nitrogen factor." In uncomplicated cases of duodenal ulcer, the amount of "secreted chloride" is raised, together with the peptic index, while the nitrogen factor approximates 2.4. The pyloric ulcers resemble these in general characteristics. Carcinoma of the stomach has no specific effect on the composition of the gastric juice, although both pepsin and chloride readings are generally lower than in other conditions. In alcoholism the peptic index is depressed, while the chloride secretion remains normal. With visceroptosis and nephroptosis there is a general depression of the gastric functions. The "nitrogen factor" is raised. The same conditions prevail with atonic gastric wall. Hyperchlorhydria, hypochlorhydria, and even achylia are encountered independently by coarse gastric lesions. The coincidence of definite hyperchlorhydria with a greatly raised peptic index is practically diagnostic of pyloric and duodenal ulcer among gastric diseases. Very low chloride readings practically exclude pyloric or duodenal ulcer. A "nitrogen factor" of 2.8 and over has been found to be almost diagnostic of delayed emptying of the stomach. Dissociation of chloride and pepsin secretion is probably the result of chronic inflammatory change in the gastric mucous membrane.

J. A. S.

THE OPHTHALMIC REACTION AS A DIAGNOSTIC TEST FOR TYPHOID.—Recently Austrian has described an ophthalmic reaction in typhoid which may prove a valuable diagnostic aid. The reaction is similar in principle to Calmette's ophthalmic reaction in tuberculosis, and was first described in 1907 by Chantemesse, who obtained positive results in each of seventy cases of typhoid, and negative results in forty-nine of fifty control cases. Floyd and Barker, using a modification of the same technic, obtained positive reactions in 96 per cent. of typhoid cases, and negative results in 84 per cent. of controls. Other investigators have obtained a variety of results in both typhoid and control cases, and some have concluded that the reaction is not specific. Others attributed the various results to a difference in strength of the extracts of virulent typhoid bacilli which were used as an antigen in the reaction. Austrian advances the hypothesis that the patient develops a sensitiveness towards the predominating strain of the organism with which he is infected, and a relatively small degree of sensitiveness toward other strains, just as a patient produces immune bodies in

large amount against the strain with which he is infected and has relatively few antibodies against other strains. Acting on this hypothesis, he prepared antigen for the reaction from a mixed culture of eighty different strains. These were grown in plain bouillon for twenty-four hours and were then sedimented, washed and killed by heating for two hours at 60° C. The mass of bacilli was then thoroughly dried and ground with sodium chloride crystals in an agate mortar, after which it was macerated with water for three days, and the watery extract precipitated by pouring into absolute alcohol. The residue was then collected, dried, pulverized and a solution made in the proportion of 10 mg. to 1 c. c. of water. One drop of this solution dropped into the lower conjunctival sac of the typhoid fever patient produced a mild inflammation, with reddening of the conjunctival membrane, and sometimes slight edema of one or both eyelids. The reaction reached its height in from six to ten hours, and the symptoms, even when marked, were not sufficient to cause the patient to complain of discomfort.

The report shows extensive charts, in which this reaction is compared with blood cultures and agglutination tests in seventy-five cases diagnosed clinically as typhoid fever. The test was positive in seventy-one and negative in four—a much larger proportion of cases than were positive by either blood cultures or agglutination. Of nineteen tests made during the first week of the disease, eighteen were positive, and the nineteenth gave also negative results by both blood-cultures and agglutination reaction. Positive reactions were often secured from the third to the fifth day, and in a few cases as early as the second day of the disease. In 190 controls, including a great variety of febrile and afebrile conditions, and in twelve normal adults, the ophthalmic reaction was absent without exception. The reaction was found to be present most often during the acute febrile stage, and absent most frequently during convalescence.

Austrian claims the following advantages: The technic is very simple, requiring no complicated apparatus, presupposing, of course, that the antigen is furnished from reliable laboratories. It is a bedside test and is available during the early stages of the disease. It causes the patient less inconvenience, probably, than does the taking of blood for other diagnostic purposes. Its results more closely parallel those of blood cultures than do those of the agglutination test. If the ophthalmic reaction can establish these claims,

it needs no other recommendation to secure its general acceptance into clinical use. We shall await with interest further reports concerning its use in routine diagnosis.—*Bulletin of the Johns Hopkins Hospital.*
J. A. S.

AMYLOLYTIC FERMENTS IN THE URINE.—Corbett (*Quarterly Jour. Med.*, 1913, vi, 351) has applied Wohlgemuth's method of quantitative estimation of amylolytic ferments in the urine to a variety of conditions. Normal individuals secrete a starch-reducing ferment in the urine, in the fairly constant amounts of 10 to 20 units on the average. Each unit represents 1 c. c. of 0.1 per cent. starch solution converted into dextrin in one-half hour by 1 c. c. of urine. A diet containing starch will increase the normal amylolytic ferment content of the urine. This was striking in the change from a milk diet to one containing much carbohydrate. Normal blood serum, by an equivalent method, showed the presence of the ferment, with an average value of 10 units. As a direct measure of renal efficiency, Corbett emphasizes leakage of ferment requiring no renal activity for its elimination, and considers the relation of the serum-content to that of the urine of greater value than the urine content alone. When the value of the serum constantly exceeds that of the urine, it may be assumed that there is a considerable loss of renal efficiency. High readings in the urine were never found in pure cases of renal disease. All the cases of undoubted pancreatic disease, whether malignant or inflammatory, gave high values, and Corbett recommends the test as an aid in diagnosis of these conditions.
J. A. S.

THE TREATMENT OF DIABETES WITH RECTAL INJECTIONS OF SUGAR SOLUTIONS.—Luthje (*Therapie der Gegenwart*, 1913, liv, 193) reports good results from the administration of glucose solution to diabetics by rectal injection by the drop method. He says that the sugar is much better absorbed and utilized by diabetics when given in this way than when given by mouth. He has had especially good results in the treatment of acidosis by this plan. By the drop method most persons can absorb from the rectum from one to two liters of fluid a day. He uses a 5.4 per cent. glucose solution, and hence the amount of sugar absorbed would be from 50 to 100 grams a day.

J. A. S.

Miscellaneous.

PATHOLOGY AND THERAPY OF RENAL CALCULUS.—(*Medizinische Klinik*, August 10, viii, 1913.)—On account of the limited information relative to metabolism, it is the belief of W. Karo that we are still unacquainted with the foodstuffs causing a precipitation of oxalates, phosphates, xanthin and cystin, all of which tend to the formation of calculi. Rosenbach has, by animal experimentation, demonstrated that a healthy kidney is able to rid itself of concretions. The acute phenomena of calculi call for symptomatic treatment. Heat, moist or dry, applied to the renal regions affords great relief. Massage may alter the position of the stone and, thus, afford relief. If the pain is extremely severe or the colic unduly prolonged, morphin, in combination with heroin and pyramidon, must be used. Copious draughts of tea and milk, and any of the mineral waters suited to the character of the stone, are advised. To lessen the possibilities of traumatic infection following the passage of the calculi, an internal urinary antiseptic is always recommended. Recurrence of the attack is best avoided by a rigid diet—one bearing a definite relationship to the nature of the concretion. The urine should be kept neutral. While the diet should be mixed, care must be taken to exclude meat, thyme, caviar, liver and kidney. Feed generously of vegetables and fruits. H. D. K.

PATHOLOGY OF THE ADRENALS.—(*Munchener medizinische Wochenschrift*, August 19, lx, 1913.)—Helly calls attention to a case in which an adrenal tumor served as the only possible explanation for sudden death. In reporting his case, Helly cites the recently-published case of Kolisko, in which sudden death followed the extraction of a tooth. Helly's case was that of a female, in the early fifties, suffering from a cardiac hypertension, increased blood pressure and glycosuria. This combination of symptoms was, in the opinion of the author, directly attributable to the adrenal tumor. The tumor, which was made up principally of chromaffin elements, caused increased functioning of the adrenal, thereby causing an excess of epinephrin to be thrown into the circulation. This excess of epinephrin damaged the heart to such an extent that the patient was unable to withstand the mild shock of minor surgical procedure. Whilst it is almost a matter of impossibility to detect any excess of epinephrin and the lowering of vital resistance with which it is attended, the finding of such tumors might

offer a reasonable explanation for cases of sudden death in apparently well persons.
H. D. K.

ADRENAL HYPERNEPHROMA IN ADULT FEMALE, ASSOCIATED WITH MALE SECONDARY SEX CHARACTERISTICS.—(*Journal of Pathology and Bacteriology*, July, 1913.)—E. J. Glynn and T. J. Hewetson state that adrenal hypernephroma does not, in all cases, necessarily mean abnormal sex characteristics. These observers, in reviewing the subject, offer the following facts as to tumor relationship with that of sex characteristics: (1) In children, manifested in the form of hirsutes; (2) in adult females, before menopause, changes are frequently noted; (3) in females, following the climacteric, no changes noted, save in some cases, growth of hair on the face or change in the voice; (4) in adult males, no change noted. Worthy of comment is the discovery that there exists in 15 per cent. of female pseudohermaphrodites a bilateral hyperplasia of the adrenal cortex. (5) Structural changes of hypernephroma in the kidney are different from those in the adrenal, and never featured by altered or abnormal sex character changes.
H. D. K.

DUODENAL ULCER IN CHILDREN.—Cheinisse (*Semaine Medicale*, xxxiii, 36, 1913) notes that, according to recent statistics, duodenal ulcer occurs more frequently in the first year of life than at any other age. Despite the difficulties with which a diagnosis of this condition is attended, it is not impossible to make a diagnosis of ulcer, even in the very young. Duodenal ulcer in the young may escape recognition or terminate in recovery. It has been stated by Von Torday and others that the clinical picture of pyloric stenosis may sometimes be brought about by duodenal ulcer. If there is hemorrhage, sub-cutaneous injections of gelatin are advised. Breast feeding at regular intervals is the treatment advocated by Helmholtz. When the usual therapeutic measures prove of no avail, resort must be had to surgery.
H. D. K.

EXPERIMENTAL GASTRIC AND DUODENAL ULCER.—Gunderman (*Archiv. für Klinische Chirurgie*, ci, 2, 1913) brought about ulceration in the stomach and duodenum of both dogs and rabbits by traumatizing the liver, impeding the circulation from that organ and inducing degenerative changes by other means. These findings lend additional weight to the view that hepatic malfunctioning is more or less responsible for ulceration about the stomach and duodenum.
H. D. K.

POST-OPERATIVE PEPTIC ULCER.—Hoberer (*Archiv. für Klinische Chirurgie*, ci, 3, 1913) calls attention to three cases of post-operative peptic ulcer in a total of 248 gastro-enterostomies. Each one of the ulcer cases was distinguished by symptoms suggestive of the condition long before operation. In these cases it was evident that the old stomach trouble maintained a vicious circle favoring ulceration. In two of the cases the ulcer followed shortly after operation; in the third, an interval of four years of health elapsed. The site of the ulcer in all three cases was on the efferent loop, opposite the gastro-enterostomy, close to the mesenteric attachment. All gastro-intestinal disturbances ceased upon resection of both shanks of the loop and the gastric anastomosis. H. D. K.

MISTAKES IN DIAGNOSIS OF JUXTA-PYLORIC AND DUODENAL ULCER.—Kemp (*Ugeskrift for Læger*, lxxv, 37, 1913) reviews thirty-seven operative cases of juxta-pyloric ulcer in stomach and duodenum, and four of cancer. The author states that recent investigations concerning the diagnosis of duodenal ulcer are erroneous; the syndrome commonly ascribed to duodenal ulcer really belongs to juxta-pyloric ulcer, regardless of whether the ulcer extends down into the duodenum or up into the stomach. Periodicity of the disturbances is of no diagnostic import, as it may occur with other gastric affections. The condition of gastric ulcer may be reasonably presumed when either of the following combination of circumstances exist: (1) Periodical tardy pains (vomiting), increased gastric secretion, occult blood; (2) periodical tardy pains (vomiting), hypersecretion and small retention after twelve hours; (3) periodical tardy pains (vomiting), hypersecretion and pyloric spasm; (4) hypersecretion, occult bleeding and small twelve-hour retention; (5) hypersecretion, motor insufficiency and small twelve-hour retention; (6) hypersecretion, pyloric spasm and small twelve-hour retention; or (7) pyloric spasm or occult bleeding. In ulcer, soon as the stomach is emptied, the pyloric spasm is relaxed and pain ceases, while in cholelithiasis the pyloric spasm is a negligible factor in the general contractions. The site of the ulcer should be definitely determined in order that the surgical interference be intelligent. H. D. K.

GASTRIC ULCER.—Petren (*Hygiea*, lxxv, 4, 1913), who has seen one hundred cases of gastric ulcer within the last two years, speaks of the discontinuousness of the symptoms as observed in this con-

dition. In a symptomatologic review of the different stomach disturbances he calls attention to the more or less frequent periods of only remission in gastric catarrh, as compared with the absolute disappearance of all symptoms in gastric ulcer. Of great importance in establishing a diagnosis is the systematic examination of stools for occult blood. Not until these findings are constantly negative does he allow a patient to leave bed. If after three weeks the Weber test findings are still positive, all food is interdicted for a day, and dieting again commenced, gradually getting up to solid food. This dieting procedure is tried two or three times, and, if blood is still found, the plan is abandoned and surgical intervention advised. The author's plans of dieting are rather elaborate. A weight record is also kept. The only drugs used are bismuth and belladonna, the latter allaying the irritability of the vagus, which Petren believes is of etiologic significance.

H. D. K.

Medical News Items.

THE SIXTH CONGRESS OF DOCTORS OF THE FRENCH LANGUAGE OF NORTH AMERICA, which should have met in September, 1912, will convene in Quebec in September, 1914. The following nominations have been made: President, Monsieur le Professeur A. Rousseau; Secrétaire General, Monsieur le Professeur A. Vallee, Trésorier General, Monsieur le docteur A. Lessard. The following questions will receive consideration: "Les Néphrites," "Les Accidents du Travail," "Les Eaux Minérales Canadiennes," "Les Stations D'Altitude au Canada," "Les Eaux Potables au Canada." All members of this Congress are earnestly requested to attend.

THE WASHINGTON SOCIETY OF NERVOUS AND MENTAL DISEASES inaugurated its seventh session by re-electing last year's officers as follows: President, Dr. Tom A. Williams; vice-president, Dr. W. K. Barton; secretary, Dr. W. M. Hough. The Society has a limited membership, but welcomes physicians and surgeons interested in neurology and psychiatry.

MALARIA SECTION OF THE NATIONAL DRAINAGE CONGRESS.—This section was organized during the Third National Drainage Congress held at St. Louis, April 10-12, 1913. The objects of the Section are to stimulate the study of the distribution, prevalence and

economic importance of malaria, to conduct a campaign of publicity, and to devise ways and means to effect a permanent and efficient campaign against malaria. The next meeting of the Congress will be held in Savannah, Georgia, in 1914, the exact date to be announced later. At this meeting an extensive malaria program is contemplated.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an open, competitive examination for medical assistant, for men only. From the registry of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Bureau of Chemistry, Department of Agriculture, Washington, D. C., at \$1,800 a year, and vacancies as they may occur in positions requiring similar qualifications. The duties of this position will be to study the claims and representations made in conjunction with proprietary remedies, look up medical literature, assist in preparing cases, etc., under the Food and Drug Act. A knowledge of French and German is desirable. Graduation from a medical school of recognized standing and at least three years' subsequent experience in the practice of medicine, or two years' subsequent experience in either pharmacological investigations or the actual examination of drug products with reference to the claims made therefor by manufacturers, are prerequisites for consideration for this position. Applicants must have reached their twenty-fifth but not their forty-fifth birthday on the date of the examination. Under the act of Congress applicants for this examination must have been actually domiciled in the State or Territory in which they reside for at least one year previous to the date of the examination. This examination is open to all men who are citizens of the United States and who meet the requirements. Persons who meet the requirements and desire the examination should at once apply for application form 304 and special form to the United States Civil Service Commission, Washington, D. C., the secretary of the United States Civil Service Board. No application will be accepted unless properly executed and filed, in complete form, with the Commission at Washington prior to the hour of closing business on January 12, 1914. In applying for this examination the exact title as given at the head of this announcement should be used.

HOOKWORM CAMPAIGN.—The Louisiana State Board of Health has started a hookworm campaign, their efforts being directed to

better sanitation and the eradication of the disease. According to its records, the number of cases of hookworm treated by physicians in Louisiana is 10,885, and it is really believed that the number is even greater than this. In order to gain better sanitation and eradicate the disease, three things are necessary: First, the examination of all persons living in territory where soil pollution is heavy and hookworms and other intestinal parasites exist; second, the treating of all infected persons; third, the improvement of sanitary conditions, especially the building of sanitary closets.

BOARDS OF MEDICAL OFFICERS will be convened to meet at the Bureau of Public Health Service, 3 B Street, S. E., Washington, D. C., and at the Marine Hospitals of Boston, Mass.; Chicago, Ill.; St. Louis, Mo.; New Orleans, La., and San Francisco, Cal., on Monday, January 12, 1914, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are received in the Bureau. Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons. Candidates must have had one year's hospital experience or two years' professional work. Candidates must not be less than 5 feet 4 inches nor more than 6 feet 2 inches in height. The following is the usual order of the examinations: 1, physical; 2, oral; 3, written; 4, clinical. In addition to the physical examination candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate and that they will serve wherever assigned to duty. The oral examination includes subjects of preliminary education, history, literature and natural sciences. The clinical examination is conducted at a hospital. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments. Assistant surgeons receive \$2,000, passed assistant surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon generals \$4,000 a year. For invitation to appear before the board of examiners address "Surgeon General, Public Health Service, Washington, D. C."

THE ASSOCIATION OF SOUTHERN MEDICAL WOMEN, dedicated to the furtherance of public health campaigns in the South and the bringing of its members into closer sympathy, was inaugurated in

Lexington, Kentucky, on November 18, 1913, as an auxiliary to the Southern Medical Association. Dr. Lillian H. South, of Bowling Green, Ky., was chosen as first president, and Dr. L. Rose Grentt, of Spartanburg, S. C., as secretary-treasurer. A membership committee includes with these officers Dr. Stella C. Martinson, of Grayville, Tenn.; Dr. Lydia L. Poage, of Paris, Ky., and Dr. Josephine D. Hunt, of Lexington. The association will meet annually in conjunction with the Southern Medical Association.

CHARITY HOSPITAL GRADUATES NURSES.—Thirty nurses were presented with diplomas on December 11, 1913. Simple but interesting exercises marked the occasion. Reports were read by Sister Mary Agnes, director of the training school, and by Dr. Joseph A. Danna, chairman of the faculty of lecturers. An address to the nurses was delivered by Mr. Orloff Lake, and Father T. J. Larkin, S. M., closed the exercises.

SURGEONS' CLUB EUROPEAN TOUR.—Under the auspices of the Georgia Surgeons' Club, a sixty days' tour of the surgical clinics of Europe is being arranged for representative Southern surgeons, to wind up at the meeting of the Congress of Surgeons of North America in London the latter part of July, 1914. Those interested may secure details of the trip from Dr. R. M. Harbin, secretary-treasurer, Rome, Ga.

ROCKEFELLER GIFT.—John D. Rockefeller recently contributed \$25,000 to the fund of \$250,000 being raised for St. Vincent's Hospital of Cleveland, Ohio. The subscription is conditioned on the entire fund being raised, but less than \$30,000 remains to be obtained.

CHARITY HOSPITAL INCLUDED IN WILL.—By the will of Jefferson Davis McGuigin, the Charity Hospital is to receive \$10,000 upon the death of his sister, to whom he leaves all his fortune in usufruct.

STERILIZATION ACT KILLED.—The Supreme Court of New Jersey has recently set aside as unconstitutional the Act of 1911 providing for the sterilization of epileptics, the feeble-minded, criminals and other defectives.

NO FEVER MOSQUITOS IN ZONE.—Dr. Edward Martini, who has been studying the United States Army's medical work in the Canal Zone in the interest of the German Government, has brought back with him from the isthms specimens of fever-infecting mosquitoes

which he had been forced to go outside the Canal Zone to find, because of the elimination of the pest by American sanitary regulation. Dr. Martini will later go to the German colonies in South America, where he will undertake to duplicate the work of the Americans in the Canal Zone.

ORLEANS PARISH MEDICAL SOCIETY ELECTS OFFICERS.—At the annual election of the Orleans Parish Medical Society, held December 13, 1913, the following officers were elected to serve during 1914: Dr. C. N. Chavigny, president; Dr. L. R. DeBuys, first vice-president; Dr. M. Thomas Lanoux, second vice-president; Dr. William H. Block, third vice-president; Dr. E. L. King, secretary; Dr. George H. Upton, treasurer; Dr. Howard D. King, librarian; Drs. Homer Dupuy, E. L. Leckert and W. D. Phillips, additional members of Board of Directors. The installation of the new officers will take place on January 12, 1914.

PERSONALS.—Dr. Tom A. Williams has returned from spending the summer and fall in Europe.

Dr. J. T. Crebbin has returned from a trip to Guatemala.

Dr. G. Farrar Patton has been made registrar of vital statistics of the State Board of Health.

Dr. Isadore Dyer lectured before the Harris County Medical Society in Houston on December 12.

Drs. R. Matas and S. M. D. Clark attended the annual meeting of the Southern Surgical and Gynecological Association in Atlanta.

REMOVALS.—Dr. S. A. Poole, from South Mansfield, La., to Myrtistown, La.

Dr. G. C. McKinney, from Lake Charles, La., to De Ridder, La.

Dr. P. B. Wilson, from 841 N. Rampart street, New Orleans, La., to Sneads, Fla.

Dr. Dandridge P. West announces that he has moved to 1126 Maison Blanche Building, and that his practice will be limited in the future to diseases of infancy and childhood.

Dr. C. H. Rice, from 615 Machecha Building to 1109 Maison Blanche Building.

Dr. J. W. A. Smith, from Touro Infirmary to 107 Camp street.

Dr. Caroline Mims, from 517 Lowerline street to 1229 Maison Blanche Building.

Dr. W. H. Seemann, from 2227 Royal street to 2452 N. Rampart street.

Dr. H. L. Staring, from Baton Rouge, La., to Charity Hospital, New Orleans.

MARRIED.—On December 11, 1913, Dr. William Thomas Weisinger, of this city, to Miss Sudie Lee Knight, of Uniontown, Ala.

On November 12, 1913, Dr. E. C. Colley, to Miss Isabelle Keen, both of this city.

DIED.—On December 6, 1913, Dr. R. C. Bethea, of Summit, Miss., aged 84 years.

On December 9, 1913, Dr. Samuel H. Backus, of Gueydan, La.

On December 12, 1913, Dr. Carl H. Von Klein, of Chicago, Ill. Dr. Von Klein was widely known for his resaerch work in the medical lore of the ancients.

On November 26, 1913, Dr. William M. Edwards, at Mobile, Ala.

On November 21, 1913, Dr. Henry P. Howard, at Dallas, Texas, aged 82 years.

On November 21, 1913, Dr. A. J. Burket, at Lafayette, La., aged 50 years.

On December 8, 1913, Dr. H. D. Key, at Monroe, La.

On December 8, 1913, Dr. J. C. McElroy, at Newton, Miss., aged 89 years.

On Decmeber 9, 1913, Dr. W. F. Clopton, at Morrow, La.

On November 24, 1913, Dr. T. E. Nott, at Brownsville, Texas, aged 48 years.

On December 18, 1913, Dr. T. M. Crosby, of Neshoba, Miss., vice-president of the Newton-Neshoba-Winston Medical Association, aged 52 years.

On December 19, 1913, Dr. Arthur B. Brown, secretary of the Louisiana State Board of Medical Examiners, aged 34 years. Dr. Brown was born in New Zealand, but has been a resident of New Orleans since early boyhood.

On December 22, 1913, Dr. Hugh Kelly, of New Orleans, at the age of 57 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

Obstetrics for Nurses. By Joseph B. De Lee, M. D. Published by W. B. Saunders Company, Philadelphia and London, 1913.

This excellent book has within comparatively a short time passed to the fourth edition. The author states that few changes were necessary in the text, the fundamentals of obstetric nursing remaining about the same. In the present edition several subjects have been added, such as the after care of fistula operation, Momberg's treatment for hemorrhage, and blood transfusion.

The chapter on infant feeding was revised by Dr. F. F. Wells, and that on Cesarean section was much amplified in view of the more generalized performance of the operation.

The book is profusely illustrated, well arranged and in every way meets the requirements of the nurse in training, as well as the nurse engaged in active obstetric nursing.

MILLER.

Diagnosis of the Malignant Tumors of the Abdominal Viscera. By Prof. Rudolph Schmidt. Authorized English version by Joseph Burke, B. Sc., M. D. Published by Rebman & Company, New York, 1913.

This is a book of 350 pages devoted to the general consideration of malignancy of the abdominal viscera, the various methods of diagnosis, with special reference to the laboratory and X-ray as aids, together with numerous well-arranged case reports. The case histories are particularly worthy of mention, because the author has been able to include the counter findings of the surgeon and the autopsy investigations.

The first feature of this work to attract attention is the systematic details of physical examination and the value of such painstaking methods. The author has everywhere been mindful of the problem of the earliest possible diagnosis and it can be seen at a glance that the secret of Prof. Schmidt's reputation as a diagnostician has been his infinite capacity for details.

It must not be understood that this work is a mere study of diagnostic methods. The nature of the subject, through the numerous diseases entering into differential diagnosis and a consideration of the different methods of diagnosis, broadens the scope of the discussions until it includes the diagnostic study of abdominal diseases in general.

The great cancer problem is touched upon from many angles and adds no little to the value of the book.

MILLER.

The Principles and Practice of Gynecology. By E. C. Dudley, A. M., M. D. Published by Lea & Febiger, Philadelphia and New York, 1913.

It is hardly necessary to do more than announce the appearance of the sixth edition of Dr. Dudley's well-known book. For a number of years no text-book on gynecology has been better known or so consistently reflected the individual opinions of the author as this one.

The preface to the present edition strongly hints the author's methods in keeping the work up to the high standard it has always maintained. Dr. Dudley says, "In the effort to make a thorough-going revision, which should express the recent advances in gynecology, I have subjected the greater part of the book, paragraph by paragraph, to a regional and interstitial dissection, have rewritten many chapters, particularly on General Principles, Inflammations, Tumors, and Traumatisms, and in so doing, by rigid rearrangement and condensation, have found space for much new matter without enlarging the volume."

The arrangement of the subject matter has always been one of the distinctive features of Dr. Dudley's book. The subjects are arranged in pathological and etiological sequence in order that the student will have constantly before him the physiological and pathological unity of the reproductive system. One of the chief advantages of such an arrangement is that the student is not likely to lose sight of the correlation of like morbid processes to one another.

It is a pleasure to review the chapters on plastic surgery. We find there the operative details and original suggestions that have for so long placed Dr. Dudley among the foremost plastic surgeons.

The present edition contains numerous new and beautifully executed illustrations, particularly those describing hysterectomy and perineorrhaphy.

It is needless to predict the new edition will continue to be one of the most valuable text-books, because it reflects the views of a surgeon of wide experience, as well as a teacher and author of the first rank.

MILLER.

The Physician's Visiting List for 1914. Blakiston's Son & Co., Philadelphia.

This regular visitor comes in three forms, as usual, the weekly, the monthly, and the perpetual edition. It contains a number of useful tables in addition to the blank leaves for visit recording. The mere fact that it comes for the sixty-third year is sufficient indication of its value.

The Medical Record Visiting List for 1914. William Wood & Co., New York.

Handsomely finished and newly revised, this popular visiting list is presented this year with much useful matter, including a list of remedies and their maximum doses.

The Practitioner's Visiting List. Lea & Febiger, Philadelphia and New York, 1914.

This record booklet is conveniently arranged, with numerous reference tables of handy information, scales, dosage, etc. The binding is attractive and durable, while the paper is of good quality.

Minor and Operative Surgery. By Henry R. Wharton, M. D. Lea & Febiger, Philadelphia.

This work is too well-known to the profession to need introduction. In this, the eight edition, little that is new has been added. In the revision one of the most important chapters, that on shock, still adheres to the old method of dealing with this condition. Though reference is made to Crile, nothing is said of the present day theory of shock and

its prevention. It is also unfortunate that more emphasis was not given to the subject of shock produced by unnecessary trauma during operation. The book serves a good purpose and must prove valuable to practitioners not in active practice and who must often act promptly.
MARTIN.

Laboratory Methods: With Special Reference to the Needs of the General Practitioner. By B. G. R. Williams, M. D., assisted by E. G. C. Williams, with an introduction by Victor C. Vaughan, M. D., LL. D. Second edition. C. V. Mosby Company, St. Louis, 1913.

The introduction by Vaughan is sufficient to accord this volume respectful attention. Isolated general practitioners, who have little opportunity to acquaint themselves with modern laboratory methods, will find it especially valuable. It may be seen from such chapter headings as "Searching for Germs," "Vascular Dramas," "Exudates in Brief," "Dialo Versus Widal," "Technic of the Private Post-Mortem," etc., that the author has attempted to make the book interesting reading. The illustrations of apparatus and technic are good, those of microscopical preparations being slightly more open to criticism.

CREIGHTON WELLMAN.

Applied Bacteriology for Nurses. By Charles F. Bolduan, M. D., and Marie Grund, M. D. Illustrated. Saunders Company, Philadelphia and London, 1913.

This attractive little volume puts forth, in a clear and simple manner, the general outlines of medical bacteriology. The text is concise and accurate and the illustrations are well chosen. The book, as a whole, is excellent and the reviewer heartily recommends it to the class of readers for whom it is intended.

CREIGHTON WELLMAN.

Hygiene and Sanitation: A Text-Book for Nurses. By George M. Price, M. D. Lea & Febiger, Philadelphia and New York, 1913.

This book, setting forth in a simple manner the principles of hygiene, lays special stress upon those details that fall within the province of the trained nurse. It brings out the importance of the trained nurse in preventive medicine and the desirability of her recognizing her value as a factor in social, civic and other public health activities. It is a volume that should be in the hands of every nurse.

CREIGHTON WELLMAN.

The Microtometist's Vade-Mecum. By Arthur Bolles Lee. Seventh edition. P. Blakiston's Son & Co., Philadelphia, 1913.

In the new edition of this useful work, are many additions and improvements, among the most important a description of Gilson's new mounting media—camsal balsam and euparal. This permits the mounting of the specimens directly from alcohol, omitting the treatment with clearing agents, which often injure the tissues and stains. The methods of Bellschowsky and Ramón y Cajal for the study of neurofibrils are fully given and recommended as being more reliable than formerly. No better reference work on methods of preparing tissues for examination is known to the reviewer. Among the most valuable chapters are the general ones dealing with the theories and principles of technical processes. Unfortunately, there is often a lack of definiteness as to the exact procedure. Another possible criticism is that several useful methods, given in former editions, are only referred to in this one. This

may be partly accounted for by the desire to keep the volume to its present easily handled size. The edition has a good index and the convenient numbering of paragraphs. CREIGHTON WELLMAN.

A Text-Book of Physiology. By Isaac Ott, A. M., M. D. Fourth edition. F. A. Davis Company, Philadelphia.

It is a pleasure to review this new book on Physiology, and the reader is impressed from the start that it is strictly a medical physiology.

The old-time laboratory stand-by, namely, muscle nerve work, is boiled down to where it belongs. The new field of electrical physiology is very well covered and excellent records of the normal heart and the heart in Adam's-Stokes disease are shown, as are the positions of the three heart sounds.

Internal secretions are carefully treated, also Abderhalden's test for pregnancy is clearly explained.

At the end of the chapters one finds a pharmacological review of the subject just covered. This feature is of great help to the student and to the reviewing practitioner.

The text is supplemented by 394 illustrations of the better sort. The subjects of Digestion, Respiration and Circulation have been brought up to date, and on the whole this book is excellent. No doubt it will become a very popular text in physiology though greater attention to the literary style of presenting the material would improve the work.

F. P. CHILLINGWORTH.

Handbook of Physiology. By W. D. Halliburton, M. D., LL. D., F. R. C. P., F. R. S. P. Blakiston's Son & Co., Philadelphia.

The first thing that impresses the reader of this work on physiology is the chapter index, which is excellent. More than the first quarter of the volume is devoted to histology and muscle nerve work and covers this difficult subject well.

The chapters on the heart and circulation are also well handled. It is to be regretted that the author did not lay more stress on the importance of the venous pulse and its relation to the bundle of His.

The chapters dealing with respiration, and especially the respiratory and blood gases, are very well considered.

In discussing the movements of the stomach the author might well have included the recent work on these movements by Kastle, Rieder and Rosenthal.

The last 37 pages of this work are devoted to the physiology of reproduction, development and death. It seems to the reader that more space should in the future be devoted to these important subjects.

It is to be regretted that the "BNA" nomenclature has not been introduced by the author.

This edition of Halliburton will prove to be an excellent reference book on general physiology. F. P. CHILLINGWORTH.

Publications Received.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1913.

"A Manual of X-ray Technic," by Arthur C. Christie.

C. V. MOSBY COMPANY, St. Louis, 1913.

"Pyorrhea Alveolaris," by Frederick Hecker, B. Sc., D. D. S., A. M., M. D.

"Causes and Cures of Crime," by Thomas Speed Mosby.

W. M. LEONARD COMPANY, Boston, 1913.

"Case Histories in Pediatrics," by John Lovett Morse, A. M., M. D.

E. B. TREAT COMPANY, New York, 1913.

"Diseases and Deformities of the Foot," by John Joseph Nutt, B. L., M. D.

P. BLAKISTON'S SON & COMPANY, Philadelphia, 1913.

"The Physician's Visiting List for 1914."

THE RIVERTON PRESS, Chicago, 1913.

"Why the American Medical Association is Going Backward," by G. Frank Lydston, M. D.

LEA & FEBIGER, Philadelphia and New York, 1913.

"Progressive Medicine," edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. December 1, 1913.

"A Manual of Surgical Treatment," by Sir W. Watson Cheyne, C. B., and F. F. Burghard, M. S., F. R. C. S. New edition, entirely revised and largely rewritten, with the assistance of T. P. Legg, M. S., F. R. C. S., and Arthur Edmunds, M. S., F. R. C. S. In five volumes.

"Modern Medicine," edited by Sir Wm. Osler, M. D., F. R. S., and Thomas McCrae, M. D. Second edition, thoroughly revised.

"The Practitioner's Visiting List for 1914."

PAUL B. HOEBER, New York, 1913.

"The Unexpurgated Case Against Woman Suffrage," by Sir Almroth E. Wright, M. D., F. R. R.

WM. WOOD & COMPANY, New York, 1913.

"The Medical Record Visiting List, or Physicians' Diary for 1914." Newly revised.

MISCELLANEOUS.

"Ophthalmic Literature." Published by Edw. Jackson, Denver, Colo.

"Linking the Life Insurance Companies to the Public Health Movement." By Eugene Lyman Fisk, M. D.

"Public Health Reports." Volume XXVIII, Nos. 46, 47, 48 and 49. (Washington Government Printing Office, 1913.)

"The Truth About Wood Alcohol." (Wood Products Company, Buffalo, N. Y.)

Reprints.

"A Contribution to the Study of Chronic Intestinal Stasis; The Surgical Treatment of Chronic Intestinal Stasis," by Wm. Seaman Bainbridge, Sc. D., M. D.

"What Occupation Neuroses Really Are," by Tom A. Williams, M. D., C. M.

"The Sanitary Waiting Room," by W. C. Rucker, A. S. G., U. S. P. H. S.

"Paralysis During Antirabic Treatment," by H. E. Hasseltine, P. A. S., U. S. P. H. S.

"Rat Proofing a Municipal Sewer System," by Friench Simpson, P. A. S., U. S. P. H. S.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans,
FOR NOVEMBER, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....	4	4	8
Intermittent Fever (Malarial Cachexia).....	1	3	4
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....		1	1
Diphtheria and Croup.....	15	7	22
Influenza.....	7	9	16
Cholera Nostras.....			
Pyemia and Septicemia.....	2	1	3
Tuberculosis.....	37	46	83
Cancer.....	27	6	33
Rheumatism and Gout.....		1	1
Diabetes.....	3		3
Alcoholism.....			
Encephalitis and Meningitis.....	4	2	6
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	28	9	37
Paralysis.....	4	1	5
Convulsions of Infancy.....		1	1
Other Diseases of Infancy.....	18	6	24
Tetanus.....		6	6
Other Nervous Diseases.....	7	2	9
Heart Diseases.....	60	46	106
Bronchitis.....	1	1	2
Pneumonia and Broncho Pneumonia.....	14	27	41
Other Respiratory Diseases.....	1	1	2
Ulcer of Stomach.....			
Other Diseases of the Stomach.....	4	1	5
Diarrhea, Dysentery and Enteritis.....	28	13	41
Hernia, Intestinal Obstruction.....	2	1	3
Cirrhosis of Liver.....	10	3	13
Other Diseases of the Liver.....	5	1	6
Simple Peritonitis.....			
Appendicitis.....	3	1	4
Bright's Disease.....	33	26	59
Other Genito-Urinary Diseases.....	10	11	21
Puerperal Diseases.....	2	3	5
Senile Debility.....	3	5	8
Suicide.....	3		3
Injuries.....	17	19	36
All Other Causes.....	38	11	49
TOTAL	391	275	666

Still-born Children—White, 24; colored, 10. Total, 34.

Population of City (estimated)—White, 272,000; colored, 101,000.
Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 17.25; colored, 32.67. Total, 21.43.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.16
 Mean temperature 65.
 Total precipitation 2.67 inches
 Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

VOL. LXVI.

FEBRUARY, 1914.

No. 8

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

PROSTATECTOMY UNDER LOCAL ANESTHESIA.*

By CARROLL W. ALLEN, M. D., New Orleans.

In the operative relief of hypertrophy of the prostate we have in the great majority of cases to consider certain factors which are not, as a rule, involved in other surgical procedures, namely: that of age, as most of the cases requiring surgical relief for this condition have reached or passed middle age, and many of them are infirm or weakened by suffering and infection.

In the old and feeble, prostatectomy is a formidable operation, though not attended by a greater mortality than that following any other major operation in the same class of patients. However, it may even show a more favorable comparison by observing certain methods in the handling of these cases.

Surgical technic has reached such a stage of perfection that in the more commonly performed operations it would seem difficult to suggest improvements in the recognized methods of procedure in typical cases. Improvements will come, but I believe that they will be more in the preparatory treatment, general handling of the

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

case and refinement in details, rather than in the general principles involved in the operation.

One of the notable advances recently introduced as a general surgical procedure is the anoci-association of Crile. This, I believe to be a factor of great consequence, particularly when applied in old and feeble patients, as it prevents shock-producing impressions from the field of operation from reaching the higher nerve centers.

The two great factors in the production of shock are trauma and hemorrhage. Surgical trauma we cannot prevent, as we intentionally inflict it, but we lessen its shock-producing effect by blocking all nerve endings in the field, by injecting the tissues with weak anesthetic solutions. This is done whether the patient is to have a general anesthetic or not, as Crile has shown that general anesthesia does not prevent shock from trauma.

The method which I wish to present to-day is the result of a gradual evolution in handling cases of prostatectomy. While I had never noticed any marked shock following prostatectomy by former methods, in those cases in which I used the anoci-association of Crile, by resorting to a preliminary injection of the prostate with anesthetic solutions there was an improvement in the results, as these cases showed practically no change in their physical condition after operation.

The control of hemorrhage was accomplished by the logical addition of adrenalin to the injected solution. The absence of all bleeding in cases so treated was most striking, practically no blood being lost at all—just enough to moisten a few sponges; thus there was a decided gain for the patient, the two shock-producing factors being eliminated.

The results of this technic were borne out by a more rapid convalescence of these patients, and this method, combined with a two-stage operation, opening the bladder a few days before, under local anesthesia, has enabled me to carry to a successful termination cases of badly-infected bladders in feeble patients, which I would have hesitated to operate by any other method.

The continued use of the above method, and its gradual extension, led to the elimination of general anesthesia, until now it is used only from choice and not from necessity, as these cases can be as successfully operated by local anesthesia as can hernia, rectal and many other conditions.

The technic of the procedure is as follows: One hour before

operation a suppository containing 10 grains of anesthesin is placed in the rectum to anesthetise this region and prevent any discomfort when the finger is introduced here in elevating the prostate.

At the same time, one hour before operation, a hypodermic of morphia, $\frac{1}{6}$ grain, and scopolamin $\frac{1}{150}$ grain, is administered to lessen physical disturbances. The operation is begun by opening the bladder under local anesthesia; its walls are then retracted by long, deep, narrow retractors, bringing into view the field of the prostate. Depending upon the size and shape of the prostate, several points are selected for injection on the vesical surface, usually one below the opening of the urethra, near the base of the gland, and one on either side. The needle is passed through the mucosa, with the idea of making the injection between the true and false sheath of the prostate, as it is in this plane that the solution must diffuse around the gland, and it is in this plane that its enucleation is effected. It is here where the large venous plexuses are situated and where the nerve filaments are more easily reached as they pass through to the prostate.

Two or three drams of a $\frac{1}{2}\%$ novocain solution, containing 15 minims of adrenalin to the ounce, are injected at each of the above points. The needle is then passed into the urethral opening and the lateral wall pierced first on one side and then on the other, and similar injections are made at these points.

If the gland is very large, or there is much of a projection above the urethral opening, an additional injection can be made here, otherwise the above will prove sufficient. It is well now to wait two or three minutes for the solution to diffuse and thorough anesthesia to be established before beginning the enucleation. While waiting for the solution to diffuse, the action of the adrenalin is observed in the prostate, which becomes quite pale and bloodless.

In making the injections, should they be made into the substance of the gland itself, no harm will be done, only they are not quite as effective as when injected peripherally between the true and false sheath; any excess of the solution thrown into the gland in this way is removed during its enucleation and not absorbed.

This method may not appeal to all of my audience, as it requires a certain familiarity with local anesthesia before one cares to undertake major operations by its use alone.

I will, nevertheless, urge that even under the general anesthesia you resort to the preliminary injection of the field with a local

anesthetic combined with adrenalin as a most potent agent in the elimination of those two most active factors in the production of shock—trauma and hemorrhage.

THE USE OF VASELIN AS A SUBSTITUTE FOR BECK'S PASTE.*

By PETER B. SALATICH, M. D., New Orleans.

Vaselin is a very poor culture medium; hardly any form of bacteria can grow in it. This, added to its strong healing power and mechanical action, suggested its use in acute or chronic cavities or sinuses. It has often occurred to me whether it was the bismuth or the vaselin that caused the result of Beck's paste.

Dr. James R. Mitchell (*J. M. A.*, July 29, 1911), uses chalk paste instead of bismuth paste, with better results. He has seen a case poisoned by bismuth. He claims that the germicidal action of the bismuth is slight, acts mechanically, keeping the wound separated, allowing it to heal by granulation from the bottom.

Dr. Wallace Blanchard (*Medical Record*, May 18, 1912) has treated 152 cases of chronic tuberculous sinuses even more successfully with a non-toxic substitute of vaselin, wax and parafin. He feels in a position to offer a vigorous protest against the further use of bismuth paste. He also claims that the bismuth acts purely mechanically.

Dr. Blanchard mentions a danger in the use of bismuth that has attracted but little attention. It is the likelihood of the heavy bismuth settling in pus sacs and sinuses and becoming permanently residual. He has seen several cases, cured and uncured, in which the X-ray showed accumulated masses of bismuth that had every indication of remaining permanent. Some three years afterwards, to test the healing powers of both, I have used them on ulcers and found the vaselin to yield quicker results than the bismuth.

If it is possible to obtain the same result with vaselin, then the danger of poisoning from contaminated, or bismuth itself, will be removed.

Potter claims that even uncontaminated bismuth nitrate, when used for a long period, will show poisonous effects. He also claims that the bismuth acts mechanically.

Yellow vaselin is easier to handle and more readily obtained.

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

Beck's paste requires a special syringe and some trouble to use; vaselin can be purchased in flexible tubes, already sterilized.

The method I use to prepare it for injection is very simple. Sterilize the amount necessary in an open vessel, set in your sterilizer or water bath, then draw into one or more ordinary glass syringes and use partly warm or cool, as we do Beck's paste. In the most foul and freely suppurating cavities, after one injection and without any other treatment, all odor and suppuration diminish. Abdominal wounds, that suppurate either from infection or contaminated catgut, often show very foul pus. After making an incision—only a small one is necessary when vaselin is used—all the pus is pressed out; the cavity is then filled with vaselin, and the wound needs no dressing for two or three days, at the end of which time very little odor and pus remain. The procedure is then repeated, and the dressings can remain for a longer period, only wiping the abdomen with alcohol being necessary. It is marvelous how rapidly cases heal where the entire wound above the fascial layers suppurate, and with less danger of hernia resulting.

In all acute and sub-acute sinuses it is best to wait until little serum or sero-pus exudes before injecting the vaselin, especially if there is any fear of dead bone at the bottom, which must be removed, or the patient will be made worse, for the vaselin stops drainage and the pus must find some other means of exit.

Dr. Beck, notwithstanding, deserves great credit for originating the method of treating chronic sinuses with bismuth paste.

EPIDEMIC CEREBROSPINAL MENINGITIS. NEUROLOGICAL ASPECTS.*

By ROY M. VAN WART, M. D., C. M., New Orleans, La.

The localization of meningococcus infections in the membranes of the brain and spinal cord makes this form of epidemic disease of great neurological interest. While the condition of the patient at the outset suggests only a general infection, the local processes soon cause symptoms suggesting an involvement of the central nervous system.

Ushered in according to the ordinary description, suddenly with nervous symptoms, it is not improbable that the disease at the

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

outset is a general infection, which in the course of a few hours becomes localized in the membranes of the brain and cord. This is suggested by the fact that early in the disease we often obtain a clear fluid, with no organisms, under high pressure, from the lumbar puncture, which a few hours later is found turbid and full of meningococci.

During this early stage we find the symptoms commencing suddenly with a chilly sensation, or a chill. The patient appears ill; there is headache, some irritability, restlessness and vomiting. The physical examination may at first show little, but after a few hours there is a slight rigidity of the neck, the pupils are sluggish or fail to respond to light. Skin eruptions may appear. Bulging fontanelle, or Macewen's sign, in adults may be present, indicating increased intracranial pressure. Macewen's sign is best obtained by bending the head slightly forward and tilting it to the side to be tested. On percussion of the fronto parietal region a dull tympanitic note is obtained.

The symptoms of this stage pass rapidly into the fully developed disease. Often a convulsion, coma or delirium, draws attention to the localization in the nervous system, which may not to this time have been suspected.

The general symptoms of the disease correspond to those of a general infection; temperature of extremely irregular character is characteristic of the disease. But this seems to be of little diagnostic value, except for its irregularity. Skin eruptions, of which herpes is the most prominent, are frequent; erythematous and purpuric eruptions are also common. The localization of the infection in the meninges soon causes the appearance of signs of intracranial disease. Increased intracranial pressure and the irritation of the meninges soon affect the mental condition. At first irritable, hyper-sensitive, excited and restless, the patients later, when the mind does not remain clear through the disease, become delirious, which, as the toxemia or pressure increases, passes into a deep stupor or coma.

The headache is very severe, and general pain and stiffness are often complained of. Rigidity of the neck is a sign of great value, though present in all forms of meningitis in varying degrees.

Often, early in the disease, there is tenderness at the angles of the jaw. Kernig's sign is of great diagnostic value and is present in a large proportion of the cases. This is obtained by flexing the

thigh on the abdomen to a right angle and the leg on the thigh to a like degree. Attempts to extend the leg on the thigh are impossible when the sign is present, due to spasm of the hamstrings.

Tache cérébrale, flushing and general or local perspiration indicate vaso-motor disturbance. Irregular breathing, Cheyne-Stokes and Biot's breathing are the respiratory disturbances most frequently seen. The localization of the process at the base leads to various cranial nerve paralyses. The most frequent are those of the ocular muscles, and are indicated by the position of the eyes.

The involvement of the facial may cause a facial paralysis of the peripheral type. The involvement of the eighth nerve may cause deafness, which is usually incurable. This may not be apparent until recovery if the consciousness has been disturbed.

Optic neuritis of varying degrees is frequent; it is most severe in the chronic cases and may lead to atrophy. Local twitchings, local or general convulsions, indicate interference with motor tracts. In the severer cases monoplegias or hemiplegia may be present.

Aphasia is rarely present. Involvement of the trigeminal may cause neuro-paralytic disturbances of the corresponding eye. The reflexes are very variable and depend on the location of the infected area and the general intracranial pressure. The knee-jerks and Achilles tendon reflexes, as a rule, increased early in the disease, are absent later, when the intracranial pressure affects the consciousness. Babinski's sign is not usually present, except when the pyramidal tracts are directly interfered with. A hemiplegia will cause its appearance.

Brudzinski's sign has been considered of value in diagnosis. Peripheral neuritis rarely occurs. It has been noted in a few instances in the posterior tibial nerves. The most distressing after-results are often seen as the result of local destruction of the brain tissue. These are often apparent as the patient is recovering, and are particularly disastrous when the brain has been affected during the first year of life, leading to various forms of mental deficiency and deformities. Hydrocephalus is a frequent complication. Several types have been noticed. The first usually manifests itself by headache, dizziness, weakness of the eyes and vomiting. These symptoms come and go, and after a time disappear without treatment. A more severe type, with exaggeration of all these symptoms and temperature, suggests a relapse.

Lumbar puncture shows fluid under high pressure and absence

of meningococci. The symptoms usually subside when the pressure is relieved. A third type is more serious and occurs when the foramina at the base becomes blocked by exudate. In certain cases the meningococci disappear from the fluid obtained by lumbar puncture, but the symptoms continue. In these cases ventricular puncture shows a fluid still infected with meningococci. In other cases the symptoms indicate a continually increasing intracranial pressure, not relieved by lumbar puncture. Ventricular puncture shows a clear fluid, indicating that the foramina have been blocked, but that the infection has subsided. These cases correspond to ordinary internal hydrocephalus.

Since the introduction of the serum treatment, recovery with serious mental defect has not formed such a large percentage as formerly. During convalescence, changes in disposition may appear, and, while usually recovered from, they may be permanent. A formerly obedient, sweet-tempered child may become the exact opposite, and destructive and impossible to control. In other instances the mental condition may be profoundly impaired, and a previously capable person may be left an idiot or imbecile. These impairments are much more serious the younger the child, on account of the arrest of development that occurs, and this disease must be placed as one of the causes of feeble-mindedness in children.

The hemiplegias occurring in young children produce arrest of development of the paralyzed limbs, in addition to the impairment caused by the paralysis.

Blindness may result from atrophy following optic neuritis, atrophy as the result of hydrocephalus or the destruction of the occipital cortex and optic tracts from involvement in the exudate.

In all cases great care must be taken to keep the patient in bed. Attention must be given to keeping the patient absolutely clean, more particularly in the chronic cases, in which bedsores are liable to occur. A water bed, in prolonged cases, is of great assistance. The bladder must be watched, as frequently an incontinence may be due to overflow and the bladder full of urine.

The ordinary means of combatting temperature and restlessness by hydrotherapy, and, when necessary, by drugs, should not be neglected. When the hydrocephalus is not relieved by repeated lumbar puncture, ventricular puncture through a small trephine opening is indicated. In infants this may be done through the fontanelle, the track of the needle being through the frontal lobe.

Spinal cord paralyses are relatively infrequent, but occasionally occur. The most frequent symptom is incontinence of urine. This, fortunately, disappears in most instances with convalescence. More rarely, various forms of paraplegia appear, leading to more or less permanent impairment of the lower extremities. The usual signs of spinal cord paralyses are present; varying degrees of sensory impairment, with spastic paralysis, and more or less loss of control of the bladder and rectum.

The introduction of the serum treatment has changed the prognosis in this disease; most of the cases recover without any after-effects in a few days. The longer the disease lasts, the more danger of nervous after-results. The chronic cases have a poorer outlook, most of them terminating fatally in a few weeks or months.

The diagnosis ultimately depends on lumbar puncture and the microscopical examination of the cerebrospinal fluid obtained. It cannot be too strongly insisted that the identification of the organism be reasonably certain before the serum is administered.

The administration of the serum may be discontinued when the fluid from lumbar puncture is relatively free from meningococci, and those present are intracellular and the clinical symptoms indicate recovery.

The paralyses, when present, should be treated similarly to those resulting from other causes. Massage, electricity, passive movement and various orthopedic measures are all indicated.

Children with mental enfeeblement should be placed in institutions for the feeble-minded, where they can be properly educated. Adults may be cared for at home, or may require the protection of suitable institutions.

THE X-RAY TREATMENT OF MYOMA OF THE UTERUS AND OF BLEEDING AT THE MENOPAUSE.*

By ERNEST CHARLES SAMUEL, M. D., New Orleans.

The use of the X-ray in the treatment of diseases of the reproductive organs of women is a recent development in Röntgenology. The results claimed for the X-ray procedures have been carefully investigated by gynecologists. Dickinson,² of Brooklyn (in an article in *Surgery, Gynecology and Obstetrics* on "The X-Ray in Gynecology"), makes this tentative summary: "If these results [of the last three years] are borne out by further experience, then

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

it seems that, in a very considerable group of cases, for those who can afford the time and expense, and have access to the X-ray therapist (as distinguished from the diagnostician), resort to hysterectomy is no longer warrantable without trial of the ray. This group includes all the intractable menorrhagias of chronic metritis and all myomas requiring treatment except those infected, degenerating, submucous or polyp, and those suspected of malignancy. The older the patient, the better the response. All fibroids are said to shrink, all hemoglobin percentages to rise."

In the same article Dickinson reviews the literature of the use of the X-ray in gynecology, drawing largely on the book by Manfred Fraenkel, of Chalottenburg, "Die Röntgenstrahlen in der Gynekologie mit einem Ausblick auf ihren künftigen Wert für sociale und sexuelle Fragen" (Berlin, 1911). Evidently, the X-ray is one of the therapeutic agents that needs study as to its possible beneficial effect in diseased conditions of the female generative organs.

The speaker had the privilege last summer of witnessing the work of Albers Schœnberg at Hamburg, and of Bordier at Lyons. He has himself since then treated with the X-ray a few cases of myoma of the uterus, and of hemorrhage at the menopause, with varying success. He is pleased to have this opportunity of presenting the facts concerning these cases, together with some account of the experimentation of others in this field up to the present time. He makes no attempt to cover the entire range of gynecology, but considers only the two conditions, myoma of the uterus and bleeding at the menopause.

MYOMA OF THE UTERUS.—*History:* Deutsch has given as many as ninety treatments to a patient. Laquerrière has reported thirty successful cases at the menopause, and De Courmelles forty-five cases, with an average of thirty treatments to a case. The next work was Fraenkel's, from 1907 to 1909. In an article in the *Berliner klinische Wochenschrift*, in 1911, he claims that three-fourths of his cases of myoma were successful, as attested by the shrinkage of the tumor. Schœnberg was the first in Germany to treat uterine myoma with the X-ray, giving six to nine treatments of six minutes each, but his method of working has not been generally followed by others. Bordier, of Lyons, has worked out a technic that is considered safe to use, as it involves very little danger of a resulting reaction severe in character.

Indications for X-Ray Treatment: Now, as to the cases of

myoma that may be treated by the X-ray: Schindler attributes so much importance to the possibilities of the X-ray treatment for fibroma of the uterus that he says that it should be tried on every case before surgical measures are undertaken. Menge, in an exhaustive study of gynecological cases treated by the X-ray in the Heidelberg clinic, published in the *Monatsschrift für Geburtshilfe und Gynecologie* (XXXV, 3, 1912, 268) during 1912, includes ninety-four cases of myoma so treated. He insists on the importance of the direction of any X-ray treatment by a gynecologist, both because of the difficulty of making the differential diagnosis of pelvic tumors and of the cost of the X-ray therapy. He excludes from this treatment the following myomata: "Large, rapidly growing tumors; all submucous polypoid growths; adenomyomata; cases infected, and degenerating, or those suspected of malignancy; younger women (below 40) with free bleeding and rapid development, and younger individuals keenly desirous of children." He considers the X-ray indicated for "all elderly patients with tumors of whatever size, particularly those that are stationary, not bleeding, or causing kidney or heart block, or crowding the pelvis; those in women deeply anemic, diabetic, nephritic, bronchitic, arteriosclerotic, or with bad hearts or large thyroids." But he says also "Leave the smaller tumors, showing no symptoms, alone."

The age of the patient is an important factor in determining the prognosis of a case to be treated by the application of the X-ray. Some of the writers already quoted, as well as others, emphasize the greater probability of favorable results near the menopause. Relatively recent tumors yield more readily to treatment than those of long standing. The speaker believes that the X-ray treatment is useless in patients under forty, as the ovaries are very little influenced by the X-ray before that age is reached.

Technic: Dickinson,² in his article, gives a summarized technic that has yielded good results in gynecological cases. His summary is as follows:

"Current—Derived from an induction coil;

"Interrupter—Wehnelt, mercury turbine or mechanical;

"Milliampère reading—1.0 to 2.0, usually 1.0;

"Penetration—Wehnelt, 9 to 10; Walter, 6 to 7;

"Radiation—Measured by Keimböck, Holtzknecht or Bordier choradiometers;

"Filter—One thickness sole leather wet, or two layers sole leather dry, aluminum:

"Time of Treatment—Between menstrual periods if possible (except in the operative cases, where the treatment should be begun as soon after the operation as possible);

"Series of Treatments Required—Two to ten, usually four;

"Tubes—Heavy anode or water-cooled tubes, seasoned so as to stand heavy currents and yet maintain a high vacuum;

"Position of Patient—Usually lying on back;

"Compression blende and protection of other parts of the patient's body used."

Bordier published, in 1911, the results of his work on uterine fibromata. Holland has abstracted his technic in the *International Medical Annual* as follows:

"The technic is essential for success, and should be thoroughly mastered. The tube used is one with a water-cooled anticathode, giving exceedingly penetrating X-rays, Nos. 11 and 12 on Benoist's radiochromometer. Adequate filtration is of great importance, and he employs as filters sheets of aluminum of varying thickness, from 0.5 m. m. to 3.5 m. m. Each series of treatments consists of nine irradiations, as follows: **The first day** the two sides are treated in succession, using a filter 1 m. m. in thickness. One of the sensitized pastilles is attached to the skin to be irradiated, and a dose of 1.5 I to 2 I (Bordier) is given. **Second day**, the patient rests. **Third day**, median irradiation, with a filter 2.5 m. m. thick, and with a similar measured dose. **Fourth day**, rest. **Fifth day**, both sides irradiated through a filter 1.5 m. m. thick (same dose). **Sixth day**, rest. **Seventh day**, median irradiation, with a filter 3 m. m. thick. **Eighth day**, rest. **Ninth day**, irradiation of the two sides with a filter 2 m. m. thick. **Tenth day**, rest. **Eleventh day**, a final median irradiation with a filter 3.8 m. m. thick. By this series of irradiations, which represent six days of treatment, the fibroma and ovaries are submitted to a crossed-fire of X-rays. After the series the patient rests for three weeks, and then a second similar series is given; another rest of three weeks, and then a third series follows. Sometimes this is the last, but in general a fourth, or even a fifth, series is necessary."¹

The speaker employs, in the main, the technic of Bordier; he does not, however, use a water-cooled tube, but a heavy anode tube of high vacuum.

Symptoms After Treatment: The application of the X-ray produces a variety of symptoms. There is sometimes increased bleeding, although one operator reports, "No case of increased bleeding." Some deaths have been attributed by certain writers to this increased bleeding, but other writers deny that death in these cases was due to bleeding caused by the X-ray treatment. No one has seen growth stimulated. Exhaustion, headache, nausea and vertigo have been reported as temporary symptoms. Schmidt, of Berlin, has noted in some cases after irradiation a feeling of malaise, vomiting and pain in the joints. One observer says that he has seen no skin troubles. Schindler says that the treatment may produce thyroid enlarge-

ment or may reduce an over-large thyroid. Artificial menopause is produced, but Fraenkel affirms instances of pregnancy subsequent to this treatment. Menge notes temporary irritation of the bladder and the bowel.

Results: The object of the X-ray therapy is, of course, the removal of the tumor, thus obviating the necessity of surgical interference. Fraenkel says that the shrinkage of the myoma is general. Gauss and Krœnig agree with this, and report two tumors as shrinking quickly. Schindler-Gœrlitz reports a fibroid reduced in a few months' time to one-third its original size, another large fibroid which disappeared entirely, and three other cases where the shrinkage amounted to one-half. Faber, of Jena, saw shrinkage in five cases. Bordier claims lessened size evident after two or three series of treatments. Kelen reports shrinkage in every case, but taking place more quickly at the menopause.

A case may be considered cured when the myoma has decreased in size, menstruation has stopped, and the symptoms complained of before the X-ray treatment have disappeared. If, after continuing treatment for three months, no positive results can be observed, it is probably useless to protract it longer. Bordier reports that bleeding and pain stopped after two or three series of treatments, and says that in every case (eighteen in all) menorrhagia was checked and menstruation ceased and did not reappear. Menge says that most of the myomata (ninety-four cases) shrank, and the cases showed improvement in weight and hemoglobin. Schœnberg gives the percentage of cures in his cases as 78 per cent. The speaker's cases are limited in number, and have not shown so high a percentage. Cases are on record in which no recurrence of the tumor has been seen after the lapse of eight years and a half.

The decrease in the size of the myoma is usually very slow. The first effect the patient notices is that the pressure on the bladder and the rectum is less, then she may feel that the growth is getting smaller. A myoma about the size of a young infant's head, after sixty-eight minutes of treatment distributed over four to six weeks, should show a decrease of about 25 per cent., with no reaction on the skin, except a dark-brown pigmentation, which would not in any way interfere with surgical procedures in case a subsequent operation was necessary. The vaginal discharge grows less and then stops. The main effect is probably on the ovaries, so that the

tumor itself shrinks as a consequence of the atrophy of the ovaries. After cure, the patients have the usual symptoms accompanying a natural menopause.

Case Reports.—Miss B., referred by Dr. Kohlmann, age 42. Previous good health; myoma about the size of a fetal head at term, filling up Douglas' cul-du-sac; rectal symptoms, constipation; irradiations, twenty-four, distributed over nine months. **Results:** No menstruation after third treatment; was free from previous symptoms for four months from time that the X-ray treatment started; five months after the beginning of treatment, menstruation returned at the expected date; was normal in amount and duration; no return of flow since. After one year from the beginning of treatment the myoma is about the size of a small orange.

Miss G., referred by Dr. Kohlmann, age 40. Previous good health; small subperitoneal fibroid; periods lasted from three to twelve days, with great loss of blood and passing of large clots; curretment three times, with only temporary relief; irradiations, thirteen, distributed over a period of three months. **Results:** At the first period after treatment was begun the flow was less; lasted five days; no return since that time; now five months since treatment was commenced.

Mrs. M., referred by Dr. Shlenker, age 41. Previous good health; five children; small fibroid; excessive bleeding at periods, lasting about ten days; irradiations, twelve, distributed over nearly four months. **Results:** Regular menstruation, lasting about four days; about normal; now four months since treatment ceased.

BLEEDING AT THE MENOPAUSE.—*History:* The X-ray treatment has also been used in cases of bleeding at the menopause, where no growth was found. The history of it is practically the same as that already given under the myoma of the uterus.

Indications for X-Ray Treatment: Saretzky, in 1909, recommended the X-ray treatment for "affections of the genital organs in which suspension of the ovarian function appears to be desirable, as (a) benign uterine tumors, (b) menorrhagia and metrorrhagia, and chronic metritis near the climacteric."² Fraenkel is also quoted as thinking that "the ovaries of older women are more easily affected than those of younger women, as they are ready to atrophy."

Technic: The technic followed is the same as that described for treatment of myoma. In some cases of excessive loss of blood during long and irregular periods the X-ray treatment is continued during the hemorrhage. With older women, the dosage is smaller than with young women.

Symptoms After Treatment: The symptoms subsequent to the treatment of this condition of hemorrhage at the menopause are in every respect similar to those already recorded as occurring when the X-ray is used on fibroid growths.

RESULTS.—Fraenkel cites a case of menorrhagia in a young woman which was not checked by two curettings, but yielded to

five irradiations of six minutes each. The patient had two children by a syphilitic husband; after three months she had short periods, then an abortion. Saretzky stated the case of one of his patients: Age 34, oöphoritis of both sides, oöphorectomy proposed; constant pain; menstruation, eight days; profuse; X-ray of each ovary separately in sessions of five to ten minutes; after nine sessions, distributed over five months, menstruation ceased, and neither ovary could be felt. These cases of bleeding at the menopause may be considered cured when the hemorrhage has decreased materially, or has ceased entirely.

Case Reports.—Mrs. B., referred by Dr. Shlenker, age 38. Previous good health; two children; no growth diagnosed; excessive bleeding at periods, lasting eight days; irradiations, fourteen in all. **Results:** Negative; hemorrhage as great as before X-ray treatment; operation advised and refused.

Miss D., referred by Dr. Kohlmann, age 41. Previous good health; no growth diagnosed; excessive bleeding at periods, lasting about six days; enlarged uterus; curetted by Dr. Kohlmann, and X-ray treatment prescribed; irradiations, nine in all, distributed over a period of three months; much bleeding during irradiations. **Results:** Negative; at time of first period after X-ray treatment was begun no menstruation; at second period, excessive hemorrhage returned; operation advised; abdominal hysterectomy performed by Dr. Kohlmann; no growth or other abnormal condition was found in the uterus.

Miss L., referred by Dr. Kohlmann, age 40. Previous good health; no children; no growth diagnosed; enlarged uterus; menstruation about three weeks of each four, the amount per day being ordinarily a normal quantity for one day, but some days hemorrhagic; patient very anemic; curettment by Dr. Kohlmann; irradiations, eighteen, distributed over twelve weeks. **Results:** Menstruated once after X-ray treatment was started; ten months after beginning of X-ray treatment no return of flow.

Miss M., referred by Dr. Kohlmann, age 39. Previous good health; no growth diagnosed; excessive bleeding at periods, lasting about ten days; irradiations to the present time, thirty-five. **Results:** After persistent treatment, flow has been less; last period had duration of six days, and loss of blood was very much less than before the first application of the X-ray; still under treatment.

- REFERENCES.**—1. Bordier. Uterine Fibromata. *Arch. Roentgen Ray*, August, 1911; Abstract in *International Medical Annual*, Vol. 30, 1912, pp. 76-77.
2. Dickinson, Robert L. The X-Ray in Gynecology. *Surgery, Gynecology and Obstetrics*, Vol. 15, 1912, pp. 602-605.

SOME EAR AND THROAT COMPLICATION OF THE LEUKEMIA AND PSEUDO-LEUKEMIA.*

By I. ERWIN, M. D., New Orleans.

Even in the prebacterial age, leukemia and pseudo-leukemia have been regarded as probably due to some infection, and it is the opinion to-day, of Albrecht, Türk and many others, that these processes often are a result of some infection, merge one into the other, when it is often hard to say, histologically, whether one is dealing with a leukemia or lymphosarcomatosis. The tubercular granulomata of Kundrot and granulomata of unknown origin seem to be related to the above processes. However, there is a proliferation of the lymphoid tissue of the whole or part of the body, and with these deposits around the mouth and respiratory tract I wish to deal at present.

The whole body is composed by a net of lymphatic tissue winding through all parts, but usually present in small and is here and there collected into large masses, from which normal requirements of lymphocytes are supplied by proliferation. In the mouth is found this lymphoid tissue, in the gums, cheek, tonsils, base of the tongue, trachea, and (also intestines) the proliferation and breaking down of these, though by no means present in all cases of leukemia, can, when present, hardly be confused with any other disease. The lymphoid masses vary much in location. Epulis may be differentiated by the induration of the edges of ulcer.

All of you who have had occasion to observe cases of leukemia have noted the fact that often the blood picture may show for a year or more before termination a normal or diminished leucocyte count, but there is usually a marked reduced red count and a predominance of lymphocytes, which also occurs in lymphosarcomatosis, where it is usual to have a normal leucocyte count. Also in these conditions there may not be a marked enlargement of the lymphatics, liver and spleen, the leukemic mass being only in bone-marrow, lymphatics around aorta, or in spleen. Therefore, these ulcerations, membranes and hemorrhages, when present, especially the ulcerations, are of value in diagnosis.

The first lesions consist of a moderately hard swelling caused by the lymphoid proliferation, under the mucous membrane, especially at the base of the lower incisors. The gums may be pushed up to the edge of the teeth; in fact, the teeth may be completely hidden.

* Read before the Orleans Parish Medical Society, October 27, 1913.

In the larynx and trachea the infiltration is in the mucosa, a predilection for around the excretory ducts. (May have same in intestines; ulcerations and hemorrhages, similar to typhoid fever, may result.)

In the mouth these areas are subject to traumatism, and ulcerations follow. These ulcerations occur around the teeth, the cheek, soft palate, uvula, in the larynx; sinus pyriformis. These ulcers, described first by Askanazy, are uniformly packed from the epithelium down to the periosteum, with large mononuclear round cells, the vessels being filled with lymphocytes. The epithelium, thin and desquamated, consists of cells loosely attached to one another, and infiltrated with polynuclear pus cells, and eventually with mast cells. In places the tissue is necrosed through the whole extent; these spots frequently remain covered by epithelium and papillæ, and lie sharply defined in the midst of the lymphatic collection. The necrotic portions show a diffuse staining, and are separated by a zone of nuclear debris; the margins are filled with bacteria. Also is a condition observed which is usually terminal, and is characterized by a general croupous membrane, associated with loss of epithelium, and usually extends over the tonsils, pharynx, larynx, and finally into the bronchi.

In chloroma, which is a process similar to leukemia, there is, in addition to the orbital infiltration, an infiltration of salivary gland. Dock reported a case of infiltration in the temporal region, with resulting deafness. The well-known hemorrhagic tendency in leukemia may manifest itself in a profuse hemorrhage of nose, mucous membrane, hemorrhages into the skin itself. Repeated nose-bleeding is suspicious of leukemia, at any rate.

Ear complications occur often as a result of this, and may occur in an ear that was previously affected, and more often in a previously normal ear, causing sudden loss of hearing, with signs of a labyrinthitis, due to hemorrhage into the endo-lymph, which often becomes organized, causing lasting deafness, or may have repeated slight hemorrhages, causing Ménière symptoms, although similar symptoms may be due to leukemic deposit around nerve sheaths.

Saw a case which was admitted to the Vienna Ear Clinic, October, 1913.—Patient, B. D. Complained of noises in right ear, followed by nausea and vomiting and loss of function of ear, coming on suddenly. The day before, drum membrane was normal; was a complete destruction of function of right ear. Previous his-

tory: Had had the ordinary sicknesses of childhood; only gave history of nose bleeding occasionally. Showed, on examination, enlarged axillary glands, liver and spleen enlarged. Leucocyte count of 20,000, and 60 per cent mononuclear leucocyte, of a large variety. Red cells, 3,000,000. Diagnosis of leukemia was made. The ear complications are usually internal ear conditions, but may have changes in mucous membranes, consisting of extravasations of lymphocytes, associated with hemorrhages.

One evening about five o'clock a woman was admitted to Chiari Clinic, in which it was my duty to take histories, who had a fever of 104°, and was suffering much from dyspnea. On looking into the throat, the tonsils, base of tongue and fauces were covered with a grayish membrane, which was organized, and, on removal, left a raw surface, and, looking into the larynx, there was a similar membrane. There was a hemorrhagic eruption over the chest. A consultation was held by Dr. Kophles, with two assistants from the Von Noorden Clinic, and the diagnosis was made of probable leukemia, although the leucocyte count was 6,000. There was 70 per cent. small mononuclear lymphocytes, 2,000 reds, slight enlargement of glands, liver and spleen slightly enlarged. Autopsy by Störck showed lymphatic leukemia. Process located in spleen, bone-marrow and retro-peritoneal glands.

Saw a case, by courtesy of Docent Newman, of Franz Joseph Hospital, of Vienna. Name, St. F., five years old; born normally. In third year had measles and scarlet fever; fourth year, whooping cough. The evening before admission the mother, in undressing the child, noticed a hemorrhagic spot in the inner side of the left arm. During the night very severe, continuous nose-bleeding. The mother also noticed small bleeding under the skin over the whole body, which became very soon a bluish-black color. Since the nose-bleeding became stronger, the mother came into the hospital. Showed on examination child of good size for age; well nourished; showed severe anemia of skin and mucous membranes; temperature, 96°; no evidence of rickets; many hemorrhages size of pinhead to size of pea, colored a blue-black; a place as large as a half-dollar in inner side of left upper arm; tongue moist, otherwise pale; tonsils enlarged; the lymphatic slightly enlarged and not painful; pain on percussion over the long bones; eyes and ears normal; lungs negative; no dilatation of heart; liver not enlarged; spleen not palpable; no disturbances of nervous system; uncontrollable nose-bleeding;

total leucocyte count not made. Differential count showed 63.4 per cent neutrophile myelocytes; 3.8 promyelocytes (Poppenheim); 7.5 metamyelocytes (Poppenheim); 5.7 myeloclasts (Nägeli); 4 polymorphonuclear-neutrophilic myelocytes; 13.4 small lymphocytes. Second day, child died. Autopsy findings: Universal, status lymphaticus; very large thymus gland; spleen not large, but all showing a myelogenous leukemia process.

A few days after seeing this case I saw a case of ulceration of tonsil, which proved leukemic, so I went in search of leukemia. Saw several pathological specimens in Pathological Institute of the University of Vienna, in which the membranes extended into the bronchi. For a year previous to death there was a history of normal leucocyte count, and absence of other evidences of leukemia.

Had the good fortune of seeing other cases, one in which the diphtheria bacillus was found in culture, but autopsy showed leukemia. From acquaintances doing larynx and throat work, I heard of several more cases of membranous form, and was impressed with the fact that all of these cases showed invariably a reduced leucocyte count.

Had occasion to observe a case of noma, with general glandular enlargement, which was a myelogenous leukemia. The ulcerative hemorrhagic membranous forms were seen. The ulcerative form was seen in acute and chronic leukemia; hemorrhagic in another, membranous form was seen as terminal affection of chronic leukemia.

Having failed to find any references to these conditions in any of our textbooks on throat and nose, and prior to seeing these cases had myself not known of these symptoms, I have taken the liberty of describing these cases, as possibly being of some interest to you.

The treatment of leukemia and lymphosarcomatosis is, as yet, not very satisfactory. One may try atoxyl or benzol. Radium is used with more or less success, and many other remedies have been used, showing varied success, but the disease itself may, when chronic, show periods of remission for a year or more, and then end rather acutely, as in above described septicemia. In acute leukemia there is nothing of value.

The autopsies and diagnosis, post-mortem made by Storck, Weichselbaum, of the Pathological Institute of the University of Vienna, and Prof. Albrecht, of the Vienna Polyclinic.

The following points in the blood examination are worth men-

tioning: In leukemia, while there may not be an increase of leucocytes, there is a preponderance of lymphocytes—50 to 90 per cent., and there is always in leukemia a reduced total red count; usually there is a marked increased leucocyte count, and at times a decreased total red cell count. In lymphosarcoma there is not usually an increased leucocyte count, but a preponderance of lymphocytes; there is no diminution of red blood cells. In the tubercular granulomata the blood picture is simply that of anemia.

REFERENCES.—Abstraction from *Beitrage zur Kenntnis der primar erkrankungen der hematopoetischen organe*, by Dr. E. Zeigler, L. Aschoff, F. Marchaud. Article by Muellern and Dr. Grossman. Archives of Pathological Institute of Vienna.

STAB WOUND OF HEART INJURING LEFT VENTRICLE. EXHIBITION OF SPECIMEN.*

By L. B. CRAWFORD, M. D., New Orleans.

Rodney Holmes, colored, age 21, brought to the hospital in ambulance, Monday night at 8:30. He had been stabbed just on line with the left nipple and two inches below it. Not more than fifteen minutes had elapsed since the wound had been inflicted. The knife had completely severed the seventh rib, and had also cut the inter-costal muscles between the sixth and seventh ribs for a distance of one and one-half inches. The patient was as near white as a negro can get from loss of blood; no pulse could be felt at wrist, and he was breathing with great difficulty.

When the temporary dressing of gauze was removed the base of the left lung could be seen protruding on each inspiration. On each inspiration blood would flow from the wound, showing that the thorax cavity was well filled with blood. Not waiting to move patient from the stretcher, I injected one-half of one per cent novocain, in order to enlarge the opening both inward and outward. At the same time, intravenous infusion was started, ten drops of adrenalin chlorid being added to the saline. Finding that I had not enough room to work in, I resected an inch and a half of the seventh rib towards the inner line. This I was easily able to do with a heavy scalpel. I then grasped the base of the lung, and immediately discovered a rent in it of at least three inches. I found this bleeding freely from three spurters. Cathing these points with artery forceps, I ligated them, and brought the rent together with catgut sutures. I then explored the cavity with two fingers, and at first could detect no opening in the pericardium. I

* Read before the Orleans Parish Medical Society, November 10, 1913.

evidently went below the opening. My conclusions then were that I had evidently stopped the hemorrhage, and that this, with the existing pneumothorax, was causing the patient's depression.

I was about to stop when I noticed a piece of tissue resembling the pericardium protruding in the wound. I grasped this with forceps, and was easily able to see the cut in the pericardium. I then resected two inches more of the seventh rib, and extended my incision more to the middle line, just up to the line of the internal mammary artery. I then grasped the cut edges of the pericardium, wound and then enlarged it a little toward the median line. This enabled me to see a fairly well-organized clot in the pericardial cavity. Upon sponging this out I discovered what bleeding really is. The wound in the heart could be easily seen at apex, extending into the left ventricle and running behind the apex, and, whenever the heart muscle would contract, a stream of blood would fairly shoot out, filling the pericardium cavity.

It still remains a mystery to me how he was able to live this long. My own conclusion is that the clot I had dislodged was acting as a plug, and for that reason he was not bleeding so freely. It was a question of a few minutes to grasp the cut edges of the heart wound, and introduced seven silk sutures. These I placed as deep in the muscular structure as I could. The victim, up to that time, had been conscious. The infusion had bolstered him up, but the active bleeding at time of the suturing was too much.

I then put a large pack in the pericardial cavity and stopped all manipulation. He breathed for about five minutes, his heart still beating. Another pint of saline was introduced in vent, and I injected fifteen drops of adrenalin directly into heart muscle.

Artificial respiration was kept up, but to no avail. It is a noteworthy fact that his heart beat faintly for ten minutes longer.

THE ABUSE OF THE HIGH PROTEID DIET IN THE TREATMENT OF TUBERCULOSIS.*

By W. A. LOVE, M. D., New Orleans.

In presenting this paper it is not the purpose of the writer to lay down any set of rules for the treatment of tuberculosis, nor is it his aim to unduly criticize a method of dietetic treatment that dates almost from the time of Hippocrates. The paper does not defend the "vegetarian" idea, nor does it condemn the use of proteid

* Read before the Orleans Parish Medical Society, November 10, 1913.

material as a food-stuff. It merely tries to state a few ideas which may be of value in the handling, in general practice, of the individual case of tuberculosis.

Let us for a moment review the general concept of diet in tuberculosis. Hyperalimentation is the generally accepted rule, and we have all, at some time, been offenders, in that we have tried to formulate in our own minds some broad general rules of diet to cover all cases of tuberculosis. The results have been good in many cases; but have we not found some individuals who have not improved, and in whom the lack of improvement was not easily to be blamed upon an increase in severity of the tubercular process? We have been too prone to place all of the blame for lack of improvement upon the tubercular process, and have not realized that at times we have been, by the application of our broad dietetic rules, really largely to blame.

The best results in tuberculosis are undoubtedly obtained where the physician directs the diet and hygiene of the patient with common sense, and carefully considers not only the disease under treatment, but also the condition of other organs than those involved in the more apparent pathology.

Most frequently this failure on the part of the physician lies in the lack of a careful investigation of the power of the individual patient to digest his intake and to eliminate upon schedule time his waste materials. Underfeeding is always a mistake in tuberculosis, but overfeeding is, at best, a faulty axiom, if the above-mentioned points are not considered.

Most of our texts upon treatment advocate the high proteid diet without giving us any idea as to when it may become an abuse. One author in particular even goes so far as to say: "Meat is of equal importance [with milk and eggs], and should at first be eaten at three meals a day"; and with the usual remarks upon the value of milk and eggs, he dismisses the consideration of proteids in the tubercular diet.

The idea that an excess of protein in tuberculosis is an absolutely necessary aid in the reparative process is not founded upon a firm scientific background. Experimental investigation has shown that the normal man requires far less than the 118 grams set as a standard by Voit, and that in sedentary occupations the nitrogen equilibrium of the body can be readily maintained with a daily protein intake of from 35 to 45 grams. There is maintained in the

blood and in the tissues a normal protein or nitrogen standard, and the body has little storage capacity for nitrogen.

The rôle of the liver in the process of proteid absorption is in itself an argument in favor of low proteid necessity. Proteids are broken up by the gastric juice into proteoses and peptones, which substances, due to the action of trypsin in the pancreatic juice, subsequently become in turn polypeptides and amino acids, such as leucine, glycine, arginine, alanine, tyrosin, tryptophan, etc. In these forms the amino acid end products of proteid digestion are absorbed and reach the liver, where they are utilized in two ways: A small portion is used by the cells to replace normal katabolic waste, while the larger portion is deaminised, and its nitrogen element is converted into urea and discharged by the kidneys.

The utilization by the body of an excessive intake of protein necessitates a temporary storage of proteids by the tissues, but at the same time brings about an excessive wear and tear upon the organs of elimination, which more than counterbalances the transient good of the protein storage in the cells. Such protein as is stored in the tissues is more easily retained and more permanently, if the amount is small and accompanied by carbohydrate liberality.

After the full body growth is attained, at about the twenty-fourth year, "fleshing" is difficult, while "fattening" becomes the easier. Flesh-building without exercise is out of the question, and we have all come to advocate rest in tuberculosis. However, rest tends to favor the increase in the deposition of fat and glycogen, and this storage supplies sufficient fuel to spare the protein in the heat and energy-producing katabolism.

As this paper is not intended as a defense of the low nitrogen standard, let us go on to the more important consideration of the subject of elimination. It is of great importance in tuberculosis, as in all cachectic diseases, to consider the individual patient's power to eliminate his waste products of metabolism. Lyle gives us a schedule in the passage of food through the alimentary tract of the normal individual of forty to forty-eight hours, viz: Mouth to cecum, four and one-half hours; cecum to pelvic colon, twenty-two hours. In short, under normal circumstances, the stool of today is derived chiefly from the ingesta of the day before yesterday remaining in the pelvic colon twenty hours.

Bearing in mind the schedule, we must not forget to consider

those conditions of abnormality in the fecal eliminating apparatus which may have antedated the disease in the individual or which may have come on as an indirect result of the tuberculosis. In the examination of our individual case we should note carefully any departure from the normal schedule, and consider such an abnormality as an important part of what we are called upon to treat. Antedating the onset of the tubercular infection, there may have been obstruction in the fecal flow ranging in severity from simple habit constipation to the more serious condition of enteroptosis. This faulty elimination may have been, in a way, an etiological factor in the production of the disease by weakening the resistance of the patient; however, this has not been proven.

Arising secondarily to the onset of tuberculosis, and particularly so in those cases which are confined to bed under rest treatment, we find the usual constipation which exists in one who has changed from an active to a sedentary life. We find in those cases that come to us after the onset of cachexia, constipation and obstipation existing, due partly to the inefficiency of the musculature of the intestinal walls and partly to atrophic changes in the strength of the voluntary muscles involved in the defecatory act.

Constipation and obstipation have been reviewed, not for their own consideration essentially, but because of the fact that they produce what is commonly known as intestinal stasis, which means, in the majority of cases, intestinal toxemia, or toxemia of intestinal origin, as an ultimate result. There exist in the large intestine putrefactive bacteria, principally *B. coli communis*, and also putrefactive enzymes. To what extent putrefaction is due to bacteria and to what extent to enzymes is not known.

The experiments of Pasteur, Duclaux, Nuttall and Thierfelder have given contradictory results as to whether or no putrefactive bacteria are necessary to normal life. The later views of Metchnikoff are well known. He claims that indol, skatol, phenol, cresol and urobilin (the bacterial derivatives of feces) are pathological and harmful, and are responsible for a great number of the organic diseases peculiar to mankind. Whether we accept Metchnikoff's view or not, it is well to bear in mind that the contents of the large intestine are exposed to putrefactive bacterial action for forty or more hours.

Having traced proteid metabolism to its end product of amino-acid formation, we may make the observation that the amino-acids

in themselves seem productive of no harm. Metchnikoff has paid scant attention to the putrefaction of amino-acids, but this matter has been one of careful study for such physiological chemists and pharmacologists as Dale, Taylor, Kossel, Laidlaw and others. Dale and Laidlaw, in 1911, showed that the putrefaction of the amino-acid *lysine* produced the amine *cadaverin*, a substance which, upon introduction into the circulation, brought about a lowering of blood-pressure. *Putrescin*, which has a similar action as a depressor, has been shown by Taylor to be a putrefactive derivative of *ornithin*, which is in itself a cleavage product of an original amino-acid *arginin*. Dale has also shown that *parahydroxyphenyl-ethyl-amin*, a derivative by putrefaction of *tyrosin* and *iso-amylamin*, produced in like manner from *leucin*, is capable of producing excessive elevations in blood pressure. *Betaamidazolylethylamin*, the putrefactive derivative of *histidin*, has been shown by Barger and Dale to produce a contraction of the bronchioles, and later research has shown it to be an active toxin in the production of asthma.

Such toxins are merely examples of the type of poisons produced by the action of putrefactive bacteria upon the end products of proteid metabolism, and are instanced only as an argument for the necessity of considering what may be taking place in the cesspool of a colon in which stasis exists. To the mind of the writer, the lesser toxic manifestations, such as headache, nausea, gastric hyperacidity, lumbago and the old-fashioned "biliousness," can be often largely blamed upon the toxic absorption from the putrefying mass in the large intestine. This seems rather a broad statement, but has proven its truth clinically. When we see these discomforts disappear under treatment directed at promoting elimination, at the reduction of the putrefiable mass in the colon and at the antiseptics of that region of the alimentary canal, then we have to admit the undoubted toxic origin of our symptoms.

When a tubercular patient is found to be absorbing an intestinal toxin and adding this poison to the tubercular toxin, it is the foremost duty of the physician to at least start the patient upon the right road by ridding him of a toxic element which is so easily removable.

Using the indican test as an index of what is going on in the large bowel in the way of toxic absorption we should work to the end of the removal of the cause, which may only be accomplished by promoting elimination, removing from the diet those substances

which putrefy easily, and by practicing, in one of its several ways, intestinal antiseptics.

To cite a few cases briefly that may serve to illustrate what can be done when the proper dietary measures are pursued, and cases that show where and why the low protein standard is often indicated:

Case I. W. B., age 21, examined December, 1912; laborer by occupation. Complains of pain in the back and soreness in right hip, and also of nausea upon arising in the morning and hyperacidity after meals. Slight cough. Chest examination reveals dullness and moist rales over upper left lobe. Sputum shows tubercle bacilli and urine shows heavy indican reaction. Weight, 119 pounds. Milk of magnesia given for hyperacidity, and bowels thoroughly cleansed. Patient is placed upon low proteid diet. Patient instructed as to bowel regulation and allowed to leave town for more pleasant surroundings. Patient was kept upon low proteid diet for subsequent six months, and reported a net gain of fifteen pounds. Jumping diet seven months after institution of treatment, patient lost ten of his gained pounds, and was instructed to return to the city for examination. At this time (August, 1913) he was found to be profoundly toxic and showed no increase of tubercular process. After purgation, was placed again upon his original diet. In the subsequent week he gained six pounds, and writes me, on November 1 last, that he has maintained the diet, feels fine and weighs 130 pounds, a net gain of eleven pounds.

Case II. M. J. E., age 20, mechanic by occupation. Shows cavity right upper lobe, with consolidation left upper apex. His sputum shows abundance of tubercle bacilli and he suffers with constipation as a result of change from an active life to rest treatment. Voice almost gone from laryngeal tubercular involvement. Weight, January 5, 1913, 103 pounds, and patient suffering from non-pleuritic thoracic pains, extreme nervousness and headaches. Indican findings, excessively heavy, and patient taking a forced feeding high proteid diet, which has been maintained for the past year, with an incidental loss of weight of some thirty pounds. The usual treatment was outlined and the patient has been under careful observation. He was comfortable after ten days of treatment, and weighs to-day 113 pounds and is in all ways improved, in spite of the extensive involvement; a net gain of ten pounds.

Cases III and IV show, respectively, chronic intestinal stasis and alcoholic cirrhosis of the liver, and have, under low proteid treatment, shown like improvement.

It has been the privilege of the writer to observe improvement, since becoming interested in the subject of low proteid feeding in intestinally toxic tubercular patients, in some ten or fifteen additional cases that might be cited if time permitted.

CONCLUSIONS.—Each case of tuberculosis should be carefully investigated as to the digestive and eliminating ability and as to the degree of toxemia of intestinal origin that exists.

When the patient is doing nicely upon a mixed diet, is digesting it and eliminating waste material without the absorption of the putrefactive toxins, no change is indicated.

If toxemia exists, every effort should be made to remove the

cause, which can be best accomplished by limiting the putrefiable proteids (especially those of animal origin); by promoting elimination from the colon, and by instituting intestinal antisepsis by means of the various therapeutic measures that have proven their efficiency.

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THE X-RAY DIAGNOSIS OF GASTRIC ULCER.*

By AMÉDÉE GRANGER, M. D., New Orleans.

Medical and surgical opinions have been influenced by the great progress made with radiology in the last five years, so that to-day a serious operation is hardly considered justified until an X-ray examination has been made. This method does not displace the older methods of physical and chemical diagnosis, but amplifies the knowledge they furnish. In fact the best results can only be expected from the Roentgen method when the patient referred for examination has already been thoroughly examined by the older methods, when the findings of the latter will be confirmed, or rendered more accurate and precise, sometimes some doubt cleared, or even some error corrected. A large number of physicians are deficient in their knowledge of the possibilities and limitations of the X-rays. Some underestimate the value of the Roentgen methods, others, forgetting that it is only one of our methods of diagnosis, expect too much from it. At this juncture it will not be amiss to recall the law governing the penetration of the X-ray, viz: that substances are penetrated in direct proportion to their atomic weights. Hence human tissues will arrest the passage of the rays and cast shadows on a fluorescent screen or a photographic plate in proportion to their thickness and density. The greater the difference between the densities of any two tissues the more distinctly are they differentiated. For example: the blood-filled heart muscle and the air-filled lungs in the normal thorax. In the abdomen not so, the hollow viscera are not distinguishable from each other.

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The stomach becomes visible only after inflation with air or some gas, which renders it more permeable to the rays or after the ingestion of an opaque meal, when it becomes less permeable to the rays.

The latter procedure is the one employed. By means of this method the anatomy, physiology and pathology of the living stomach have been studied. This study has resulted in a new anatomy, as it was found that the living stomach was quite different from the stomach as seen in the dissection rooms and in the operating rooms with the patient under deep anesthesia. The stomach is much lower and more vertical than was supposed. Its walls are collapsed when empty, and it is never larger than its contents. No organ in the body is subject to such a variety of forms as the stomach and such a thing as a single normal stomach shadow does not exist. The best classification of normal stomach shadows is that of Schessinger as follows: The hypertonic, orthotonic, hypotonic and atonic. This classification is based upon the tone of the stomach. By tonus is meant the quality of contractility or resilience of living muscular fiber under normal conditions. If it is powerful the stomach moulds the ingesta; if absent, condition of atony, the food gives form to the stomach. It was further found that the type of stomach fitted the individual and under normal conditions this could be confidently looked for. For example, the hypertonic is seen in sthenic, robust individuals, with high, broad thorax; the atonic in the asthenic individual. Whenever the type of stomach seen does not fit the individual, some pathological condition of the stomach can be suspected.

Briefly, the technic of the examination consists in observing the patient with the fluoroscope during the ingestion of some opaque mixture, and following this by making two or more skiagraphs. The number of these which will be necessary will depend largely upon the fluoroscopic findings.

During the fluoroscopic examination must be noted carefully:

1. The manner in which the stomach fills up.
2. Its tone.
3. Its size and position.
4. The frequency and amplitude of the peristaltic waves.
5. The presence and permanence of any constricted areas.
6. The presence of any painful areas and their relations to the stomach shadow.

The pyloric end of the stomach and the duodenum are carefully studied and the evacuation of the stomach is watched. The position of the X-ray tube is

changed in order that the rays will pass through the stomach from different angles, and when absolutely necessary, palpation with the gloved hand is made. The effects of respiratory movements and of forced movements of the diaphragm on the stomach shadow are also noted. The emptying time of the stomach is of great importance, as also the study of the position and shape of the stomach residue, if any, after six hours. The accuracy of the diagnosis will depend upon the extent and the situation of the pathological process. Perforative ulcers of the callous type can be detected in nearly all cases; next come the penetrating ulcer involving the muscular coat. The diffuse ulcer of the florid types are hard to recognize and the simpler ulcer involving only the mucosa cannot be diagnosed positively.

Ulcers of the pars medi or pars cardia give much more positive Röntgen evidences than do those of the pars pylorica.

The only positive Röntgen evidences of ulcer are the presence of craters or diverticula, and the hour glass contractions. These indicate respectively the existence of a perforating ulcer, and the scar and retraction due to a perforating or a penetrating ulcer. In addition to the above, one or more of the following Röntgen signs of ulcer may be present:

1. Persistence of the bismuth shadow at a given point after the rest of the stomach is empty.

2. A constant and marked indentation at a given point of the greater curvature of the stomach. This is caused by a localized spasm of the circular fibers, caused by the presence of an ulcer on a point of the lesser curvature lying opposite.

3. Hemispherical collection of gas above the extragasric bismuth shadow.

4. The displacement to the left of the pyloric end of the stomach, due to a shortening of the length of the lesser curvature caused by contraction of the scar tissue of a callous ulcer, whose favorite site is on the lesser curvature.

5. A retardation of motility so that six hours after the ingestion of the bismuth meal a large amount still remains in the stomach.

6. Antiperistalsis rarely seen and only when the ulcer is at or near the pylorus, or when there is pyloric stenosis due to the scar of an ulcer.

7. The presence of an acutely tender spot corresponding to

some point of the stomach outline. This indicates the presence of perigastric peritonitis, the result of ulcer, and is invariably associated with the presence of perigastric adhesions.

Exclusive of the two positive signs of ulcer, the presumption of the presence of ulcer will be in direct ratio to the presence and persistence of one or more of the signs just enumerated on repeated examinations. Several examinations may be required to differentiate from a malignant hour-glass contraction, or an organic glass contraction from a spasmodic or an intermittent hour-glass contraction.

Except in the case of perforating ulcer there are no positive X-ray evidences of ulcer in the pars pylorica. But a careful study of the evacuation, the radiologic picture of the pyloric and antrum and the pylorus and of the residue after six hours will enable a careful observer to make the diagnosis in a fairly large proportion of the cases examined. Here must differentiate from simple stenosis due to fibrous bands between the mucosa and the serous coats, duodenal ulcer, malignant infiltration and pylorospasm due to extra gastric causes. The differential diagnosis between these conditions is in a great measure possible by the Roentgen method.

Before closing it is interesting to mention one case with a typical clinical history and picture of gastric ulcer repeatedly examined by the Roentgen method with negative results, and was operated on and no ulcer was found after a careful search by experienced and competent surgeons.

Orleans Parish Medical Society Proceedings.

MEETING OF OCTOBER 27, 1913.

DISCUSSION ON DR. ERWIN'S PAPER (*v. s.*).

DR. HALSEY: We have very often overlooked the nose and throat phases of these cases. I have looked it up in the literature and find that scant attention has been given to this subject.

DR. HOWARD D. KING: In the *Year Book of Medicine*, edited by Head, of Chicago, the nose and throat complications of leukemia

and pseudoleukemia are discussed. The treatment is symptomatic and tonic. Some years ago, before this Society, Dr. Scheppegrell read a paper dealing with tonsillar conditions as a cause of obscure disturbances in childhood. Dr. Erwin's paper, together with that of the one just mentioned, might help the general practitioner in the clearing up of the many dyscrasic states with which we have to deal.

DR. ERWIN, in closing: I am sorry that no one has mentioned seeing a case. They are seen rather frequently in Vienna and all the nose and throat men whom I questioned mentioned having seen cases similar to the one I have described.

MEETING OF NOVEMBER 10, 1913.

DISCUSSION ON DR. CRAWFORD'S PAPER (*v. s.*).

DR. EUSTIS: After so much infusion was not the heart pumping saline?

DR. CRAWFORD: Yes, toward the end. The main thing that impressed me was the amount of handling that a heart will stand.

DR. MANN: I am at present working on the heart. I take off the entire thorax and put the heart in a vessel of saline. The heart beats for two or three hours and the respiration continues also.

DR. CRAWFORD: I would ask Dr. Mann what would have been the effect of blood transfusion?

DR. MANN: It would have been beneficial. Experiments show that animals' hearts will not stand as much manipulation as the human heart. This is more marked in young dogs. It may be due to the anesthetic used.

A MEMBER: Did the sutures give way before death?

DR. CRAWFORD: No, but the coroner told me that the sutures were loose. The sutures should have been tied in systole. Again, it would perhaps have been better if I had used a general anesthetic instead of novocain.

DISCUSSION ON DR. LOVE'S PAPER (*v. s.*).

DR. LEMANN: Dr. Love has done well in emphasizing the danger of falling into a rut in the feeding of tubercular cases. We forget to watch for the dangers to which he called our attention. Again, a patient may have had some other trouble before the tuberculosis, which we should consider. I think we overdo the proteid

feeding in health as well as in disease; but I do not think we should hold the proteid intake down to Chittenden's standard, although his standard is more nearly correct than Voit's. Though I attach much importance to the presence of indicanuria, I have seen patients with heavy indicanuria and no toxemia and I have seen patients who suffer from slight indicanuria, as their symptoms disappear when the slight indicanuria has been made to disappear; that is, the individual reaction of patients to the absorption of persons (as represented by indicanuria) varies greatly.

DR. MANN: If we starve an animal or take a frog which has had no food during the winter months and then feed them on milk protein we can demonstrate microscopically within one hour and a half an increase in the amount of built-up proteins in every cell of the body by the use of proper staining methods. This increase is found even in the brain. If a person be starved for thirty hours we find that the white blood cells in smear preparations are larger than in similar slides made from a person on full diet, owing to the fact that the cells become softer from a loss of protein and from a diminution in surface tension and hence they are flattened more readily by the pressure of the cover-glass at the time of making the smear. Fed cells always stain more deeply than do starving ones and this deeper staining is due to stored protein. In a well fed cell, immediately after it has stopped feeding, the protein represents the "total" protein; then up to the time of the next meal the cell partly feeds upon its own protein and partly supplies other cells with protein, and to this portion I give the name of "available protein." If a cell is starved for a very long time it will die while it still contains a considerable amount of protein surrounding the nucleus; this protein is the "non-available protein." When Chittenden published his work I cut down my protein intake to 40 grams per day, but found that I could only do about one-half the usual amount of work. The amount of energy-value which we get out of a diet rich in vegetables is mainly a question of the length of intestine which each one of us possesses and my intestine is too short to allow me to get the full value out of vegetable proteins alone. My father is a great meat eater and I seem to have inherited that tendency. Anyhow, we know that if we feed three sets of tadpoles, one set on a vegetable diet, one on a mixed diet, and a third on meat, that those of the first set will have the longest intestines when they become frogs, while the

meat fed tadpoles will possess the shortest intestines, and those fed on a mixed diet will have intestines intermediate in length. I wish to ask Dr. Love how much protein he gives his patients and whether he distinguishes between the purin and the non-purin containing proteins. Theoretically for building up tissues we should exclude all purins as much as possible, for Nature furnishes purin free milk for mammals and purin free egg white and yolk for birds. If we take pepsin and trypsin we do not get the putrefactive products enumerated by Dr. Love, and we have no evidence that these products are formed within our body after the absorption of amino-acids. In tuberculosis we have, as a rule, increased destruction of muscle tissue, and in feeding tubercular patients we should remember that proteins are readily oxidized and to me there seems to be a lack of oxidizing power in tuberculosis. At any rate, we find that in tubercular patients a block seems to exist between the motor end-plate and the muscle fibers, which block can be removed by the administration of alcohol and other substances which lead to increased oxidization. I see no objection to giving to tubercular patients an abundance of non-purin proteins, provided we always make sure of the bowels being kept open. I experimented on myself last year by taking each day after breakfast an enema. I found that I could do more work and felt better.

I would like to ask to what extent rheumatic people are subject to tuberculosis? There may be an antagonism between tuberculosis and rheumatic diatheses. If there is such an antagonism the rheumatic tendency would be indicated, which means that we should perhaps give food rich in purin. Whenever we have pancreatic disorders we should not give any protein food excepting milk protein, as the latter is acted upon by the ferment erepsin, which can split up milk proteins into amino-acids without the help of either gastric or peptic digestion, also which breaks down the peptically and tryptically digested proteins into the amino-acids we need for our welfare.

DR. DUREL: I do not find the abuse of meat proteids very common; but I do find that the use of milk and egg proteids is often abused of by the profession in general. I find it hard to make tuberculous patients eat meat. I believe that a mixed proteid diet, fats, carbohydrates, etc., is essential. I would not, however, go to the other extreme of feeding patients only on a proteid diet, or a carbohydrate, or a vegetable diet. We should remember that in tuberculous patients the stomach fails first, and as proteids are

most digestible, we should give them. I do not find much constipation in my patients. A light purge may be needed at times. The length of the intestine may be a factor to consider. I think the forced fat feeding has done much harm. We must have a mixed diet with some proteids. Superalimentation in some cases does harm, but we cannot leave a diet entirely to the patient. The patient must be overfed to some extent if the stomach permits it. I trained myself along these lines when I had tuberculosis.

DR. HOWARD D. KING: I cannot allow to pass unnoticed the strictures upon the general practitioner which have just been uttered by Dr. Durel. On my part, there is no desire to quarrel as to who is responsible for the milk and egg craze, but I would be recreant to a self-imposed duty if I did not resent the charge that the general practitioner is the culprit in the overfeeding of the tuberculous. Dr. Durel blames the general practitioner for the overfeeding of tubercular patients with milk and eggs. Now, who is really responsible for this condition of affairs? The specialists in tuberculosis are solely and absolutely responsible for the milk and egg fad. With them it is milk and eggs at all times, and under all conditions and circumstances. The specialists in tuberculosis know nothing else but milk and eggs. The tuberculosis specialist has virtually educated the general practitioner in the milk and egg diet. If the slogan of the lung specialists had not for many years been milk and eggs, how would the general practitioner have become so imbued with this particular diet? The milk and egg diet has really become an obsession with the men who specialize in pulmonary conditions. Milk and eggs is their constant and never-ending cry. And, now, to blame the general practitioner for overfeeding tubercular subjects with milk and eggs is as absurd, as it is untrue. At this very minute I have in my pocket a circular advertising a Western tuberculosis sanitarium and more stress is laid on milk and eggs than all other features combined. The consumptive might get more milk and eggs than he actually needs, but whose fault is it? Assuredly not the general practitioners! I believe this settles the milk and egg business!

Some years ago at a meeting of the British Medical Association a symposium on phthisis was a feature, and the question of dietetics was given quite a bit of study. While Dr. Love's paper is extremely interesting he fails to tell us what should constitute a standard in the feeding of these patients. What is the basis of cal-

ulation which should determine a correct diet? What should be the proteid intake? In the regulation of a diet for the tuberculous are not other external factors such as weight, climate, and stage of the disease to be taken into consideration? Errors in diet are usually responsible for loss of weight. If a tubercular subject who has steadily been gaining begins to lose weight I believe it is well to inquire into the dietary and see if something has not gone amiss. We are taught that a high proteid diet is essential in the treatment of tuberculosis, but here we encounter another difficulty. If too much meat is allowed, we may get a renal or hepatic disorder as a complication. At all events, and despite the opinions of others, I stand firm in the opinion that hyper-alimentation is a sheet-anchor in the treatment of tuberculosis.

DR. DUREL: I wish to defend the phthisiotherapist, especially Dr. Pottenger. He has fought reckless overfeeding and high proteid diet steadily. Eggs and milk are all right in moderation; but I certainly condemn the practice of having the eggs and milk diet supplant the ordinary mixed diet. Eggs and milk should be used only as a collation, in the super-alimentation of the patient.

DR. GUTHRIE: We must remember the possibility of proteid overfeeding, but the idea of low proteid diet is not new. We should incline to a rather higher proteid diet, of course, keeping the bowels open.

DR. GENELLA: Interesting experiments in a recent copy of the *Journal of Biologic Chemistry* proves that a high proteid feeding poisonous acids may be formed, even hydrocyanic acid. It may be that the improvements of patients on a low proteid diet is due to low amount of proteids used in feeding in the West.

DR. EUSTIS: I do not think low proteid feeding should be called a fad. It is based on scientific experiment. Dr. Love does not mean to advocate low proteid diet for all tubercular patients. We give them all the proteids they can stand. In regard to Dr. Lemann's remarks, would say that these things are explained by the fact that the tissues, especially the liver, have the power of detoxicating some of these toxins. The liver may be worn out and then the toxins pass through and produce symptoms. Eggs often give rise to temperature, due to toxemia. We must replace energy of the tubercular patient before we can build him up and the carbohydrates are the best energy producers.

DR. LOVE (in closing): I have seen some patients with heavy

indican and no toxemic symptoms. They are more resistant to the toxemia. I have seen many patients showing albumin and indican, both of which cleared up on clearing up the toxemia. My object in reading this paper was merely to call attention to what may occur in some cases. In toxemia, we may get lumbago, sciatica, frontal and temporal headaches, cervical neuralgia, etc. Milk is the best tolerated proteid food. The proteids not leaving much residue are not as great producers of toxemia as the others. Personally, I formerly had much trouble with urticaria and headaches, but have no trouble now, after cutting down my proteid intake. I do not advocate the low standard of Chittenden. In answer to the question of Dr. King about the gain of weight under proteids, would say that they gain better when fed on fats and carbohydrates. As regards the amount of proteids, we give as much as the patient can stand without toxemia. We have not worked it out along the lines of the absolute amount taken by the patient. In toxic cases constipation is not as common as stasis. The fecal material may stay in the large intestine longer than normal with increase absorption of toxins. I wish to correct the impression of Dr. Guthrie that I apply low proteid diet to all cases. I do not.

MEETING OF NOVEMBER 24, 1913.

SYMPOSIUM ON PEPTIC ULCER.

DR. PARHAM: I think there should be a closer association between the surgeon and the internist in the diagnosis and treatment of these cases. This was a striking feature at the recent meeting of the Clinical Congress of Surgeons in Chicago. Dr. Sippey brought out the point that ulcer is at first medical and only becomes surgical when complications develop, complications which may or may not be malignant. Then surgical intervention is indicated. Dr. Sippey stressed the point of frequent emptying of the stomach (not lavage) and the use of alkalis in the treatment. He empties every four hours in the day, again at bedtime and again two hours later; then the patient can go through the night comfortably. He spoke very highly of this treatment. In regard to diagnosis would say that I cannot see on the X-ray plate all the fine points mentioned by Dr. Granger. I recall several cases, one in particular, where the X-ray and the internist

were both at fault. The diagnosis was made of duodenal ulcer, confirmed by X-ray. This man had been transferred to my ward from a medical ward. Operation disclosed no gastric or duodenal trouble. He developed a chill shortly afterwards and I made a diagnosis of the empyema of the gall bladder. At operation the stomach and gall bladder were normal. I palpated the kidney, discovering a suspicious enlargement. I closed the wound and later found colon bacilli in the urine. This was treated by lavage of the renal pelvis and he made a recovery. Another case was a chronic condition with symptoms referable to the stomach. She had a colonic infection of the kidney, with a small ureteral stone (passed). She made a gradual recovery. HCl aggravated the condition, alkalis relieved her. We should be very careful in giving due weight to the history of these cases. Moynihan emphasized the importance of the inaugural symptoms of disease. Let the patient talk freely in giving his history. We thus often will get valuable points to aid in ferreting out the early pathology of the case. The case as we see it later in its history exhibits the symptoms of late pathologic changes, whereas careful attention to the details of the history as given by the patient may lead us to work out more accurately the original seat of disease which often differs very much from the apparent pathology as we see it when the case comes to us. I have great respect for the internist, for while it has been said that the surgeon is a man who works with his hands, the internist is one who works with his head. Much consolation, however, for us as surgeons arises out of the observation that the internist can learn much by seeing the case when opened by the surgeon's knife. The lesson from all this is that the surgeon and the internist should be close relations and should more frequently work together.

DR. HALSEY: I think many pyloric ulcers will prove unfavorable for medical treatment. I would like to ask if, in such cases, the taking of food in the treatment is not likely to be followed by pain and vomiting. Another point about the use of morphin in peptic ulcer and pyloric spasm; we know that in such cases morphin will first relieve vomiting and later it will recur; also morphin will cause vomiting. This was first shown on cats and dogs, later on men. Even in one-sixth or one-eighth grain doses, it often causes pyloric spasms for six to eight hours; hence it may be bad to use it in such cases. We are informed that morphin

checks secretions, but we know now that its effects on gastric secretions is uncertain. It may first depress and later stimulate the secretion of gastric juice. This latter is undesirable. So we should withhold morphin, but try alkalis and local applications. If these methods fail, try some other pain-reducing drug by rectum, such as chloral, which does very nicely.

DR. EUSTIS: I agree with Dr. Simon on all points except one. When does an ulcer become surgical? I consider all gastric ulcers as surgical. Personally, I cannot tell when a peptic ulcer becomes indurated or malignant. I think internists should not treat these cases too long. We should treat them by rectal feeding alone for two weeks. I have learned more from following cases to the operating table than in any other way. We should not delay too long in referring these cases to the surgeon.

DR. HOWARD D. KING: When is an ulcer medical and when surgical? The symptomatology is often very deficient. Dr. Simon lays stress on the laboratory analysis. In the *Quarterly Journal of Medicine* is an article in which it is stated that gastric analysis is practically useless. Dr. Simon also spoke of the pain. This varies. A point of great significance is the presence of persistent pain on one area of the stomach. In regard to malignant degeneration of peptic ulcer we are still uncertain. In a recent article by Cintesse in *La Presse Médicale*, peptic ulcer in infancy is discussed. These patients should remain in bed five or six weeks and stools should be searched for occult blood; if this be found, after three weeks' rest the case should be turned over to the surgeon. This three weeks' rest may be too short, but we should not delay surgical aid too long.

DR. FOSSIER: I regret very much that Dr. Simon had not time enough to go more deeply into the treatment. In the diagnosis of these conditions he has overlooked a very important sign, and that is Boas' point. Rest, both physical and mental, are the mainstays of the treatment. Care should be taken to prevent the patient from worrying. He should be isolated from business cares, etc. Diet is the next important factor in the treatment of these conditions. I do not agree with Dr. Eustis that the patient should be starved for a great many days, and be fed only by rectum. Whilst the diet should consist of milk for quite a long while, we must be governed by the physical condition and strength of the patient, and the amount of feeding accordingly regulated.

The drugs indicated are all used to prevent gastric irritation by reducing acidity and for this purpose we use bismuth, olive oil, or silver nitrate. According to Lerch silver nitrate acts by forming a protective coating in the interior of the stomach.

DR. E. D. MARTIN: Peptic ulcer is one of the most difficult things to diagnose, except in the advanced stage. We are fortunate when we can diagnose it before operation is necessary. Many cases get well spontaneously. The condition is not so dangerous in the young. The history is the most important point in making a diagnosis. I had a case recently in which I made a diagnosis of peptic ulcer. This was confirmed by the internist and the X-ray. At operation I found only a few adhesions and suspended the stomach. The patient is now much better and has gained weight. I have had several similar cases in which I found adhesions around or near the pylorus. I think there are many cases of adhesion causing interference with motility and hence the symptoms ordinarily referred to peptic ulcer. As regards the age of the patient, we should suspect cancer at the middle life. If we cannot diagnose positively, operate and excise ulcer if found. Or we may occlude the pylorus and do gastroenterostomy. I am surprised that internists have not mentioned the use of the Murphy drip in the treatment. I used it recently with success. In regard to hemorrhage I think it is best not to operate or infuse.

DR. C. C. BASS: In view of the fact that peptic ulcer is accompanied by hyperacidity, in most cases, it would seem advisable to reduce the hydrochloric acid contents of the stomach. This is best done by not feeding the patient, for when the stomach is at rest its contents are outlined or neutral and remain so until food is taken. Physical rest reduces the amount of food necessary and permits rectal feeding. But when the patient cannot rest the best method of reducing acidity is by reducing the chlorine intake or the sodium chloride intake. I have made a few observations along this line and am sure that this can be easily done.

DR. ADOLPH HENRIQUES: In the matter of X-ray diagnosis of peptic ulcer, we are led by the men of Vienna and Germany. It is unfortunate that at the Charity Hospital we have never had proper apparatus for gastro-intestinal work. The best men use the fluoroscope first, using bismuth subcarbonate or other opaque

substance. In all fluoroscopic stomach cases we should hold the stomach with the hand and watch the filling and motility. I think a shallow ulcer can also be diagnosed. The chief points are pylorospasms and changes in motility and form of the stomach. There are a great many ulcers which are clinically pronounced healed which are not really healed, as shown by the X-ray. Again, the ray has shown that more cases of hour glass stomach exist than we have supposed; here the internist cannot always do good work with the test needle. I think the X-ray gives more aid in diagnosis than any other method except exploratory laparotomy.

DR. GRANGER: (in closing) Dr. Simon misunderstood me. I did not say that when the ulcer is at the pylorus that the stomach empties itself more rapidly, since the opposite is almost invariably the rule. The slide which I exhibited showed an old callous ulcer resulting in a rigid and patulous pyloric valve. At the Charity Hospital the equipment is not such that these cases can be properly examined and in view of the fact that the fluoroscopic examination is not possible, we must content ourselves with making a number of skiagraphs. The only two positive X-ray evidences of ulcer are the hour glass contractions and the crater formation. I do not think that it is possible to differentiate between a defect in filling due to the scar of an ulcer, and one due to the presence of perigastric adhesions. I cannot agree with Dr. Henriques that a positive diagnosis of florid ulcer can be made with the X-ray alone, but the results of the Röntgen examination are often so strongly suggestive that the diagnosis of ulcer can be safely made when other clinical evidences are present. Answering Dr. Halsey, it has been proven by means of the X-rays that all bland oils lessen gastric motility.

DR. SIMON: (in closing) In regard to the use of drugs in the treatment of these cases, will say that I never use morphin, but have used alkalis. One of the most certain signs of ulcer is the prompt cessation of symptoms by putting patients to bed with no food at all for one or two days. This is not as marked as any abdominal condition. If this does not occur the case is most probably not peptic ulcer and should be referred to the surgeon. I had a patient recently with symptoms suggestive of ulcer in which laparotomy was done. The stomach was found all right, but the operator found a Lane first kink. This was short circuited and she got entirely well. Drugs are secondary to the rest treat-

ment. I use none until the end of two weeks. Then in some cases I give bismuth subcarbonate, dram 1, t. i. d., in water. For the first three days I use glucose, Murphy drip and give no food by mouth. In regard to the Boas' point, would say that it is important, but we must be very careful how we interpret painful spots in the abdomen. The painful spot is never larger than a quarter and it should persist in the same place in order to be of diagnostic importance. The point brought out by Dr. Eustis depends greatly upon the history. If we get cases the first year we can feel that it is almost certain to be still in the acute stage. As we learn to diagnose these cases earlier the complications demanding surgical attention will become cured. If the patient gives a history of one year or over or the history suggests pyloric obstruction, hemorrhage or malignancy or recurrence, after careful treatment, the patient should be turned over to the surgeon. Dr. Bass' point is well known and we always cut down the salt intake.

INSTALLATION MEETING, MONDAY, JANUARY 12, 1914.

ADDRESS OF RETIRING PRESIDENT.

DR. HOMER DUPUY, retiring President, delivered the following address:

The lamentable fact which looms up before me tonight, and like the ghost of Banquo, will not down, is, since my elevation to the Presidency, I have strenuously endeavored to serve this Society with all the faculties of mind and body, yet at this hour of retirement from the Presidency, I am chastened and feel somewhat like the young man who, skeptical and dissatisfied in religious matters, went in search of a congenial church. He went from temple to temple without finding the long-wished-for haven of spiritual rest and satisfaction, until one day he happened by and took a seat in a little wayside chapel. The minister began his sermon, taking for his text, "We have done the things we should not have done, and have left undone the things we should have done." The man in the pew exclaimed: "Thank heaven, I have at last found my crowd!"

I presume this is the feeling experienced by all retiring presi-

dents who believe that the Orleans Parish Medical Society is no greater than its founders meant it to be. All incoming Presidents are rich in promise, but all retiring Presidents know how poor has been the fulfillment.

Yet a retrospect affords ample proof that some things which spell progress and which will be of permanent value, have been accomplished during the year 1913. But what has been done is the result of a splendid co-operation between the President and the Board of Directors, the chairmen of the various committees and the committees themselves.

Without making invidious comparisons, the strenuous chairman of the Scientific Essays Committee deserves a meed of praise for the splendid and varied intellectual menus he has served the Society. The Judiciary Committee had some very delicate points to settle and they always with fairness and at the same time with fearlessness performed their full duty. But for our faithful Assistant Secretary many things would have unquestionably remained undone. But we have not left undone the alteration in our By-laws, which metes out full justice to our co-laborers—the women physicians. This society responded nobly and with no uncertain voice to the call of its President to give the women physicians applying for membership equal rights with men. This marks a new era in the history of our society. We have not left undone a radical change in the By-laws, by which the well-nigh obsolete institution and dangerous weapon, the blackball, we hope, is forever banished from this assembly. A Committee on Membership now stands guard. It will insure the quality of your membership and will at the same time guarantee a square deal to every applicant.

We have not left undone the creation of a special committee on Hospital Abuse. The momentum given this movement at our special meeting must centralize itself into a permanent—standing—committee on Hospital Abuse, which is the recommendation of the outgoing administration to the incoming.

And last, but not least, we have not left undone the official recognition by this Society of the distinguished services of one of its members in the field of medical research.

On such an occasion is it not well to remind ourselves that while "the paths of glory lead but to the grave," the world has always honored and, in a way, immortalized its popular heroes—

its men of achievements, in the glowing canvas, in the chiseled marble, in majestic verse, in soul-stirring harmony. Such Titans as Alexander the Great, Julius Cesar, Hannibal, Napoleon, Washington, and a galaxy of others, are now popular figures in the Valhalla of the world's great ones. The disciples of Esculapius the followers of the Healing Art, they alone have been neglected and forgotten. Away from the maddening crowd's ignoble strife, "along the quiet sequestered vale of life, they kept the noiseless tenor of their way," and thus remained undistinguished and inglorious.

But we are at the golden dawn of a brighter day when a change has come upon the spirit of the world in a praiseworthy tendency to give just and proper recognition of service to science which ultimately means service to mankind.

Imbued with this very spirit, the Orleans Parish Medical Society tonight is doing the gracious act of honoring a distinguished member, who, by his achievements in the domains of medical research, has honored this society. As the last official act of my administration, mine is the happy privilege of presenting to you, Dr. C. C. Bass, this medallion in token of your eminent services to science. Unquestionably, the cultivation of the malarial plasmodia in vitro is a splendid laboratory accomplishment. The intrinsic value of this discovery, its practical aspects, its ultimate application in the mastery of the problem relating to the spread of malaria, these alone attach a noteworthy importance to this contribution. But aside from these questions, through this testimonial, we wish in a special manner to glorify the achievement itself and to honor the man who wrested from Nature one of her most innermost secrets. We wish through this testimonial to applaud and commend the infinite patience, the indefatigable industry, the devotion to an idea, the courage that sticks to the sticking place and does not fail, these epitomize what may be considered the virtues of the scientist and without which such an accomplishment would have been impossible.

Through this testimonial we wish to honor the man who, without blare of trumpet, without thought of the world's applause, without thought of material reward, wrought in silence and touched virgin soil and thus blazed a new pathway in the field of medical science. This medallion is in itself "a thing of beauty," and may it prove to you, my dear Dr. Bass, a joy forever. But

richer than the gold it contains and more precious than its artistic workmanship, is the thought which prompted the deed and the sentiment which graces the gift. May this testimonial, which is the material expression of our good will, friendly feelings, and highest admiration, inspire you to further conquests in the realm of medical research.

ADDRESS OF INCOMING PRESIDENT.

Mr. President, Members and Guests of the Orleans Parish Medical Society: In becoming your president, I realize the responsibilities you have placed upon my shoulders. The honor you have conferred upon me is indeed deeply appreciated and especially so, when I consider that this Society is composed of the most representative of the medical profession of New Orleans, whose members stand second to none in this great English-speaking country.

Our Society has grown and will continue to grow in importance, keeping pace with the future growth of our city. The next few years should find a wonderful development of New Orleans, with a corresponding growth of its many institutions. The activity which we are about to enter should soon see us with three-quarters of a million population; we will have a corresponding growth of the entire Southland. You can readily realize what our possibilities will be, situated as we are at the gateway of the richest valley of the world; the metropolis of the garden spot of America and the nearest port to that wonderful achievement of the twentieth century, the Panama Canal. It behooves us, then, as representatives of a profession that has always stood in the foremost ranks, to work together with a common purpose, the uplifting of our people and the advancement of science.

The past year has brought needed changes in dear old Charity. The task of modernizing an institution the size of our hospital is one beset with many difficulties and at best a very slow one, which can only be accomplished by the co-operation of every member of the visiting staff. Our Society is composed in a great part of the members of this staff, whose good efforts, I am sure, can very materially aid the Board of Administrators, the Medical Committee and Dr. Wilkins in this great work which, when completed, will compare favorably with the largest and best of hospitals.

At our last meeting, a special one called by your President for the purpose of hearing the report of the Hospital Abuse Committee and the discussion of same. I can hardly pass this subject, as it is one of the greatest importance, an abuse that is growing each year and will continue to grow unless checked. This can only be done by the conscientious, hard and careful work on the part of the permanent committee, which I trust will receive the favorable action of this Society, thereby amending the By-laws, making the Hospital Abuse Committee a permanent one. It shall be my duty to appoint this committee. I assure you my efforts will be to give you a strong, hard working committee, which will do much toward the improvement of existing conditions.

Dr. Gessner, Chairman of the Delgado Museum Fund Committee, states that the committee has collected \$81. We should make every effort by individual subscriptions to increase the amount to \$150 which, I understand, will purchase a \$200 marble group, a gift worthy of our Society. This additional \$69 should be easily raised, which would properly represent our profession in this already magnificent museum. The Delgado Museum has made rapid strides. Those of you who have not yet visited it, have certainly a treat as well as a great surprise in store.

Our library, which boasts of about 12,000 volumes and nearly 200 journals, has grown under the present librarian, Dr. Howard D. King. Unfortunately we are not in a position to appreciate the increase, owing to the insufficiency of funds available for the purpose, without which the library cannot be kept to an up-to-date standard.

For years it has been the dream of every member to have the Society housed in just such a fitting building as now stands, an ornament to our city and a pride to our profession. No other profession in our city can boast of such a domicile. The financing was not an easy one and from the present outlook, each year will make the financial problem of our Society more and more difficult, as our new home, which has many luxuries, calls for more expenditures.

The question then arises: Are we to continue struggling with our home unpaid for, just able to pay our running expenses and the interest on our bonded debt, with no funds for the continuance of our library and the maintenance of our building, the wear and tear of which will be more and more as the years go by? The

great American ideal of owning our home has been realized only from a certain viewpoint. I say this is not our home until every dollar of indebtedness against it has been paid.

Every one of you will agree that some means should be devised by which we can begin redeeming these bonds. During the past year the Society has brought the subject up and your Board of Directors thought of several plans, which did not meet with your approval. The increase of dues and the assessment of members, measures proposed, were not cordially received. No doubt you know that the bonded indebtedness of your Society is represented by 200 first mortgage bonds of \$100 each, bearing 5 per cent, making a total of \$1000 which we have to pay each year. The bonds were originally bought by the members, and I feel certain that some of them have fallen into the hands of outside or disinterested parties, whose sole sentiment is the cutting of coupons every six months. Let us fail to pay these coupons and a different story will be told.

It strikes me then that one of the most important duties I will have to perform during my tenure of office will be to redeem as many of these bonds as possible which, once commenced, can be continued by succeeding administrations. A scheme which has the approval of several bankers and is strictly within the letter of our charter and can easily be accomplished, is as follows:

Each member subscribes to one share of stock of \$50, this amount to be paid at the rate of \$5.00 a year, for which each member is given a receipt; at the end of the tenth year you will receive your certificate for one share of stock. This would not mean an assessment, nor would you be giving the Society anything excepting the interest, which would in ten years amount to \$13.75, or the small, insignificant sum of \$1.37 a year, as seen by the printed slips which I had prepared for the purpose. At the end of eleven years we would have converted our \$20,000 bonded indebtedness into a \$15,000 stock one, a reduction of \$5000. This amount would be readily taken up by the money which we are now paying in interest. This, I believe, is the simplest way to get out of our present financial embarrassment and I trust that at an early date you will give it your earnest consideration.

Again thanking you for the honor, I can assure you that our Society will have my best efforts during the year 1914.

Louisiana State Medical Society Proceedings.

In Charge of the Publication Committee, DR. L. R. DEBUYS, Chairman.

DISCUSSION ON PAPER OF DR. ALLEN (*Vide supra*).

DR. SANDERSON: I would like to ask Dr. Allen what sort of drainage he uses?

DR. ALLEN: Rather free drainage.

DR. SANDERSON: The reason I raise the question is that we have had a number of prostatectomies, and lost one case, an old gentleman 78 years of age, and I think it was due to defective drainage on account of the tube we used. When you make the primary opening, the bladder is pushed up. If you could put it in this direction [indicating] it would be all right; but remember, you have the patient in the Trendelenberg position, or the bladder is distended, and after you are through, should you have distention of the abdomen, the bladder is forced down and flattened up against the pubes. If the tube is large enough to afford drainage, it is usually so stiff that the bladder, being pushed down, brings the tube against the posterior wall of the bladder and causes trouble. This particular patient whom we lost suffered a great deal with pain in the posterior part of the bladder. We withdrew the tube to avoid irritation, and withdrew it too far. We have devised a tube with a hook which comes over the pubes and hooks right down into the old prostatic seat. This tube has perforations. It does not make much difference if the bladder comes down, the drainage tube will not injure the posterior wall of the bladder. I have seen two or three cases of autopsy with retention catheters in them, and the weight of the catheter had actually perforated the wall of the bladder. I am quite sure lots of men who have been at the Charity Hospital have seen autopsies in which the retention catheter has perforated the posterior wall of the bladder. A large rubber tube is liable to perforate the posterior wall of the bladder and cause death. No autopsy was allowed in our case, so that we do not know whether there was perforation of the bladder or not.

Local anesthesia is a great improvement in these operations, and should be the method of election, and not one of emergency.

Drainage is the chief thing in prostatectomies, so far as I have been able to observe, and if the tube is not large enough you will have trouble.

DR. E. M. ELLIS, Crowley: I am very much interested in this paper, because, as a rule, prostatectomy is looked upon by the country surgeon as being quite a difficult operation, and of such major importance that most of us steer clear of it. At least, that has been my experience. Until recently, I have not done many of these operations myself. I would suggest, not for the benefit of the trained surgeon in that particular field, but more for the immature surgeon, who is beginning his work, to adopt the combined route. I know Dr. Allen is very fond of the suprapubic route in attacking the prostate. I know very well, too, that the trend of surgical development in that line to-day is towards the suprapubic route, but notwithstanding that, I believe in the combined method for most of these patients who need this operation, because they come to us with highly infected bladders which have been strongly in need of drainage for a long time, full of pus, and with the patient usually in a more or less septic condition. The kidneys have been embarrassed by the long continued pressure and lack of drainage, and I believe that by the method of opening the bladder, say a week before the final operation, draining it through the suprapubic route, irrigating it, if necessary, with antiseptic solutions, relieving the kidneys of the previous pressure, we will get the patient in a much better condition for the final operation. Then, I have found, in what limited work I have done, one of the very easiest ways of doing the complete operation is by the Young method, by simply making an inverted V-shaped incision in the perineum, going through the urethra in its membranous portion, putting in his retractor and pulling upon the prostate and enucleating it. Those who have not tried this method cannot conceive how easy it is. I was surprised, when I attempted my first operation, at getting through so easily. I discovered I had been altogether mistaken in the difficulty of doing this operation, and then, if you have an opening above, there is no trouble in placing the retractor to get in through the membranous portion of the urethra, pass the finger through the other opening, and pull the prostate into the wound, and make the typical Young operation, and then put in a drainage tube, which is a very important factor in the final outcome of these cases. You have certainly got abundant drainage, if you are draining both ways, and at the Mayo Clinic Dr. Judd places great stress on continuous drainage for the first twenty-four hours. He puts the patient to bed, institutes continuous flushing,

continuous irrigation for twenty-four hours, then removes the perineal tube, and in two or three days he lets the patient get up. They have shown in their work in connection with prostatectomy in old cases that are unfavorable for operation, by this preliminary preparation of suprapubic cystotomy and preparing the patients, that they have reduced the mortality to a minimum, and while Dr. Allen does this operation suprapubically in a masterly way, and no doubt it seems easy to him, to my mind, those who are not absolutely familiar with the technic, if they want to get through without having any trouble whatever, they should do the combined operation, go through from above first, and in the final step make a perineal opening, bring the gland down, and remove it as easily as a dentist can remove a tooth.

DR. ALLEN (closing the discussion): Regarding the method of operation, as Dr. Ellis has said, the general tendency is towards the suprapubic rather than towards the perineal route, particularly so if you open the bladder previously for drainage, you already have an avenue of approach to the prostate; now if we make a perineal wound, there is an added trauma, besides there are greater possibilities of complication in the perineal route than in the suprapubic. The complications are rectal and urinary fistulæ. You may not open the rectum yourself in the operation, but the slightest trauma, the slightest pressure from retractors may cause it to break down afterwards; particularly in all cases with arteriosclerotic disease. That is much less likely to occur by the suprapubic route. Of course, the perineal route has its advantages, and one decided advantage you get is the dependent drainage. You drain from the lower part of the wound, still, I believe, all things considered, the suprapubic route is the best in the great majority of cases. However, we cannot lay down any hard and fast rules about these things, because there are some cases better operated one way than another.

Reference was made to the Mayo Clinic by Dr. Ellis. Formerly they were much in favor of doing the intra-urethral operation from below. They simply made a slit in the midline of the perineum, put a finger in and puncture the posterior urethra, enucleating the lobes of the prostate. They operated very much as though they were going to do a lithotomy for stones; putting in a tube afterwards and they got excellent results. They are now leaning in favor of the suprapubic route, although they resort to all methods, depending upon the indications in the particular case.

Dr. Sanderson spoke of drainage in these cases, which is a very important point in the handling of them. When we took that out, we did not have the bladder open in the way it is illustrated as an artificial condition. We opened the bladder, retract it, put the patient in the Trendelenberg position, air rushes in, and we get a cavity. We do not have that cavity as a rule. When the prostate is taken out, there is no cavity. The walls of the prostate collapse; we have a wrinkled tube.

Dr. Sanderson said that he found it necessary to use a large tube, which is undoubtedly the case. We want a large tube, about the size of one inch and a half. We want one sufficiently large so that big clots will come out of it. An opening is made at the lower end and the tube set right down to the bottom and another opening made on the side. If the case is badly infected, we resort to continuous drainage, and continuous drainage is comparatively easy. You run a catheter alongside the tube or inside of it, and have another siphon tube at right angles run out here. If the tube is so regulated it will deliver a constant stream of water to the bladder. The nurse every hour puts in a gallon of water, with a stop cock set on the irrigating bag to allow the water to trickle continuously in there (illustrating). The patient does not get wet. It is siphoned off and it is very effective.

Another point that has not been brought out is with reference to hemorrhage. I called attention to a suggestion for the control of hemorrhage which is absolutely effective, and that is, after you have taken out the prostate this thing collapses in a rather funnel-like tube. The hemorrhage may be considerable. We hear of operators who remove the prostates without ever thinking of packing. I think it is a mistake not to pack. Freyer, who was formerly a non-advocate of packing, has come to use it. (Demonstrates method of packing neck of bladder.)

DISCUSSION ON PAPER OF DR. SALATICH (*Vide supra*).

A MEMBER: Would you advise vaselin in cases of empyema where there is slow healing?

DR. SALATICH: By no means. There is less danger of having the vaselin remain permanent, as I mentioned there, after three years, as in some cases where some bismuth paste was found. I think you can inject vaselin with less danger than you can inject bismuth.

DR. ADOLPH HENRIQUES, New Orleans: I should like to say, we can administer large quantities of bismuth in making X-rays of the digestive tract. I have given large amounts of bismuth for this purpose. It is the bismuth subcarbonate we use, and not the subnitrate. Beck uses the subnitrate.

THE AVOYELLES PARISH MEDICAL SOCIETY PROCEEDINGS.

The Avoyelles Parish Medical Society met at Bordelonville, La., Thursday, December 18, 1913, at ten o'clock a. m., with Dr. S. J. Couvillon, president, in the chair. In spite of the fact that the attendance was rather small, but in view of the fact that this meeting was the most important one of the year, Dr. R. G. Ducote, of Bordelonville, introduced a resolution that the Society proceed with its called purpose and elect the delegate and alternate to the annual State Convention, elect the officers of the Society for the ensuing year, and called dues to begin the fiscal year, January 1, in order to comply with the adopted resolution of the State Medical Society to that effect. The minutes of the last meeting were read and adopted and the regular program of the day was dispensed with.

Dr. P. J. Stricker, a new practitioner at Bordelonville, applied for membership and was unanimously elected. The doctor presented a paper entitled, "Suggestions for the Betterment of Those Who Practice Medicine as a Business." The paper received unanimous commendation and on motion of Dr. G. R. Fox, a vote of thanks was extended to Dr. Stricker and his paper ordered spread on the minutes and a copy sent to the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* for publication.

On motion by Dr. P. E. Brahic, Dr. G. R. Fox, of Moreauville, was elected to the House of Delegates for the annual State Medical Meeting, and Dr. R. G. Ducote, of Bordelonville, alternate.

On motion by Dr. Ducote, Dr. S. J. Couvillon and Dr. P. E. Brahic, of Moreauville, were both re-elected president and secretary-treasurer, respectively, of the Avoyelles Parish Medical Society, and Dr. E. Stanley Matthews, of Bunkie, vice-president.

In view of the splendid reception tendered the Society by Mrs. S. E. Greene and the splendid hospitality extended to the visiting physicians by the Bordelonvillians, it was decided that the Society

would again meet at Bordelonville at its next quarterly meeting, the last Thursday of March, 1914.

At the above meeting Dr. P. J. Stricker, of Bordelonville, read the following paper on

“SUGGESTIONS FOR THE BETTERMENT OF THOSE WHO PRACTICE
MEDICINE AS A BUSINESS”:

Mr. President and Members of the Avoyelles Parish Medical Society, Greeting:

Being a stranger among you and having just been honored as a member into your valued organization, you will not expect anything from me in the way of a scientific paper, but I must say at the outset that it is very important for which I ask your most careful consideration. I will not attempt more than a few suggestions for the betterment of those who practice medicine as a business.

Much has been done through co-operation for the benefit of the general public and much remains to be done for the pecuniary benefit of the general practitioner of medicine. The present credit system without the least security and prevalent, I am sorry to say, only in this country section, is most abominable and should be remedied at once. The evil has become so pronounced that the presentation of a “doctor’s bill” is, in many instances, regarded as an insult, and if ever paid at all, it is with flotsam and jetsam far in excess of its value.

Should we not see that a doctor’s account is not only legitimate, collectable; should we not co-operate in black-balling all dead beats and demand cash or security for our work with such individuals; the day for the general practitioner is passed, and country physicians just as well throw up the sponge. The regulation of prices also should require our attention. One thing, however, that demands our attention, and it is the immediate abolishment of an evil that is strictly illegal and robs the medical profession of a good deal of respect and of large revenues, which belong to the practitioner of medicine, and which, under difficult conditions, would help to swell a bank account which the poorly paid fraternity do not possess.

This dart I hurl at the common every day “mid-wife.” The law provides for ways and means toward vital statistics. Is there any accuracy on this important subject in this parish?

Can there be any accuracy under the prevailing illegal method of bringing infants into the world and sending them out without pomp and record with which even our blooded stock is honored?

Who is to be blamed for this infraction of the law? While we must admit it is quite courageous on the part of the mid-wife, it is the fault of the doctor whose duty it is to abide by the law and report mid-wives without licenses and those who should not be licensed and force them to abandon their calling in favor of the doctor who is supposed to report all births and deaths.

During my twelve months' practice here I have not attended a single woman in confinement, while my other kind of practice has been very good. Many children were born, but I must admit that the record for this part of the parish must necessarily show very little activity in the way of population, as I know that no births are ever reported save those that are accidentally reported by the physicians. They are not reported because the so-called mid-wives cannot do it and our only means of arriving at any degree of accuracy as to population is through the census every ten years. Thanking you for your kind indulgence and with hopes that our conclusions will be reached and redound to the good of our profession, as well as to our respective communities. To all present my heart goes out for a Merry Christmas, a happy and prosperous New Year.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

EXTENSION WORK FOR MEDICAL SCHOOLS.

The school of medicine has hitherto exercised the function of training young men for the practise of medicine, and in this the entire attention of the faculty has been occupied.

With few exceptions, graduate courses have not been considered in the plans of medical schools, and it has been rather difficult for the graduate to obtain any practical courses in colleges offering regular undergraduate instruction. The need of short periods of instruction on clinical subjects occasioned the development of post-graduate institutions which have arisen in most of the large cities in this country and in some cities abroad.

Even these schools missed the opportunity for developing the graduate in lines of modern conceptions of medical education thru the desire to respond only to a demand for multiple clinics and by practically disregarding all except the most elementary laboratory work, which for a long time was given perfunctorily.

Nowadays it is not sufficient that postgraduate schools shall offer clinics and elementary laboratory courses; the demand has come for modern methods in the instruction arranged for physicians who visit medical centers for educational opportunities.

A considerable percentage of men graduated within the past ten years realizes the advances in methods of diagnosis and practise, and that percentage is desirous of becoming modernized in their systems of handling the sick, so that to-day the every-day practitioner aims at knowing the technical detail of the laboratory, which the recent graduate must know as a matter of course.

The university spirit of higher education has been injected into those schools of medicine which are a part of the university, and with that spirit has come a practical application of the scientific point of view directed at supplying the facilities for advanced ideas and work for those medical graduates who seek opportunities with a sense of research.

The medical school of to-day, then, already has begun to fulfil a broader place in the educational function than formerly, and in the future development along the lines of preventive medicine the school of medicine must occupy a large place in creating lines of public service.

Extensive work for the college of medicine is to be a natural out-growth, and not only among the general public, which is eager for education along technical and scientific lines, but among the profession itself.

Educational institutions in some States have already adopted the visiting system of schools, thru which, at regular intervals, groups of teachers are sent to one community after another to promulgate methods and ideas.

It is gratifying to know, then, that the Council of the Louisiana State Medical Society has opened the way for just this sort of work with the College of Medicine at Tulane University. Post-graduate education may be best afforded at the home of the college where facilities are best, but it will be a great day when the college can be brought to groups of willing students who cannot, for one or another reason, visit the college itself. The systematic arrangement of courses of instruction for the country physician, by a plan which contemplates sending detailed groups of teachers to various centers in the State, opens up a new conception of the service of a medical college, but one which promises a variety of interest and of benefit to the doctor, to the community, to the college, and, above all, to the State, which is served by one of its dependencies.

PHASES OF CRIME.

The whole plan of natural things emphasizes the perfect types by the evidence of variants, some just off the balance and others so deficient in the characteristics of the type as to be almost unrecognizable.

So many different sorts of things contribute to the elements of crime that any discussion of a single plane must necessitate a consideration of the main theme to make way for any selection of one view only.

The human individual is naturally predatory; civilization has developed to such an extent that community protection has overcome the instinct in the vast majority; among the minority there

remain those who still have not learned to appreciate community law. Crime then, is as it is interpreted. With older races and communities, under civilization, the degrees of crime vary within small limits; with newer races, the definition of crime has more latitude and what may not be a crime in the former may be penalized fully in the latter. For example, horse stealing in a frontier community is a hanging offense; in a large city, it is only punishable by imprisonment for a term, usually not very long. So, too, among savage races, the systems of feuds permit killing among the tribes, of one group, without recourse to higher punishment.

Crime, then, must be defined before we can hold any views as to its esthetic effects. In communities with a large negro population, there are frequent upheavals over the violation of white women, while among the negroes themselves, little or no outcry is made, if a negro girl or negro woman is the object of a male negro's lust. With this race, there is likely still extant a trace of tribal marriage by violation which makes the offense even righteous to the negro, who, in spite of the white man's horror and vengeance, often does not understand the reason for the punishment inflicted. Crime, then, among races, is comparative. The degree of offense argues and perhaps determines the degree of commission, in a given community.

There are listed as crimes various offenses against human law; murder and rape are perhaps the most heinous; arson, felonious assaults, perversions and grand larceny are among the others.

The criminal is really not a normal creature. He is as much diseased as one sick with a disease more commonly apprehended. We may feel shocked, sympathetic, afraid, horrified, pained, impressed with many sentiments referred to a sick person.

Disease has many types, not yet even properly classified, but the group of physical defectives, embracing those mentally inefficient, misguided and perverted are in a class apart, and now being investigated for their own good.

In the study of criminology, there are some elemental processes which determine thought, namely, the laws of cause and effect, and their application to heredity and environment and their consequences. The criminal may be so accidentally, circumstance determining the act; much more often the criminal is a type, either arising from antecedents which have been criminal or which have created criminal instincts, or developing under environmental necessities which have occasioned a criminal habit.

Murder began with the human race, and its first incidence argues the accidental criminal for the only antecedent in Adam and Eve suggesting heredity influence was probably an inherent sense of superior animal traits. Throughout the martial history of the world, rapine has been the aftermath of victory and so repeatedly that it has seemed a necessary evil.

The isolation of criminals has never stopped their development and so rapidly has the necessity for provisions against crime developed that the means have scarcely met the needs.

Our point of view changes, too, for the present day altruist and utilitarian, as well, aims at two things which argue for pity and mercy rather than for their opposites. The first is the effort to educate the criminal so as to make him useful even when incarcerated. The second is the aim at the prevention of the future generations of criminals by eugenical methods legally executed through surgical procedures at once stopping the possibilities of the criminal born.

These bespeak a sense of responsibility, akin to that which dictates the solicitous care of a mother for a child born without the attributes of a perfect type; even the worst examples of criminals find a large sympathetic following ready to sacrifice much to save them, though there can be no other object than the morbid sense of responsibility without understanding.

After all, the whole matter of crime is just one phase of the general law of economics, which provides for the select at the expense of the weaker products of existence, no matter what the plane, and if, in the growth of the world in the reach after an ideal, there develop parasites, these must finally give way as the world grows more healthy. In the process of development, the attrition of forces of all sorts destroys the elements antagonistic to growth and the criminal is only an exaggerated type of the unfit, which includes also many kindred types, less unfortunate, but equally irresponsible in the battle of life.

To sum up: Crime is a necessary outgrowth of the forces of society, creating classes with opposed interests and opportunities. The human race is not old enough nor socialistic enough to live evenly in all classes so as to prevent the development of hereditary influences, mental and physical.

All ideas of the submerged classes are morbid, even among themselves. Rational conceptions of the parasites on society, however,

must consider abnormal types as diseased and, therefore, lacking the attributes of the perfect type, and, therefore, because deficient, entitled to the care of human effort, either for their relief or their euthanasia.

Louisiana State Medical Society Notes.

In Charge of DR. L. R. DEBUYS, Secretary, New Orleans.

THE COMING ANNUAL MEETING OF THE SOCIETY.

The Annual Meeting of the Louisiana State Medical Society will be held at the Hotel Grunewald, New Orleans, April 20 to 23, 1914.

Dr. Fred J. Mayer, President of the Society, has arranged to have the day before the opening of the meeting (Sunday, April 19) set aside as a "Medical Sunday," and, with this end in view, will enlist the coöperation of the clergy.

Monday, April 20, will be "Board of Health Day," which will be devoted to the Section on Hygiene and Preventive Medicine.

Tuesday, Wednesday and Thursday, April 21, 22 and 23, will be reserved for other scientific sections.

Friday and Saturday, April 24 and 25, have been assigned for clinics in the various hospitals.

A fuller program will be published in the next issue of the JOURNAL.

COMMITTEE ON ARRANGEMENTS FOR 1914 MEETING OF THE LOUISIANA STATE MEDICAL SOCIETY—Members of the Orleans Parish Medical Society, with the following committees actively in charge, Dr. M. Thomas Lanaux, Chairman:

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Badges—Dr. W. H. Block, Chairman; Drs. Maurice J. Gelpi, J. F. Points, Chaillé Jamison, A. Ficklen, C. E. Verdier, G. Wogan, J. T. Wolfe and W. T. Richards.

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Care of Advanced and Indigent Consumptives—Wallace Durel, Secretary. Parish and Member: Acadia, L. B. Arceneaux; Assumption, L. E. H. Duffel; Avoyelles, Gordon Morgan; Beauregard, J. D. Fraser; Bienville, J. M. Moseley; Bossier, J. Z. Wise; Caddo, J. M. Bodenheimer, J. M. Callaway, F. S. Furman, R. A. Gray, R. H. Gullette, G. B. Lawrason, M. K. Purnell, W. K. Sutherland,

E. L. Sanderson, A. S. Reisor; Calcasieu, R. R. Arceneaux, J. H. Ford, R. G. Holcombe, Geo. Kreeger, T. H. Watkins; Caldwell, E. D. Gardner; Claiborne, J. F. Gladney; Concordia, C. H. Barley; De Soto, W. B. Hewitt; East Baton Rouge, A. L. East, R. C. Kemp, G. W. Sitman, E. B. Young; East Carroll, W. K. Evans; East Feliciana, T. W. Young; Franklin, J. L. Denson; Grant, T. J. Harrison; Iberia, M. B. Tarleton; Iberville, G. A. Darcantel; Jackson, D. E. Brown; Jefferson, Theo. Engelbach; Jefferson Davis, V. A. Miller; Lafayette, A. R. Trahan; Lafourche, J. J. Ayo; La Salle, B. T. Ferguson; Lincoln, W. S. Rutledge; Livingston, V. J. Gautreaux; Morehouse, S. D. Graves; Natchitoches, W. T. Williams; Orleans, Philip Asher, Geo. S. Bel, C. A. Borey, F. Temple Brown, W. W. Butterworth, Geo. S. Brown, W. W. Calhoun, L. C. Chamberlain, J. F. Chretien, H. S. Cocram, Isidore Cohn, E. M. Dupaquier, C. G. Cole, Homer Dupuy, E. D. Fenner, J. B. Guthrie, J. T. Halsey, Ralph Hopkins, G. Keitz, C. J. Landfried, Geo. W. Lewis, Edmund Moss, P. A. McIlhenny, Hermann Oechsner, W. D. Phillips, L. L. Rabouin, P. B. Salatich, W. H. Seemann, C. A. Weiss, Solon Wilson, Wm. Wunderlich; Ouachita, A. H. Gladden, Thos. E. Wright, J. Q. Graves, O. W. Cosby; Plaquemines, W. H. Pipes; Pointe Coupee, W. W. Mathews; Rapides, P. A. Foote, M. Cappel, F. W. Quin, B. N. Sewell, D. K. Texada; Red River, W. L. Davis; Richland, J. S. York; Sabine, W. G. Allen; St. Bernard, J. A. Estopinal; St. Helena, A. J. Newman; St. James, J. G. Doussan; St. John, L. T. Donaldson, Sr.; St. Landry, L. Daly, J. P. Saizan, J. N. Brown, E. S. Barry, Z. T. Young; St. Mary, W. D. Roussel; St. Tammany, A. Givens; Tangipahoa, E. L. McGehee, Jr.; Tensas, R. S. Trice; Terrebonne, J. B. Duval; Union, E. H. Jameson; Vermilion, J. T. Abshire; Vernon, D. O. Willis; Washington, J. H. Slaughter; Webster, H. H. Smith; West Baton Rouge, M. Levert; West Carroll, J. C. Baskin; West Feliciana, R. S. Winn; Winn, D. W. Kelly.

Enforcement of Public Health Rules and Gathering Vital Statistics—Parish and Member: Luther Sexton, Chairman; S. P. Delaup, Secretary; Acadia, J. B. Parrott; Ascension, M. R. Cushman; Assumption, A. A. Aucoin; Avoyelles, L. Tarleton; Bossier, C. H. Irion; Caddo, Louis Abramson; Calcasieu, D. C. Iles; Claiborne, J. F. Gladney; Concordia, M. C. Reeves; De Soto, S. J. Smart; East Baton Rouge, T. P. Singletary; East Feliciana, A. F. Barrow; Evangeline, H. C. Milburn; Franklin, L. F. Robinson; Grant, A. J. Morat; Iberia, George Sabatier; Iberville, A. A. Allain; Jackson, A. E. Simonton; Jefferson, C. F. Gelbke; Jefferson Davis, B. C. Fry; Lafayette, F. R. Tolson; Lafourche, A. J. Meyer; La Salle, J. A. Coleman; Lincoln, S. L. White; Livingston, J. A. Minton; Madison, G. W. Gaines; Morehouse, O. M. Patterson; Orleans, C. W. Allen, J. M. Batchelor, H. D. Bruns, S. M. D. Clark, J. C. Cole, John T. Crebbin, L. De Poorter, C. L. Eshleman,

M. Feingold, Paul J. Gelpi, E. S. Hatch, A. Jacoby, E. S. Kelly, W. H. Knolle, W. W. Leake, Otto Lerch, G. W. Lewis, A. Maestri, R. J. Mainegra, Sr., Paul Michenard, A. J. Montz, H. P. Jones, Mayer Newhauser, J. W. Newman, J. A. O'Hara, F. W. Parham, J. F. Points, L. M. Provosty, P. A. Moore, J. A. Storek; Natchitoches, J. S. Stephens; Ouachita, C. P. W. Gray; Plaquemines, G. A. B. Hays; Pointe Coupee, L. E. Bergeron; Rapides, R. L. Randolph; Richland, J. M. Barrier; Sabine, C. M. Petty; St. Bernard, J. A. Estopinal; St. Charles, V. Lehmann; St. Helena, C. M. Sitman; St. James, J. L. Deslattes; St. John, S. Montegut; St. Landry, R. G. Hawkins; St. Mary, J. C. Berwick; St. Tammany, R. B. Paine; Tangipahoa, H. G. Morris; Vernon, J. H. Word; Washington, J. L. Brock; West Baton Rouge, J. O. St. Dizier; West Carroll, C. W. Smith; West Feliciana, J. M. Daniel; Winn, B. H. Talbot.

Collective Investigation of Malaria in Louisiana, Relative to Drainage and Public Roads Thereto—Dr. C. C. Bass, Chairman; Dr. Foster M. Johns, Secretary. Parish and Member: Acadia, D. D. Mims; Allen, T. R. Sartor; Ascension, M. R. Cushman; Assumption, H. C. Dansereau; Avoyelles, G. R. Fox; Beauregard, S. O. Turner; Bienville, W. B. Allums; Bossier, J. R. Snider; Caddo, S. L. Christian; Calcasieu, Geo. Kreeger; Claiborne, A. R. Bush; De Soto, S. D. Kearney; East Baton Rouge, R. C. Kemp; East Feliciana, W. D. Wall; Franklin, C. L. Ramage; Iberville, W. L. Grace; Lafourche, L. E. Meyer; Lincoln, H. N. Harper; La Salle, J. A. Coleman; Livingston, J. A. Minton; Madison, G. W. Gaines; Morehouse, E. M. Clark; Natchitoches, J. Stephens; Red River, C. E. Edgerton; Orleans, Philip Asher, H. P. Jones, G. K. Pratt, Jr., L. M. Provosty; Ouachita, G. M. Trezevant; Plaquemines, H. L. Ballowe; Pointe Coupee, L. E. Bergeron; Rapides, F. V. Gremillion; Richland, J. C. Sartor; Sabine, T. B. Younger; St. Bernard, J. A. Estopinal; St. Charles, V. Lehmann; St. John, L. T. Donaldson, Sr.; St. James, W. F. Bolton; St. Landry, T. T. Tarlton; St. Tammany, B. B. Warren; Tangipahoa, C. S. Stewart; Vermilion, C. J. Edwards; Vernon, F. P. Jones; Webster, L. Longino; West Baton Rouge, F. H. Carruth; Winn, B. H. Talbot.

Collective Investigation of Cancer in Louisiana—Dr. O. W. Cosby, Chairman; R. H. Blackman, Secretary. Parish and Member: Acadia, M. L. Hoffpauir; Ascension, T. H. Hanson; Beauregard, S. T. Roberts; Bienville, C. Crawford; Bossier, J. B. Hall; Caddo, E. L. Sanderson; Calcasieu, J. D. Tuten; Claiborne, C. C. Craighead; De Soto, E. Davies; East Baton Rouge, W. S. Cushman; East Feliciana, E. M. Toler; Franklin, L. F. Robinson; Iberville, W. E. Barker; East Carroll, W. K. Evans; Grant, E. B. Grav; Lafayette, Geo. R. DeLaureal; Lincoln, W. S. Kendall; Lafourche, H. S. Smith; La Salle, B. T. Ferguson; Livingston, W. W. Faust; Morehouse, C. L. Hope; Natchitoches, E. W.

Breazeale; Red River, W. W. Gahagan; Orleans, Isadore Dyer, H. E. Menage, W. D. Phillips, H. Wade; Ouachita, J. Q. Graves; Plaquemines, C. Y. Seagle; Pointe Coupee, T. J. Box; Rapides, J. C. Hardy; Richland, R. L. Jones; Sabine, C. M. Petty; St. Bernard, J. A. Estopinal; St. John, J. W. McGehee; St. James, R. F. DeRouen; St. Landry, G. Richard; St. Tammany, F. G. Rohmer; Tangipahoa, J. H. McClendon; Vernon, W. N. Palmer; Webster, S. M. Richardson; West Baton Rouge, H. G. Riche; West Feliciana, G. McG. Stewart; Winn, D. W. Kelly.

PARISH SOCIETY MEETINGS.

THE BI-PARISH MEDICAL SOCIETY.

At a regular meeting of the Bi-Parish Medical Society, held at Natchitoches on December 3, 1913, the following answered to roll call: Drs. C. E. Edgerton, J. S. Stephens, J. T. Keator, W. L. Davis, W. F. Sibley, W. T. Williams, J. B. Pratt, E. R. Harrington, Z. T. Gallion and E. Y. Breazeale. Dr. C. E. Edgerton, president, called the meeting to order. Drs. W. H. Huckabay and M. H. Phelps, having made application, were recommended and duly elected to membership.

Motion by Dr. E. R. Harrington that the two parishes separate and that Natchitoches and Red River each organize a separate Parish Medical Society received general discussion. Failing to get a second, Dr. Harrington withdrew the motion and pledged his assistance and co-operation in building up the Society, both as to membership and advance in medical research.

The following resolution by Dr. C. E. Edgerton, seconded by Drs. Williams, Pratt and Keator, was unanimously carried: That the date of the fall meeting at Natchitoches, as heretofore taking place in December of each year, be changed, and that instead we meet on the first Wednesday after the second Monday in October, and that the spring meeting remain the same as in the past, and that a written notice be sent by the secretary to each member and the same be incorporated in the by-laws.

Dr. E. R. Harrington read a paper of Pellagra, which was discussed by Drs. Stephens, Davis and Edgerton, with closing remarks by Dr. Harrington.

Dr. Sibley, on behalf of the Tri-State Medical Society, extended an invitation to the Society to be present at the meeting of the Tri-State Society at Texarkana, Arkansas, on December 9 and 10, promising all a good time.

The following were appointed to prepare and read papers at the next meeting: Dr. J. B. Pratt, on Practice; Dr. W. L. Davis, on Surgery; Dr. W. H. Huckabay, on Gynecology; Dr. J. T. Keator, on Pneumonia; Dr. Z. T. Gallion, on Obstetrics; Dr. E. R. Harrington, on Medical Ethics.

There being no further business, the meeting adjourned to meet in Coushatta on Wednesday, April 8, 1914.

DR. E. W. BREAZEALE,
Secretary and Treasurer Bi-Parish Medical Society.

WEBSTER PARISH MEDICAL SOCIETY.

A meeting of the Webster Parish Medical Society was held at Minden, La., December 23, 1913. Dr. H. H. Smith, president; Dr. L. Longino, vice-president; Dr. W. McDade, secretary and treasurer. These officers were re-elected for 1914.

The following members were present: Drs. H. H. Smith, L. Longino, R. C. Tompkins, C. T. Deloach, J. R. Browning, S. F. Martin, J. G. Gladney, R. E. Smith and W. McDade. Visiting physicians were Drs. Cason and Houston.

A paper on "Masturbation" was read by Dr. Luther Longino.

We had a very good meeting and have promised ourselves to make our Society for 1914 a better year than we have ever had.

Next meeting will be held at Cotton Valley, La., on the first Tuesday in March.

W. McDADE, M. D., Secretary.

ST. JOHN-ST. CHARLES SOCIETY.

The regular annual (fourth quarterly) meeting of the St. John-St. Charles Bi-Parish Medical Society was called to order at 11:30 a. m., December 3, 1913, with the following members present: Dr. H. D. Cooper, vice-president, presiding; Drs. J. P. Elmore, S. Montegut, R. H. Johnson and L. Chevis Tebo. The minutes of the last meeting and the annual report of the secretary-treasurer were read and approved.

Papers were read by Drs. Johnson, Elmore and Montegut, and report of clinical cases made, with discussions on same, following in the order mentioned.

After the transaction of miscellaneous business, an election of officers for 1914 was held, resulting as follows: Dr. R. H. Johnson, of Hahnville, president; Dr. J. P. Elmore, of Edgard, vice-presi-

dent; Dr. L. Chevis Tebo, of Reserve, secretary-treasurer; Dr. V. Lehmann, of Hahnville, delegate to the State meeting.

There being no further business to transact, the Society adjourned. (Signed) L. CHEVIS TEBO, M. D., Secretary.

Medical News Items.

THE GEORGIA SURGEONS' CLUB will meet in New Orleans, February 27-28, 1914. The purpose of the Georgia Surgeons' Club is to arrange in advance, through an executive committee, with the heads of the various clinics, a program that will occupy the entire time allotted, so that a short period of clinical study of surgery may be of value. A program of clinics has been arranged for the coming meeting by the surgeons of New Orleans. The officers of the club are: Dr. E. C. Davis, Atlanta, Ga., president; Dr. Thos. J. McArthur, Cordele, Ga., vice-president; Dr. R. M. Harbin, Rome, Ga., secretary-treasurer.

APPROPRIATION FOR PELLAGRA HOSPITAL.—Secretary McAdoo has asked Congress to appropriate \$47,000 for a pellagra hospital in some Southern city. If the appropriation is granted the proposed hospital will be equipped with twenty-five beds and all facilities necessary for the conduct of metabolic and physico-chemical studies, considered necessary by the Public Health Service because of the suspicion of the association of the disease with diet and metabolism.

CHAUTAUQUA SALUTE CONDEMNED.—The Chautauqua salute has come under the ban as a distributor of colds, influenza and tuberculosis. Resolutions condemning the familiar flutter of handkerchiefs, which marks many gatherings, were presented recently to the Public Health Service and to the Society for the Prevention of Tuberculosis by a local aid organization in Washington, which works for the cure and prevention of the white plague.

MEAT PRODUCTION WILL BE STUDIED.—A special committee of experts has been appointed to conduct a general inquiry into

various factors which contribute to the present unsatisfactory meat production conditions in the United States. The committee will especially investigate beef, with a view to suggesting possible methods for improvement. The personnel of the committee includes Dr. B. T. Galloway, Assistant Secretary of Agriculture, chairman; Dr. H. J. Waters, president of the Kansas State Agricultural College; Prof. C. F. Curtiss, dean of Iowa State College; Prof. H. W. Mumford, professor of animal husbandry, University of Illinois; Dr. A. D. Melvin, chief of the Bureau of Animal Industry, U. S. Department of Agriculture, and Dr. T. N. Carver, director rural organization service, U. S. Department of Agriculture. The committee's work will center largely on the study of economic questions involved in the production, transportation, slaughter and marketing of meat.

DETROIT COLLEGE OF MEDICINE AND SURGERY.—The Board of Trustees and Faculty of the Detroit College of Medicine and Surgery has sent out invitations to inspect its college building and newly-equipped laboratories.

NEW FUNGUS MAY CURE DIPHTHERIA.—Dr. T. L. Ten Broeck, of Minneapolis, describes in the *Medical Record* a new method of treating diphtheria. He relates his experience in implanting in the throats of diphtheria patients a fungus which multiplies rapidly and destroys the germs responsible for the disease. The fungus is called *achyla muscaris*, and is described as thalophytic fungus. Dr. Ten Broeck says that the fungus possesses the power of destroying bacilli of diphtheria in culture and in the throat, and is applicable in all stages of the disease.

DR. BASS AGAIN HONORED.—The Orleans Parish Medical Society presented Dr. C. C. Bass a medal in recognition of his services in the field of medical science, and particularly for his work with the plasmodium. The presentation occurred at a meeting of the Society on Monday, January 12, 1914, when the newly-elected officers of the Society were installed.

CANCER CURED BY RADIUM.—Dr. Abraham Jacobi, ex-president of the American Medical Association and an authority on women's and children's diseases, was cured of cancer by radium. Dr. Jacobi made the announcement at a meeting of the Eastern Medical So-

ciety in Buffalo. Seven years ago an epithelioma appeared upon his nose, and for two years it gave him a great deal of worry. He was subjected to radium treatment, and a prompt cure resulted. This was accompanied by three applications—one of three minutes, one of four minutes and one of seven minutes, at short intervals.

PERSONALS.—Prof. Christian R. Holmes has been installed as dean of the College of Medicine (Ohio Medical College) of the University of Cincinnati.

Dr. Creighton Wellman has resigned from the Tulane College of Medicine.

Dr. Elmore D. Tichenor, formerly of this city, but now of the faculty of the Medical College at Detroit, spent the Christmas holidays with his parents in New Orleans.

Dr. Lewis H. Marks, of Frankfort, A. M., Germany, spent a few days in the city recently. Dr. Marks was associated with Prof. Ehrlich in his recent discoveries.

Mr. Richard Bruff, former secretary of Tulane University, has been appointed registrar of that institution.

Dr. Isidore Cohn, of New Orleans, delivered the annual address at the annual meeting of the Nashville Academy of Medicine, on January 6, 1914. His subject was, "Regeneration of Bone."

REMOVALS.—Dr. N. N. Crook, from Gibsland, La. to Cuthbert, Ga.

Dr. Walter M. Dake, from Denver, Colo., to Dugan-Stuart Building, Hot Springs, Ark.

Dr. Clarence Martin, from St. Peter's Hospital, London, to 3700 Morgan street, St. Louis, Mo.

Dr. R. B. Paine, from Slidell, La., to Mandeville, La.

MARRIED.—On January 13, 1914, Dr. J. S. Stephens to Miss Jessie Bowden, both of Natchitoches, La.

On January 14, 1914, Dr. Foster M. Johns and Miss Olga Carrie Wenck, of New Orleans.

DIED.—On January 13, 1914, Dr. Edward C. Spitzka, of New York City, aged 61 years. Dr. Spitzka was an authority on insanity. He was the discoverer of the interoptic lobes of the lower brain and the author of many medical works.

On December 29, 1913, Dr. Emma E. Musson, of Philadelphia, aged 50 years. Dr. Musson was professor of otology at the Women's Medical College, Philadelphia.

On January 16, 1914, Dr. Roger Louis De Montluzin, formerly of New Orleans, but for many years a resident of Bay St. Louis, Miss.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

A Clinical Manual of Mental Diseases. By Francis X. Dercum, M. D., Ph. D. W. B. Saunders Company, Philadelphia and London, 1913.

There are many good reasons for the recommendation of this work, which is based upon the annual course of lectures delivered by the author at the Jefferson Medical College, to the family physician for use. It presents the subject of mental diseases from the clinical aspect which is always certain to prove both highly instructive and interesting. Though the classification presented differs from that given in recent works on this subject, it is nevertheless simple and thorough. The first group comprises the mental conditions most frequently met with in general practice, i. e. delirium, confusion, stupor. There are considered in turn the melancholia-mania-circular insanity group, the heboid-paranoid (dementia precox, paranoia) group; the neurasthenic-hemopathic (psychasthenia) group and dementias.

The second part of the work presents the clinical forms of mental diseases related to somatic affections, such as the infections, intoxication, visceral diseases, pregnancy, puerperium, and mental diseases as related to age. Both of these chapters deal with the subject matter just as one will find it in every-day practice. The last chapter deals with the prevention and treatment of mental diseases. Here the reader will find detailed instructions for the proper management of both extra and intra-mural cases of mental diseases.

CAZENAVETTE.

Surgical Clinics of John B. Murphy, M. D. W. B. Saunders Co., Philadelphia and London, 1913.

We have deemed it best to review collectively the first five numbers of Murphy's (1913) Clinics, which, with the December number of the same year, will form the second volume of this most valuable contribution to surgical literature. The first (February) number of this issue contains a treat in the form of a lecture by Arbuthnott Lane of London on the open treatment of fractures. One should read it to grasp exactly our British confrere's contentions.

A case of luxation of semi-lunar cartilages is related with appropriate comments and operative details. It is of interest, as Murphy justly says that this particular lesion is either becoming more common

or more attention is being paid to it. The treatment of intestinal fistula, laminectomy arthrodesis and other subjects are handled in Murphy's masterful style.

In the April issue is to be found among many other lectures the following description of Murphy's original operation—Hysterectomy—for which he claims many advantages over the other accepted methods; gastric, pyloric and duodenal ulcers are described with excellent pertinent hints.

Impacted fracture of the body of first lumbar vertebra, laminectomy with rapid recovery following decompression of cord.

Ureteral calculus, cerebellar tumor with quite a dissertation on choked disc, its modus operandi, its significance, etc.

From the June number we may cite obturation, ileus obstruction, due to large gall stones in ileum; intestinal stasis caused by bands of adhesions; arthroplasty of the hips; Dr. Murphy's uteropexy and his clinic at the Mercy Hospital.

We note in the August publication some observations on vaccine and serum-therapy; several cases of bone surgery with osseous transplantation; interposition of facial flaps for ankylosis of jaw; a cerebellar case in which the patient was kept breathing with Pulmotor 34 hours.

The October surgical clinics are like the preceding ones, replete with varied subjects, all so clearly and instructively presented. It is indeed difficult to pick out the most important lectures. We will, however, mention that on double inguinal hernia, with Italian statistics and a graphic technic of the Andrews' operation; appendicitis with differential diagnosis; early management of joint infections to prevent ankylosis; carcinoma of tongue with laboratory examination of specimen; abdominal fetal fistula with appropriate remarks, and a talk on cancer by Dr. Rodman of Philadelphia.

To see Murphy operate or hear his surgical lectures is a privilege, but to pursue carefully his published clinics is a surgical treat.

LARUE.

Surgical Treatment. By Cheyne and Burghard. Lea & Febiger, Philadelphia and New York, 1913.

The fourth volume of Cheyne and Burghard's Manual of Surgical Treatment is a valuable addition to the preceding ones.

The treatment of the Surgical Affections of the Jaws, Tongue and Alimentary Canal is presented in a masterly way.

We were particularly impressed with the chapters concerning the stomach and intestines.

Many lucid and appropriate illustrations are found in this volume.

LARUE.

Operative Surgery. By John F. Binnie, A. M., C. M., N. V. (Aberdeen), P. Blakiston's Son & Co., Philadelphia, 1913.

It has been our privilege to review the former editions of Binnie's Operative Surgery so that we are in a position to recognize any improvement in the present volume—the sixth edition.

This edition has, in fact, been necessarily enlarged, new ideas and perfected operative methods having loomed up within the past two years.

As Binnie states in his preface, he has endeavored to present every advance in surgical technic so that his latest work would be thoroughly up-to-date.

A graphic description is given of the operation of hypophysectomy or excision of the pituitary body for the cure or relief of acromegaly and other peculiar conditions. We take pleasure in seconding Binnie's efforts by heartily recommending this newest edition.

LARUE.

Surgery of the Vascular System. By Bertram M. Bernheim, A. B., M. D.
J. B. Lippincott Co., Philadelphia and London, 1913.

This timely and very valuable contribution to Vascular Surgery is from the pen of one who has the distinction of being instructor in surgery at the Johns Hopkins University. Bernheim was in a position to present this phase of up-to-date surgery, including some original work, having had such excellent opportunities under the guidance and interest of such men as Halsted, Finney, Bloodgood and Harvey Cushing.

Naturally the names of Payr, Dorrance, Carrel, Crile and Matas are mentioned in their respective places.

This is no doubt one of the best and condensed books on the subject of Vascular Surgery, from both the historical and technical point of view.

The value of the book is enhanced by the best print and most accurate illustrations.

LARUE.

Blood Pressure From the Clinical Standpoint. By Francis Ashley Faught,
M. D. W. B. Saunders Company, 1913.

Who shall write a book on blood pressure? We think that Dr. Faught possesses in a great degree the necessary qualifications. As the inventor of a good instrument for the determination of blood pressure, and as instructor in this field for some time, his information is for the most part first-hand.

It is perhaps safe to assert that the sphygmomanometer has done more to advance the diagnosis of cardio-vascular disease than any other device or procedure of our acquaintance. That blood pressure, by means of the sphygmomanometer, is being better studied than ever before goes without saying. Many physicians now own, or employ, these instruments for the study of cardio-vascular disease. That some who use the instrument do so improperly does not detract from the value of the procedure.

Some of the factors which influence blood pressure are as follows: there is little change between the standing and the sitting posture; between the standing and the recumbent positions, the rise may be as much as 20 mm.; emotion and excitement play an important part; every effort should be made to eliminate these disturbing factors before and during the test; it is believed that in a person whose muscular system is well developed the normal systolic pressure may be from 5 to 15 mm. above that of a physically weak individual; diminished barometric pressure is claimed to lower the blood pressure; if taken in moderation, strong alcoholic drinks do not materially influence blood pressure; owing to the bulk of fluid, large amount of beer cause a temporary rise of from 5 to 15 mm.; next to adrenalin nicotine is the most powerful vaso-constrictor known; Cook and Briggs have shown a temporary rise in blood pressure following smoking, yet we have the apparent paradox that these who indulge in excessive smoking have a subnormal blood pressure; the moderate use of cigars has been found by many, including the author, to cause reduction in pressure, though continuous smoking resulted in a rise from 5 to 15 mm.

The new factors here mentioned as influencing blood pressure constitute only a small part of what may be said on the subject, but they are the most important to bear in mind aside from diseased conditions.

The opposite condition to high blood pressure, i. e., hypotension, deserves careful consideration, as it is often found to be an early sign of tuberculous infection.

In writing of arteriosclerosis, the author complains, and rightly so, that "its causes and treatment, are most discouraging, as no two authorities appear to agree even upon the most fundamental and important points." He says that the term arteriosclerosis is too often loosely employed by physicians.

As a list of the most important vasodilators the following are enumerated: amyl nitrate, nitroglycerin, potassium nitrate, sodium nitrite, erythrol tetranitrate, mannitol hexanitrate, vasotonin, diuretin, agurin.

Caution should be used before employing any drug in this group, as failure to obtain effect is often due to deteriorated preparations. This is particularly true of sodium nitrite.

We have derived much profit from a reading of this book.

STORCK.

The Art of Medicine, and Other Addresses, Papers, Etc. By Isadore Dyer, Ph. B., M. D. J. A. Majors & Co., New Orleans.

This is a collection of some of the writings by Dr. Dyer, produced during the last twelve or thirteen years.

Of the two dozen units composing the volume, three are poems. Of the remainder, nearly all have been published, mostly in various medical journals.

All are of merit, the most important being "The Art of Medicine," "The Philosophy of Wellbeing," "The Barber Shop in Society," "The Owen Bill," and "Medical Education." The titles alone of these attest to Dr. Dyer's well-known versatility.

It was a happy idea to gather these products of Dr. Dyer's pen, as no doubt his numerous admirers will be glad to have them in a compact form. They are neatly presented and an interesting feature of the book is a good likeness of the author as a frontispiece.

C. C.

Obstetrics. By Walter P. Manton, M. D. Second edition. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

This is a manual for students and practitioners and is included in Lea & Febiger's Medical Epitome Series. The author states that he strove to make it a brief but comprehensive manual of the essentials of obstetrics as distinguished from a compend.

The present edition demanded a rewriting of the text in order to make it conform to modern methods and ideas.

It contains one hundred well selected illustrations and it must be said that the author has succeeded in condensing into a small volume a surprising amount of the essentials of obstetrics.

MILLER.

Elements of Bacteriological Technique. By J. W. H. Eyre, M. D. Second edition, 219 illustrations. W. B. Saunders Company, Philadelphia and London, 1913.

The second edition of this already well-known volume will be welcomed by all those interested in laboratory work. It is clear, concise and reliable and has been brought up-to-date by a number of additions and revisions of older methods. There are 219 well-chosen illustrations. A commendable point is the clearness and simplicity which characterize all exercises and description of procedures. This renders the book especially valuable to isolated and independent workers who have not the advantages of established laboratories. The volume is well indexed and is altogether commendable.

WELLMAN.

Syphilis and the Nervous System for Practitioners, Neurologists and Syphilologists. By Dr. Max Nonne. Authorized translation by Charles R. Ball, B. A., M. D. J. B. Lippincott & Co., Philadelphia and London.

There is no phase of lues at this time of more direct concern to the average man in medicine than that related to the nervous system and

the presentation of an English edition of Dr. Nonne's accepted text is indeed timely.

The present edition has been brought down to date and the consideration of each chapter correlates modern views of the origin, cause, and biology of syphilis. Even the newer therapy finds place and recent bacteriological researches are fully covered.

The text is excellently arranged for either teacher or student and the matter is presented in so readable a form that it will be a great privilege to any physician who may own so excellent a book. DYER.

Sex; Its Origin and Determination. By Thomas E. Reed, M. D. Rebman Company, New York.

There is a vast amount of miscellany embraced in the book bearing the title at the head of this notice. Most of the matter contained relates directly or indirectly to the theories of sex determination and the author has conscientiously presented and related a large number of theories already proposed.

The book is everywhere keenly interesting and the pabulum will afford others the opportunity of further speculation on many topics not altogether related to sex.

The author strikes out into ideas of novelty in arguing a co-relation of functioning centers as determining characteristics. Life is a series of chemical reactions, resulting in growth which reaches its limitations in due course, but the bounds are broken by reproduction, in which types go on in spite of extrinsic limitations. Reproduction results from overgrowth, but the determination of the process is essentially a feminine function, biologically, though no reproduction may ensue without the dual quality of both sexes; the accidental (apparently) determination of sex depends on the phase of the cycle of the germ plasm at the time conception takes place. The coincidence of conception with the phase of mere time as calendared by the lunar month fixes the exact period in the physiological rhythm in which sex, male or female, predominates in the developing embryo. Alternation is one phase of the sex determination, often occurring against the rule.

Of such hypotheses is the book made and a further excursion is left to the reader who is invited to interpret the author's logic at first hand. DYER.

A Compend of Diseases of the Skin. By Jay F. Schamberg, A. B., M. D. P. Blakiston's Son & Co., Philadelphia, 1913.

We are glad to see a new edition (the fifth) of this little compend. It is a good ready guide to the busy practitioner and its popularity is attested by the demand for another printing.

The text has been generally revised, even though the author still employs a classification which leads away from accepted usage.

The illustrations have not been much improved since former editions, but the terminology shows a number of changes. Quite a few new suggestions in treatment have been added. DYER.

Pyorrhea Alveolaris. By Frederick Hecker, B. Sc., D. D. S., etc. Illustrated. C. V. Mosby Company, St. Louis.

This little brochure of some 150 pages very comprehensively covers the discussion of different types of pyorrhea, and presents, at the same time, the modern bacteriological point of view of this affection of the gums and teeth.

While of direct interest to the dental profession, the medical man is also interested in this disease which is so immediately associated with the major organs of the body. The illustrations are excellent and well placed. DYER.

Publications Received.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1913.

"An Introduction to the History of Medicine," by Fielding H. Garrison, A. B., M. D.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1913.

"Meningococcus Meningitis," by Henry Heiman, M. D., and Samuel Feldstein, M. D., with an introduction by Henry Koplik, M. D.

"International Clinics." Volume IV, twenty-third series, 1913.

P. BLAKISTON'S SON & COMPANY, Philadelphia, 1913.

"Surgery of the Upper Abdomen," by John B. Deaver, M. D., Cc. D., LL. D., and Astley Paston Cooper Ashurst, A. B., M. D. Volume I and II.

"The Practice of Medicine," by James Tyson, M. D., LL. D., and M. Howard Russell, M. D. Sixth edition, revised and enlarged.

WILLIAM WOOD & COMPANY, New York, 1913.

"Cunningham's Text-book of Anatomy," edited by Arthur Robinson, M. D., F. R. C. S. Fourth edition, enlarged and rewritten.

LEA & FEBIGER, Philadelphia and New York, 1913.

"Medical and Sanitary Inspection of Schools," by S. W. Newmayer, A. B., M. D.

E. W. ALLEN & COMPANY, Atlanta, 1913.

"Genito-Urinary Disease and Syphilis," by Edgar G. Ballinger, M. D., assisted by Omar F. Elder, M. D.

"The Wasserman Reaction," by J. Edgar Paullin, M. D. Second edition, revised.

Miscellaneous.

"Annual Report of the United Fruit Company Medical Department for the Years 1912 and 1913." (Press of Geo. H. Ellis, Boston, 1913.)

"Forty-fifth Annual Report of the Secretary of State on the Registration of Births, Deaths, Marriages and Divorces in Michigan for the Year 1911."

"Annual Report of the Bureau of Health of the Philippine Islands for the Fiscal Year July 1, 1912, to June 30, 1912.

"Quarterly Bulletin of the Louisiana State Board of Health." New Orleans, November 1, 1913. Volume IV, No. 4.

"Epidemiologic Studies of Acute Anterior Poliomyelitis," by Wade E. Frost. (Washington Government Printing Office, 1913.)

"Transactions of the American Surgical Association," edited by Archibald Mac Laren, M. D. Volume XXXI. (Wm. J. Dornan, Philadelphia, 1913.)

"E. Merck's Annual Report." Volume XXVI. (E. Merck Chemical Works, Darmstadt, 1913.)

"Transactions of the American Otological Society." Forty-sixth annual meeting. Volume XIII, Part 1. (Mercury Publishing Co., New Bradford, 1913.)

"Proceedings of the Canal Zone Medical Association, Isthmian Canal Commission." Volume V, Part 1.

"When Did It Happen?" (Published by Reed & Carnrick, New Jersey.)

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans.
FOR DECEMBER, 1913.

CAUSE.	White	Colored	Total
Typhoid Fever.....	3	2	5
Intermittent Fever (Malarial Cachexia).....		3	3
Smallpox.....	1		1
Measles.....			
Scarlet Fever.....			
Whooping Cough.....		1	1
Diphtheria and Croup.....	10	3	13
Influenza.....	5	2	7
Cholera Nostras.....			
Pyemia and Septicemia.....	1	1	2
Tuberculosis.....	38	40	78
Cancer.....	19	7	26
Rheumatism and Gout.....	1		1
Diabetes.....	2	1	3
Alcoholism.....	1		1
Encephalitis and Meningitis.....		1	1
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	18	8	26
Paralysis.....	4	2	6
Convulsions of Infancy.....	2		2
Other Diseases of Infancy.....	17	8	25
Tetanus.....	2	1	3
Other Nervous Diseases.....	7	2	9
Heart Diseases.....	63	41	104
Bronchitis.....	4	5	9
Pneumonia and Broncho Pneumonia.....	27	23	50
Other Respiratory Diseases.....	1	1	2
Ulcer of Stomach.....		1	1
Other Diseases of the Stomach.....	5	2	7
Diarrhea, Dysentery and Enteritis.....	30	14	44
Hernia, Intestinal Obstruction.....	1	1	2
Cirrhosis of Liver.....	5	3	8
Other Diseases of the Liver.....	6	1	7
Simple Peritonitis.....			
Appendicitis.....	2	2	4
Bright's Disease.....	31	20	51
Other Genito-Urinary Diseases.....	8	6	14
Puerperal Diseases.....	10	7	17
Senile Debility.....	4		4
Suicide.....	4		4
Injuries.....	19	14	33
All Other Causes.....	13	22	35
TOTAL.....	365	245	610

Still-born Children—White, 34; colored, 20. Total, 54.

Population of City (estimated)—White, 272,000; colored, 101,000.
Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 16.10; colored,
29.10. Total, 19.65.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.12
 Mean temperature 55.
 Total precipitation 1.78 inches
 Prevailing direction of wind, east.

New Orleans Medical and Surgical Journal.

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MARCH, 1914.

No. 9

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

THE CESARIAN SECTION IN ANTE-PARTUM HEMORRHAGE.*

By WM. KOHLMANN, M. D., New Orleans.

The fact that in recent years more operative procedures are employed in obstetrics, and especially in obstetrics in hospital work, has produced the impression that more operations are performed than before. But statistics show that not the quantity of operations has increased, but their quality has changed. Version, high forceps, artificial premature birth, craniotomy on living child, have no doubt decreased in frequency.

I mentioned just now that the quality of operative procedures has changed—a change which we recognize, too, in the treatment of ante-partum hemorrhage. In placenta previa there are mainly two methods of treatment which have been employed during the past years—Braxton-Hicks version and metrenyxis. I do not intend to discuss the advantages and indications of either one. Reports from many institutions show a mortality of mothers from 7

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

to 10 per cent and more, and children from 60 to 70 per cent. In most instances the loss of blood in their employment is very great, and has been the cause of death in the majority of cases. In only 10 per cent is sepsis found to be the cause of death.

To reduce this high mortality, Cesarian section has been recommended in recent years in the management of a certain number of cases of placenta previa. There are mainly three points which are to be considered in favor of this radical procedure:

First. The dilatation of the lower uterine segment can be avoided, and thereby the intra-partum hemorrhage prevented.

Second. If labor has begun, and loss of blood has already been so great that the continuation might prove fatal, a Porro Cesarian may yet save mother and child.

Third. Cesarian section will prevent the post-partum hemorrhage, which most frequently complicates these cases.

Especially Krœnig and Sellheim have recommended and employed this method of delivery in special, selected, cases, as placenta previa centralis and lateralis, before complete dilatation of the cervix has taken place. As yet this treatment has not been recognized generally. But without doubt the low mortality of Cesarian section at the present time, and the great reduction of the infant mortality by this operation, will more and more, I may say, popularize the abdominal delivery.

In cases of central or lateral placenta previa, pregnancy being at or near term, living child, mother in good condition, cervix closed or only slightly dilated, Cesarian section ought to be the operation of choice. Such a case came recently under my observation, and I advised the abdominal delivery, which was successfully carried out.

Mrs. F. W., age 36 years, admitted August 29, 1912; discharged September 7, 1912. Menses always normal. Five normal deliveries. Last menstruation, December 21, 1911. Has been in good health during present pregnancy. Two days ago, slight uterine hemorrhage. Twenty-four hours later, second and more profuse hemorrhage was stopped by pack. After few hours there was severe bleeding, which came through pack. Vaginal examination showed free bleeding, os dilated for two fingers; permeable, placental tissue can be felt covering the os. Labor pains have been felt for last two hours. Temperature normal; pulse, 120.

Diagnosis—Placenta previa centralis.

Operation—Abdominal incision, five inches long, two inches above navel, extending three inches below navel.

Uterus was opened in position, and child, female, eight and one-half pounds, easily delivered. Placenta was found over covering the os uteri. Bleeding was moderate during operation. Iodoform gauze was intro-

duced into uterus down into the cervix. Uterus contracted well. Mother made normal recovery and left hospital with healthy child on ninth day.

Accidental hemorrhage, or abruptio placenta, as suggested by DeLee, a term which means the premature separation of the normally implanted placenta, is much less frequent, but more dangerous to mother and child than the just-mentioned placenta previa.

The statistics of Goodell show a mortality of 51 per cent. of mothers. Of his 106 cases collected in the literature, 54 died; 41 died without being delivered at all. Only six children were living. Brauns reports 51 cases, with a mortality of 25 per cent. for mothers. Only six children were delivered living, and four died immediately after birth. Hertzfeld—cases collected from 1900 to 1906—reports for mothers 20 per cent. mortality; for children, 78 per cent. Steffens, 27 per cent for mothers and 81 per cent mortality for children. Zweifel reports 22 cases from 1901 to 1912. He gives a mortality of 90 per cent for children. He calls special attention to the complicating post-partum hemorrhage, on account of atony of the uterus. He considers the atony due to the anemic condition of the patient on account of the previous prolonged bleeding, but most probably the pathological condition of the uterus leading to this complication may predispose to atony. Four of his cases died, due to this complication. In three cases he performed abdominal hysterectomy, on account of the impossibility to stop hemorrhage, and he considers that the three cases were saved only by this heroic measure.

The causes of accidental hemorrhage have been explained in different ways. Traumatism was considered to be the causal factor in some cases, but most probably only by pre-existing local abnormal conditions. Winter drew attention to nephritis, which he found existing in a number of such cases. V. Weiss and Gotschalk attribute the most important rôle to endometrial changes and degeneration of the decidua.

Considering the high mortality of mothers and children, I advised the abdominal delivery, either conservative Cesarean or Porro, in case of danger of post-partum hemorrhage, in a case which came under my observation a few weeks ago, as the safest procedure for the child, and most probably for the mother.

At the time of operation the condition of the mother was very good, and delay would have been possible; but the mother, having

no living children, was asking greatest consideration for the child.

Mrs. J. S., age 34, admitted March 10, 1913; discharged March 25, 1913. Menstruation began at the age of 14; painful, profuse, lasting four days. Leucorrhœa. One pregnancy ten years ago; a dead child was delivered after a long and difficult forceps.

Patient considered herself near full term. Was in good health until day of admission. Had a severe coughing spell, which brought about a severe uterine hemorrhage. As bleeding did not cease, patient was transferred to the hospital three hours later.

General condition was good. Pulse, 110, and of good volume. Temperature normal; urine normal. Uterine contractions had been felt about every fifteen to twenty minutes. Fetal heart-sounds could be heard on right side of umbilicus, fairly strong, but somewhat slow—120. Size and position of uterus indicated about eight months' pregnancy.

Vaginal examination showed a continual flow of blood. Cervix was open for one finger. No placental tissue could be felt near internal os. Diagnosis of premature detachment of placenta was made and Cesarian section was done shortly after admission of patient. Usual abdominal incision. Just before incising the uterus 1 c. c. pituitrin was given by hypodermic. A female child—weight, five pounds, six ounces—was easily delivered. Uterus contracted well, no doubt due to the injection of the pituitrin, so that there was only a little bleeding at the time of suturing the uterine walls. Iodoform gauze was introduced in the uterus, before suturing, down to the cervix.

The administration of pituitrin diminished not only the quantity of blood lost during the operation, but produced a powerful post-partum contraction of the uterus. The bleeding after delivery could be favorably compared, regarding the quantity, with the loss of blood after a normal confinement.

The mother made an excellent recovery and left the hospital on the fifteenth day with a living child.

MEDICAL ASPECT OF APPENDICITIS.*

By F. T. GOUAUX, M. D., Lockport, La.

It may not be amiss to say here that a critical review of the progress of surgery during recent years impresses one with the fact that it has been a period not so much of innovation and discovery, but rather one of deliberation and development. The work of the past decade in surgery has been both voluminous and brilliant. The dawning of the era of antisepsis and asepsis was followed by startling achievements. The danger of sepsis and its correlating conditions, which, ere this time, rose as a black nightmare before the vision of ambition, had limited surgery to a comparatively narrow part of the great science of healing.

Before the immortal discoveries of the great Sir Joseph Lister, however, in one moment the forbidding walls were laid low. Fields of investigation hitherto looked upon only as *terra incognita* now became the scene of busy activity in surgery. Pathological conditions which had previously baffled the wisest counsel and most ingenious devising of medicine now invited the efforts of the new surgery. Enthusiasm naturally ran wild, and, with neither chart to guide nor theory to control, experimental surgery began its new career. Before each aspiring surgeon lay open rich fields of unexplored wealth, with visions of fortune and eternal fame awaiting his command.

Each man a pioneer, and none a guide, was truly an enticing opportunity. The work of the past decade has naturally, therefore, been more fraught with discovery than any which had gone before—nay, perhaps, than all which had gone before—and gives it rank in history as the golden age of surgery. Many of its achievements have brought inestimable good to the human race and paved the way for surgery to its recognition as one of the grandest and noblest of all the sciences and arts.

It is not my purpose in this paper to detract in the least degree from the high measure of praise and commendation due to surgery and surgeons of the decade that is gone. As, however, the explorer of all new lands, unguided by experience, commits errors apparent to his retrospection, so surgery in its new work has with enthusiasm advanced some doctrines which its present wisdom and experience must lead it to modify, or even discard.

* Read at the Thirty-fourth Annual Meeting of the Louisiana State Medical Society, Baton Rouge, April 22 to 24, 1913.

The collection of data must precede the classification and establishment of any true science or the enunciation of fixed principles arising therefrom. These years which have gone before, therefore, have been invaluable in the collection of vast elements of advanced truth.

Late years, though indeed largely barren in new exploration, must likewise be considered as time most wisely spent in the critical analysis of the facts already adduced and in the deduction of sound principles for future work. This is the time for reckoning, and we should now be able to in a measure weigh our discoveries and ascertain the true reaction of surgery to the problems of human life and human happiness. The result of these deliberations has demonstrated to us many excesses of our zeal and led to a decided trend toward conservatism in surgery—not that conservatism, however, which but masks the face of ignorant inactivity, but a truer and higher conservatism, which puts life, then function, and finally form.

In appendicitis, radical surgery has gone to extremes, and been thoroughly tested and discussed. Just what is the proper relation of surgery to the inflammatory affections of the appendix is, in my judgment, still an open question.

The insidiousness of the disease, its manifold aspects clinically, the uncertainty of differentiation of its various forms, and the impossibility of foretelling its course, render a scientific and fixed stand impossible in the light of our present knowledge. Unfortunately, the mass of clinical observation in appendicitis scientifically recorded has been from cases surgically treated. This aspect of the disease has, therefore, been carefully weighed.

A corresponding amount of evidence regarding the non-surgical treatment is not obtainable. True appendicitis must have been treated for many years medically before the surgery of the appendix was ever introduced. At that time, however, the pathology of this condition was practically unknown, and its differentiation from other conditions, such as general peritonitis, obstruction of the bowels, fecal impaction, typhoid fever, etc., was so utterly obscure that accurate data were never had, and retrospective diagnosis and records utterly unreliable. Since its recognition as a distinct disease, on the other hand, the fashionable treatment has been so largely surgical that we are just now beginning to acquire medical statistics for scientific comparison. The result of these researches is an unmistakable trend toward conservatism.

A few years ago the almost universal doctrine was, "Surgery alone, and surgery immediately." It is to be hoped that we will never drift back to the old do-nothing course.

A judicious selection of cases, however, and a correct decision as to the time for operation in the various forms, is worthy of our thought and honest discussion.

Hunter McGuire, in a paper on this subject, says: "I am not always in a great hurry to operate, but I am inclined to wait for the more acute symptoms to wear off, and operate, if at all, after suppuration has taken place, or during the quiescent stage between the attacks. I wish my voice were strong enough just here to call a halt to the men who say, 'Operate at once; not this afternoon or to-morrow, but now, in all cases when the disease is recognized.'"

Concerning the class of cases for operation, Herbert W. Page says: "Increasing experience shows that the affections of the appendix which call for surgical intervention fall into two main classes, and are those in which the appendix has its lumen temporarily obstructed by kink or cicatricial contraction so as to cause retention of mucus and feces, which lead to inflammation in and around it. The former cases are the more serious, and call for early operative measures in order to evacuate local collections of pus. The latter are to be dealt with in periods of quiescence, when the disturbance of adhesions is less likely to be dangerous and aseptic conditions can be more readily secured."

Senn very tersely summarizes his position in the following words: "The custom followed by many American surgeons, to remove the appendix in all cases in which a diagnosis of appendicitis is made, is a very harmful one. The removal of the appendix should be limited to (1) those cases in which, during the first attack, symptoms arise which portend danger to life, and (2) to relapsing appendicitis. Some cases of appendicitis yield to medical treatment, and in a large percentage of such cases the patients remain free from a second attack."

These expressions suffice to indicate the judgment of some of our best men, both at home and abroad.

There are, however, many other surgeons of unquestioned ability who still retain radical views. A sound conservatism is undoubtedly desirable, and will soon, I believe, be unchallenged. I have no sympathy, however, with the wilful ignorance of those who claim that 90 per cent of all cases of appendicitis will get well without surgical intervention.

The first point in the treatment of appendicitis is to place the patient in bed. Insist upon absolute quiet and rest. An ice bag is placed over the seat of the disease. If the case is seen early, flush out the intestines; if the case is seen but on the third or fourth day, I use a warm rectal enema. Some practitioners employ, in most cases, belladonna; they value this remedy in the treatment of rapid inflammation, where the tendency is to the formation of pus. They claim that its effect is almost magical, dissipating the inflammatory process before the peritoneum becomes involved and before product formation takes place; this remedy is worthy of trial. Hot fomentations very frequently repeated over the seat of the disease is advocated. Control pain with opiates administered hypodermically; use as small doses as possible to relieve the patient. I restrict the patient to a limited diet, usually malted milk or concentrated broths. This done, there is time to consider the difficult question of operation.

The physician of the past was concerned in the disease, and not much concerned about the causes of the disease; the physician of the present day is most concerned about the causes of disease. The physician of the past struggled with disease, struggled to cure disease, without concerning himself much about the cause of the disease; hence the invention of a term with which you are all familiar, "idiopathic." The strength of the physician of the past was idiopathy; the strength of the physician of the present is pathology.

Our brother in the profession, the surgeon, bases all his grand achievement on the idea of cause and on the continuation of cause; he assumes a possibility, knowing the cause. The physician of the past studied the nature of disease; the physician of the present accepts the disease as a condition. The physician of the present has divorced them, and re-studies causes, and the study of the causes of disease has done more to illuminate medicine of the present day than any other one circumstance. The physician of the past knew there was such a thing as vitality; he recognized life, and he made it the business of his life to understand life; he studied the nature of life, and he was disappointed.

The physician of the present has learned the important lesson that the nature of life is incomprehensible, but he has done something—he has found the abode of life; he has fixed the source of life; he has learned the conditions of life, the media of life. Verigo has delivered us from the vagueness of humoralism on the one side,

and the equal vagueness of neurological conceptions on the other. The great past, the illustrious past, comes, with its bio-chemistry, and breathes the spirit of truth. In the past there was just as much labor expended and just as much interest felt in medicine as at the present; but, unfortunately, our energies were misdirected. Now all energy is utilized, because we have abandoned certain chimerical notions regarding vitality, regarding life, and we recognize them as conditions. And whilst the public would be ready, I suppose, if the present doctor were to tell them that he has learned that he cannot cure disease, to say, "Give us back the old doctor, who assumed that impossibility," and if the common expansiveness of surgery rests upon the fact that we have learned but to prevent diseases, and know nothing more about the cure of them than those who preceded us, they might perhaps be a little disappointed; but such is the case.

The modern doctor has found that the essential part of all disease is the cause; he has acquired knowledge that largely enables him to exclude that cause. I recognize this discovery of causes is the true good of medical science, and I feel sure as we progress we will reach a point where, realizing, as distinctly as the physician of the past, the incurability of disease, our hope will rest entirely upon the prevention of it.

THE FUTURE OF THE MEDICAL PROFESSION.

By A. J. DELCOURT, Sr., M. D., Houma, La.

In his address delivered recently to the graduating class of Rush Medical College, Chicago, Prof. John George Adami spoke feelingly and learnedly about the "Future of the Medical Man." Forgetting, for the circumstance, that he was a scientist, to become for one hour an educator and adviser, speaking to young men on the very threshold of medical practice, he tried to read in the dim, yet for him no distant future, and to draw from all the signs of the time what appeared to him the probable destiny of the medical profession in this country. With an evident sincerity born of a conscientious appreciation of the facts, he strove to sketch of the future of the medical man an horoscope which, if true, is called to revolutionize the profession in more ways than one.

This age we live in may be rightly called the age of great social problems. In whatever domain pertaining to modern life, there have arisen new conceptions and new social solutions, calculated to make us as unlike our fathers as possible. Even amongst the most conservative nations, the fundamental problems of property, of labor, of association, are progressing gradually and swiftly towards socialistic organization and solutions.

In the good old time, for instance, the patrimony of the poor and the indigent was a legacy transmitted through the ages, of the munificence and generosity of the wealthy; together with public charitable institutions, they were quite competent and sufficient to meet the wants and the destitution of the needy ones, and the charity and benevolence of the medical profession never was found wanting, and always rose to the height of the emergency.

But soon the stringency of the times, the gradual increase in the wants, helped too often by the squandering and dilapidation of resources, created an embarrassed situation in the domain of public charity. Then, with the advent of the new school of political economy and socialistic ideas, a corresponding change took place in the conception of humanitarian questions. It soon became apparent that the health of the people was the supreme asset of a country; that instead of being made dependent upon charity doled out sparingly and grudgingly, it was to be sustained by public contribution; that those whose services were devoted to building up and maintaining public health to its highest standard, should be paid up at public expense, whenever the individual patient was necessitous or otherwise unable to do it himself. And so it came to pass that medicine, more than any other profession, by the very nature of its services and its intimate connection with public welfare, was launched into socialistic evolution. Of course, every country did not reach at once such a radical solution as Lloyd George struck in Great Britain last year; but it may be said that in every country some legislation has been enacted or is in the process of elaboration, in view of providing and regulating the attendance to the wants of the laboring classes, of people of poor or modest means, by way of compulsory insurance against accidents, sickness, convalescence, old age, or any kind of invalidism. Every country went into that movement of social legislation according to its own character and educational temperament; according, too, to the more or less advanced political ideas prevailing.

In Belgium, for instance, the legislation at first took the form of mutual societies of a co-operative nature; that is, with the participation of the members in the benefits of the societies; and some of them, still in existence now, have attained a high grade of prosperity. But soon those societies, originally intended for laborers, opened their ranks to well-to-do people. The doctors, who were already working on starvation wages, protested and refused their services. Thanks to the defection of twelve doctors, acting as strike-breakers at a salary of twelve to eighteen thousand francs a year, 580 physicians of Brussels, where I was practicing at that time, were kept in check for five years, and deprived of all practice with the co-operative societies.

In Germany, where the legislation has been on trial since 1911, and where it is intended to extend the benefit of the insurance act to something like twenty-two millions of people, almost the same situation confronts the medical profession at the hands of insurance societies, or "Krankenkassen," trying to impose a starvation tariff on the physicians, with the help of black-leg practitioners who have accepted appointments as strike-breakers. Some idea may be gained as to the extreme degradation of the medical profession, when it is known that in one of the last exercises of the German law, medical visits have been paid as low as seven cents, exactly .30 mark; all commentary would be superfluous.

So, after all has been said, the English insurance act, which at first met with such opposition at the hands of the British Medical Association, as to disrupt that venerable body and tear the whole profession assunder, represents beyond any question, the most liberal, fair, generous, human specimen of social legislation for all interested. Instead of delivering up the doctor to the too often scurrilous and degrading exploitation of "Krankenkassens," or of any intermediate insurance societies, whose purpose is generally the lowering of the profession to the grade of cheap wage earners, as we have shown above, the English law makes a clean sweep of and does away with any intermediate association; the state itself assumes plainly and alone all the risks and responsibilities of the insurance, of its application and of all its financial consequences. The profession has no sacrifices to make as to its dignity and independence, having accepted in all liberty acceptable, dignified and remunerative conditions, and the insured himself has no reason to complain of the generosity and fairness of the insurance law.

Now, in the face of this bold, efficient and original piece of social legislation, comes Professor Adami's rather startling vaticination that we stand within measurable distance of the nationalisation of the medical profession. Verily, we are living in troublous times. What does it really mean, that would be nationalisation of medicine? What shape is this medical army to assume? Is it something like the great army of the republic? All this is at yet shrouded in deep mystery. It is an old adage that he who makes a prophesy risks his reputation. It is nevertheless true that those who inhabit the sumits of science may indulge to a certain extent in vaticinations, as the particular atmosphere in which they live, and the opportunity given them for a closer observation and a proper appreciation of the scientific and social movements, from their special point of vantage, enables them to foresee things inobservable to the ordinary man in the street.

We have, therefore, no desire nor inclination to discuss the objectivity of Professor Adami's views on this matter. At the most, could we question the opportunity and the desirability of such a change? As every one knows, the curse of democracy, especially modern democracy, is functionarism, and functionarism is the "Ultima Thule" of politics and politicians. From the cradle to the grave the politician has no other object in view than to be a functionary. This is the nature of the beast. Now, is it desirable to see the medical profession get down into the political arena and become a tool and a bait in the hands of intriguers and ambitious politicians?

Furthermore, the zeal of reformers being proverbial, it is likely that such a thing as nationalization of medicine, so called, should be preceded or accompanied by the nationalization of many other things, and that to reach that alluring land of Utopia, we would have some incursions, (and what excursions) in the regions of socialism, of collectivism, or of some other forms of advanced socialistic fadisms as yet unfamiliar to practical medicine. Before we embark on such tempestuous and unknown seas, we must needs make sure of our compass and canvas.

But if we are not prepared to barter our independence for a mess of pottage, are we going indefinitely to shut our eyes to the actual condition of our profession, to its shortcomings, to its pitiful plight? Are we ready to hear unpleasant things about it?

While speaking of the medical profession "as it is," one feels

somewhat embarrassed, as he does not like to utter anything disparaging of an institution that rightly deserves all respect and consideration. To speak of the profession "as it should be" is quite another thing, and, as the poet of Mantua, we would at once be ready to accord our lute and to exclaim triumphantly:

"Sicilides Musæ, paulo majora canamus."

Most of us remember that magnificent eulogy of the medical profession which Professor Osler gave us a few years ago, under the heading: "Unity, Peace, Concord." It was the utterance of a great orator speaking in a noble cause. Seldom did the medical profession appear in a more dignified yet truthful, though poetical and glorious garb. Truly it was the brilliant picture of the old guild presented under the colors of the new flag to the young generation. We all love it that way and to us no human institution can compare with it, in its plain and majestic grandeur. While under the spell, the least of us takes conscience of his value, and of the importance and the sacredness of the rôle he is called on to play in the old and always young fraternity. But as John Allen Wyeth said in his presidential address before the A. M. A. meeting at Saratoga Springs some years ago:

"It is a fact painful to acknowledge that of the three so-called learned professions, the ministry, the law and medicine, ours is accorded the inferior position, and we who, day in and out, in every home of the land, are close in the personal friendship of our patients, respected and loved as individuals, are incapable of wielding by organization and discipline the powerful influence of an united profession aiming at a high and honorable purpose."

Undoubtedly, the reason of this difference cannot and does not lay in the respective importance of the specific object that belongs to those three functions. The care of the human race will always, under ordinary and even more so under extraordinary conditions, appeal more strongly to the preoccupations of humanity than anything else. And yet, so runs the world:

"God and the doctors we alike adore,
But when in danger, not before;
The danger over, both are alike requited,
God is forgotten and the doctor slighted."

The social importance of medicine is nevertheless paramount and recognized by all. Unfortunately, instead of presenting, like the other two professions, a solid unity conscious of its rights and

privileges, the medical profession offers the most pitiful spectacle of dissociation and individualism that can possibly be imagined. It seems really as if that profession, intelligent and elevated though it be, highly educated, open to all the great concepts, all the high concerns and designs of society and humanity, capable of all the heroisms, of all the sacrifices, and made to lead the world, as it actually did in the origin, be totally unable of ordering its own house; of systematizing its efforts in view of promoting and protecting its material and moral interests, improving its usefulness, its welfare, its chances and opportunities, and securing for the whole fraternity that respect and consideration which naturally attaches to a well organized and united profession.

This is the more remarkable because all the characteristics of modern life and activities tend precisely to organization, unification, syndicalism, to use a more modern and comprehensive term. There is not to be found now a single industry, trade, corporation or profession that does not, in some way or another, organize itself into close and rigid associations, having for their object the welfare of their members and the protection of their interests against any unjust aggression or competition. Under no pretext could any member be found recreant to the established rules and by-laws, or willing to act in a way prejudicial to the common interest of associates.

What a contrast with the medical profession! Instead of that close discipline that would cause every one to sacrifice his own moral or material interest in behalf of the fraternity, we are bound to acknowledge a lack of harmony, of good understanding, of unity of views in the profession, each one, so to say, taking too often counsel with his own interests, and disregarding those of his close neighbor; each one making a rule and law of practice for his own use and accommodation, without thinking for a moment that even in the absence of any pre-established rules or by-laws between confreres, an absolute liberty of action is impossible, blamable and incompatible with the general interest of the profession. We all live in a close solidarity one with the other; the interests of one are indissolubly linked with those of the community; and the most solid foundation, the bottom rock of all organization and of true fraternity lies in the individual respect and consideration for the general welfare. I do not mean to say that any manifest ill-will be anywhere openly noticeable, but the

profession at large is being infected with that spirit of individualism, of egoism, that makes every individual member too often indifferent if not antagonistic to the common interest of the corporation. Under such dissociation of efforts and discipline, how is it possible to protect ourselves against the shameful exploitation to which we are subjected every day at the hands of individuals and corporations, of would-be benevolent associations, lodges and societies of all denominations, whose aims and purposes are alike the exploitation of the medical profession?

In the late years there have appeared amongst us several "Life and Accident Insurance Companies," whose operations in the South have multiplied to a disquieting extent for the physician. Those societies, which all operate in the same way, have found the secret of imposing upon the doctor the task of visiting and examining patients, of filling up certificates of very elaborate and extensive description, bearing on clinical examination, mensuration, urinalysis, diagnostic, prognostic, and all this gratis, the insurance society having nothing to do with the physician, except to consume his time. As for the patient insured, he is under no obligation whatever towards the doctor, and he can dismiss him with contempt. Is not this admirable? I could extend considerably the list of those various exploitations. That would add nothing to the luster and glory of our calling. Even aside from all material interest, and viewed simply in the light of ethics, all this is greatly to be deplored by those who have at heart the honor and the consideration of the medical profession. Should such a lack of unity of action, of mutual good understanding, continue to obtain, it would create to the moral and material interests of medicine the most serious handicap as to its future usefulness and prosperity.

The remedy, which is close at hand, lays in the solidarity, the mutual respect, the proper estimate and the right appreciation of what constitutes the greatness and the actual needs of the fraternity. It would the more make any one of us wish fervently for anything calculated to raise our profession, its ethics, its discipline, its sense of self respect and just pride, far above those miserable squabbles, those degrading competitions and exploitations. No amount of idle recrimination or of reprobation will be of any avail. More than ever, the future welfare and prosperity of our dear calling should have for its mainstay and its rallying word,

that beautiful and inspiring advice of Osler: "Unity, Peace, Concord." And if we were to appeal to another moral uplift, we should simply pray in the words of that canny Scot:

"Would to God the gift was gie us
To see oursel's as ithers see us."

FRACTURES OF THE GREATER TUBEROSITY OF THE HUMERUS.*

By ISIDORE COHN, M. D.,

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Demonstrator Minor Surgery, Tulane University,
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I am prompted to report these two cases because of the apparent rarity of the condition. Stimson, whom Ashhurst in a recent paper designates as the greatest authority on fractures in America, states, (1910): "Isolated fractures of either tuberosity is so rare an accident, except in connection with dislocation of the shoulder, that very few cases are on record, and none have been verified by direct examination." Mendel states: "They are seldom seen alone." Scudder does not devote a word to the subject.

Because of the foregoing facts, I am going to take the liberty of reviewing briefly the anatomy of the shoulder, particularly the muscular attachments, as I am convinced that in cases which are so rare we are prone to overlook anatomic considerations in the management of the case as it presents itself.

The head of the humerus is enclosed in the capsular ligament which is attached to the anatomic neck. Below the head are the tuberosities which are separated by the bicipital groove. To the greater tuberosity the supra-spinatous, infra-spinatous and teres minor are attached. The supra-spinatous is solely an abductor muscle. The infra-spinatous and teres minor are *outward* rotators when the arm is vertical; when the arm is horizontal they draw the arm *backward*. To the lesser tuberosity is attached the subscapularis. The subscapularis is also inserted into the capsule of the joint; its action when the arm is vertical is that of an *inward* rotator; when the arm is abducted the subscapularis draws the arm *forward*. The teres major is also an internal rotator.

We must further concern ourselves with the attachment of the deltoid, pectoralis and latissimus dorsi. The deltoid is attached to the deltoid tubercle on the humerus, in passing over the greater tuberosity of the humerus it is separated from the tuberosity by a mucous bursa. The deltoid abducts the arm to a right angle.

The latissimus dorsi is inserted into the bicipital groove of the humerus, its action being to draw the humerus downward, backward and rotate it inward.

The pectoralis major is inserted into the bicipital ridge of the humerus, its action being to draw the arm forward and adduct it at the same time.

The clinical picture in fracture of the greater tuberosity is just what one might expect it to be from a study of the anatomy of the region. The injured arm is adducted and rotated inward. Palpation reveals great pain over the tuberosity, usually limited to that region. Passive abduction is very painful.

The fact that I have seen two such cases may be attributed to my good fortune or the more probable condition that these cases exist more often than they are recognized.

But to come back to the reason for the clinical pictures. As far as I can see the following is the explanation:

The outward rotators, the infra-spinatus and the teres minor, have been severed from the shaft. This gives the internal rotators free play, consequently inward rotation. Two of the abductors have been carried with the fractured prominence and the function of the other, the deltoid, is limited because in reaching its insertion it is separated from the tuberosity by a bursa. Naturally, contraction of the deltoid in order to abduct the arm would be so painful that the patient does not attempt it.

Treatment: The treatment of fractures of the greater tuberosity, according to Mennel is "*Massage and Sling.*" According to Stimson the treatment is immobilization with as much outward rotation of the arm as is practicable in order to diminish the pull on the attached muscles. "Any tendency to inward displacement should be opposed by a pad in the axilla."

The indications for treatment are:

(1) Apposition of fragments, and (2) Immobilization.

I. In order to accomplish this purpose we must *rotate the arm outward and abduct it* at the same time, because the infra-spinatus and teres minor in contracting cause the tuberosity to be

markedly separated from the shaft (rotated outward). Since we have no control over them we must overcome the action of the muscles still attached to the shaft (the internal rotators and adductors).

Abduction is necessary for the following reasons:

(a) To favor apposition.

(b) To diminish the tendency of the subscapularis to lacerate the capsule, and consequently to bring about dislocation. Right here I pause to wonder if we were to ray every dislocation of the shoulder whether we would find the combination of the two more often.

(c) To relieve the pressure of the deltoid on the tuberosity.

II. Having thus reduced the deformity by outward rotation and abduction immobilization in line with the above anatomic data should be carried out. The method used in the cases seen has been as follows: Axillary triangle, shoulder cap and immobilization of the elbow. The triangle maintains abduction. The shoulder cap favors limitation of muscular activity on the part of the deltoid. Outward rotation is maintained by immobilizing the elbow. The entire dressing was kept on for two weeks. Abduction only for one week; one week with sling. During the third and fourth weeks passive motion and massage were used. At the end of four and one-half weeks each of the patients had all motions of the shoulder perfect, with the exception of external rotation, and this was perfect in both cases at the end of six weeks.

Case I. Mr. D. B. W. On March 16, 1913, while trying to step from a moving car, he fell to the pavement. He was seen by Dr. Geo. S. Brown, who very kindly referred him to me on March 24. During the week following the accident the patient noticed that he was unable to use his arm or abduct it.

Examination revealed marked ecchymosis of the arm. There was loss of contour of the shoulder joint. He held his arm close to the body, the arm rotated inward. He complained of severe pain over the greater tuberosity of the humerus.

Limitation of the motions of the shoulder, especially external rotation. In fact he was unable to rotate the arm voluntarily to any degree, and passive external rotation and abduction was painful. The diagnosis of fracture of the greater tuberosity was made and the accompanying skiagraph confirmed the diagnosis. The plan of treatment followed has already been outlined.

On May 3rd, he was discharged. At that time there was practically perfect function of the shoulder.

Case II. J. C. M., 53. He fell June 8, 1913, while trying to board a street car. I saw him within an hour of the accident. The left arm hung by his side; voluntary abduction and external rotation was impossible. Passive abduction and rotation was painful. There was no change in the contour of the joint. The clavicle was normal. Pressure over the greater and lesser tuberosities was painful, especially



ILLUSTRATING ARTICLE OF DR. ISIDORE COHN,



over the greater. The head of the humerus rotated with the shaft. Crepitus was absent. The picture confirmed the suspicions of a fracture of the greater tuberosity. The result was a perfect functioning shoulder.

Conclusions in regard to longitudinal fractures of greater tuberosity of humerus:

(1) Injuries of the shoulder, where no other evidence of disability is present, except loss of voluntary external rotation, should arouse a suspicion of fracture of the greater tuberosity.

(2) The X-ray will probably reveal many cases which have been diagnosed as sprains.

(3) Recurrent dislocation of the shoulder is favored by this complication accompanying the dislocation.

(4) Conservative treatment has given perfect results in the cases under observation.

PELLAGRA.*

By E. R. HARRING, M. D., Natchitoches, La.

Pellagra is an endemic (and has in the United States, in a few instances, almost approached an epidemic) disease, characterized by serious organic changes, clinically, by a chronic course with acute phenomena referable to the gastro-intestinal tract and nervous system, with the appearance of erythematous lesions on certain parts of the body, more especially the exposed portions, and not infrequently to insanity.

The etiology is perhaps as obscure to-day as it was 200 years ago, and, as is to be expected in a disease of so obscure etiology, there are numerous theories advocated.

The corn theory developed almost simultaneously with the disease, and was handled in a vague sort of way. It was probably formulated by Marzari in 1810, who thus started the zeist school. His idea was that corn caused pellagra by its deficiency in certain nutritive principles, which was soon supplanted by Balardini, and this conception is no longer held, as careful analyses have shown that corn possesses a high nutritive value in fats and carbohydrates and that it is easily assimilated. Balardini's theory was that the cause was due to molds on the corn, which was faultily handled. Lombroso devoted years to this theory.

* Read before the Bi-Parish Medical Society, Natchitoches, December 9, 1913.

The toxico-chemical idea is that under the influence of saprophytes (bacteria, or mold) corn may undergo certain changes, with formation of toxic substances of a chemical nature (oxogenous poison), causing intoxication through the action of micro-organisms, in themselves harmless to man.

This was advocated by Lombroso, and is the most popular to-day of all the maize theories, and is the one accepted by the Italian Government in its prophylactic measures. Lombroso failed to incriminate any particular micro-organism, but chemically he describes toxic substances of a resinous and oily nature; the oil he called pellagrosine, and, experimenting on lower animals and man, he developed symptoms analogous to those of pellagra.

In 1902 Ceni declared pellagra to be due to two molds of the family of aspergilles. In 1906, Tizzoni advocated a specific bacterium, but neither of the views has been confirmed.

C. C. Bass, of Louisiana, in 1911, from experiments on chickens fed on corn for a long period, found symptoms that looked very much like pellagra, diarrhea and erythema. Only a few days ago I had the following experience: There was in a coop in my yard some five or six chickens that had been fed only chopped corn for about two months, non-experimentally, however, and the chops had become molded, and my wife noticed that one of the chickens had an eruption on the head and lower jaw, and they were turned out, whereupon one died before night, and since then one more has died and two are now ill with a diarrhea. Whether or not this is a condition of pellagra I do not know.

The anti-zeists take the stand that the extent to which corn and corn products have and are used without the appearance of pellagra, and the cases found that give absolutely negative histories of the use of any corn products, are sufficient reasons to abolish that theory.

A group of French writers deems it a symptom complex which may arise in the course of many cachetics, especially alcoholics and insane persons. This theory brought about the idea of pseudo-pellagra, which has not, however, been broadly accepted. The parasite idea was first advanced by Sambon in 1905. He thinks it to be a protozoal organism probably transmitted by the buffalo gnat, and emphasizes the connection with running water where the gnat breeds. He thinks that the localization cannot be brought to harmonize with the zeist theory.

Alessanderi thinks it is caused by a water-borne worm, which harmonizes with the topography of Sambon.

Ravitch, of Louisville, Ky. (in the July 2, 1912, *Journal A. M. A.*), states, as his theory of pellagra, the transmission of the trypanosomes by migratory birds, especially the blackbird. He had working with him Drs. Eisenman and Purdy, and claims that the seasonal incidence of pellagra coincides with the migratory habits of the birds. Novy and McNeal claim to have found the trypanosomes in migratory birds, and especially the blackbird. I think, however, that this theory will fall flat from the same argument with which the anti-zeists try to refute the corn theory, for we know that the birds have been migrating ever since time immemorial. He claims that, in antebellum days, we had no pellagra, and there is no record whereby we are told that the birds did not change their feeding places at that time. I think that we may have had pellagra at that time, but we were prone to make the diagnosis of the separate manifestations, as chronic diarrheas, eczemas, and when the nervous symptoms arose we were content to diagnose it as one of the various dementias that were best suited to our individual case, and did not try to associate the lesions as a group. Had we done this, I think we might have had plenty of cases to report in that period.

Dr. D. White, of New York, reports a case of a girl of fifteen who gave a history of never having partaken of any maize or cereals in any form, which to me seems rather far-fetched, since corn enters into about 130 commercial products.

Dr. Knight, of Georgia, reports having found a family of eleven where there were ten pellagrins, ranging from the ages of four to forty years. These were poor people, and the cornmeal they were eating, upon examination, was found to be unfit for human consumption.

Dr. Bodenheimer, of Shreveport, reports finding a family of six, with five pellagrins, ranging from the ages of one and one-half to thirty years, but refuses to say that he believes it contagious.

Treatment.—Dr. Cranston, of Georgia, says that, after fair trial, Dr. Walker, of the Georgia State Sanitarium, found atoxyl unsuccessful. Urotropin also proved disappointing, and calcium sulphid likewise.

Drs. Walker, Yarbrough and Cranston, of Georgia, treated eleven cases with salvarsan, and, from the following results, they were very

much disappointed: 13 per cent recoveries; 9 per cent unimproved; 36 per cent relapses; 36 per cent deaths.

Dr. Martin, of Hot Springs, Ark., claims to have had far better success with salvarsan. His method of administration was to give the dose, repeating every seven days, until desired results were obtained—that is, until no reaction occurred.

Dr. Dyer, of New Orleans, advocates the following regime:

Dietary.—Feed gelatin one-half to one ounce daily, either separately or mixed with other foods; the juice of two or more oranges or lemons; milk, eggs and well-cooked vegetables. Exercise to be taken before and after sunset, keeping out of the sun entirely. Daily baths in tepid or warm water, to which one ounce of laundry starch is added.

Medication.—When the bowel symptoms are present, ten grains quinin hydrobromate every three hours, and when these symptoms have disappeared, five grains three times a day. As a tonic, the quinin is to be given indefinitely, in two- or three-grain doses. Iron, strychnin, arsenic and other remedies, as indications arise. Improvement to be based on the increase in weight, with the disappearance of symptoms. :

The case that I am going to relate to you is the first that I have any knowledge of as having occurred in this vicinity, but since this case was seen I have found a family of nine, only seven living together, and there were six of them suffering with this condition, ranging from two to nineteen years; but this alone does not lead me to believe that it is contagious, as the cause and environments were identical in all. Since this first case there have been fourteen cases reported within a radius of four miles of the town, thirteen, however, in the vicinity of Natchitoches. I was told by Dr. S. L. Williams, of Shreveport, that 33 per cent of all the deaths in the Charity Hospital of that place were caused by pellagra.

Mrs. C. C. P., white, female, age 31, widow, housekeeper. Born and lived near Coushatta, La., for twenty-one years, when she was married and moved to Lawhorn, La., where she lived two years, and from there she moved to Arcadia, La., and remained there for about two years, and moved back to Red River Parish, where she resided until coming to Natchitoches, about ten months ago.

Family History: Negative, so far as to bearing on the disease.

Personal History: Had whooping cough when about eight years old, a very severe case of malaria when nine years old, which lasted about two weeks, but took a very long time to regain her normal status. At the age of ten or twelve years she had an exceptionally severe case of measles, which she thought settled in her bowels, as she dates her diarrhea from that time, since which time she has had more or less

trouble with this condition. In fact, she tells me that in all this time she only remembers one time when there was any constipation. The only relief that she could get from the diarrhea was when she would take oil and laudanum, which was prescribed by her brother, who is a physician. In July, her sister came to my office to get me to prescribe some laudanum for her, which I did reluctantly, after having gotten the history of the continued diarrhea and that her brother was a physician and had tried everything else, to no avail, with the injunction that she consult a physician and see if a cause could not be ascertained for this condition. On August 12, the above patient came to my office for consultation, and presenting the following picture: A woman of about 31, well nourished, and in apparently good health, with an eruption on the posterior surfaces of both hands extending about two inches above the wrists, giving the appearance of a glove, and an eruption at the junction of the neck and body, extending entirely around the neck, giving the so-called cravat type. This eruption was of a dry appearance, the scales of a grayish-brown color upon a very bright red background of skin that gave the appearance of bleeding on the slightest touch, but which did not. She denied any eruption on the genitalia, which I later discovered. This eruption was extremely painful, and at times, as she expressed it, would seem to run her almost crazy from burning. There was at no time any exudation.

Diagnosis: Pellagra. Prognosis: That she could be cured, if she would religiously follow instructions, which she agreed to do.

Treatment: A powder of zinc oxide, with five per cent of carbolic acid as a dusting powder; internally, Fowler's solution, initial dose of five drops three times daily, to be increased one minin per dose, which was continued until twenty-three drops per dose was being taken, when there appeared arsenical symptoms, whereupon I dropped the dosage to fifteen drops three times a day. Within a few days there was a cessation of the arsenical symptoms. In the meantime there was a complete disappearance of the rash on the hands, forearms and neck, and a diminution in size of area involved around the genitals, and a decided improvement of the diarrhea, the bowels moving now only twice daily, when they had been moving anywhere from five to twelve times daily. During this time, however, the patient had lost about twenty-five pounds in weight. I now (October 8) have her on five grains quinin hydrobromate every three hours, iron and two minins of Fowler's solution three times daily, and she seems to be doing nicely.

In the beginning of treatment there was some insomnia, which has entirely disappeared. About this time she left off treatment, and the next I heard from her she had had a fall, and I was called, to find nervous symptoms very pronounced, and was fearful of mania, so had her brother to see her with me, and she returned home with him, and advised and instructed that he institute the use of sodium cocodylate, by needle, which was done. I saw her some time later, and she had improved very much—in fact, had gained about fifty pounds in weight. But there were present some nervous symptoms, and I advised the use of neo-salvarsan, which was begun by her brother, and only two doses given, she leaving and he not showing sufficient interest to keep up the treatment—in fact, stated he would not take such treatment himself. I have seen her since and note an increase of the nervous condition. There has been no return of the erythema, although the change from summer to fall has occurred.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

THE STATE SOCIETY.

The State Medical Society will meet in New Orleans in May, and a preliminary notice of organization has been printed in the February *JOURNAL*. Every year the notice of a coming meeting of the Society is given in these pages, with a view of reminding the reader that he is expected to take part.

The State Society stands for so much more now than in past years, when its chief function was the coördination of medical information. The development of public health and of State medicine has broadened the purposes of the State body of medical men so that the interests of each member are now engaged not only in diagnosis and treatment, but in prevention.

When the occasional opportunity invited attention formerly to any public health question, it required more than a perfunctory medical society paper to arouse interest. Now, every field of practise is saturated with the thought of preventing the spread of disease.

Nor is this the sole present outlet of medical thought. The education of the people is to-day a matter of effort on the part of the medical profession and the means are many and are varied; the public interest in purely sanitary practises needs to be met with advice from the practitioner, who is himself better informed than heretofore.

The State Medical Society has gradually aided in bringing these things about, as it has consistently developed the ramifications of State medicine. With the oncoming years the aggregate altruistic motive of the State Society will develop all of the utilitarian and proletarian interests of the State, so far as the purviews of medicine are concerned, and all of this with no real sense of reward in any kind except that of right service.

But the regular business of the State Society and the Miscellaneous scientific work need a large attendance. The members of the State Society have too much in common to let even one stay away except for cause.

This year an interesting program has been slated and, with the early announcement of the papers to be read, the attendance should be the best yet.

The JOURNAL joins the officers of the Society in urging all who can to come to New Orleans and be progressive.

THE THREE SCORE AND TEN.

Next May the JOURNAL will celebrate its seventieth birthday. Nowadays youth has the call over age, and the new rules it over the old, yet this cannot apply to periodicals as to other things, for they are ever changing with the times, and their youth is renewed through their successive writers and contributors.

In the present instance, we trust that the existence and prosperity of our publication at this late period after its birth is simply an example of the survival of the fittest. The editors are only eighteen years young in the business, and they hope to demonstrate that there is a good deal of life in the old publication yet, and that the normal duration of life of a publication of merit is nothing short of a century, at the least.

We propose to issue a particularly interesting number in commemoration of our reaching an important milestone, and, as we shall print and distribute an unusually large edition, we expect it to prove profitable to subscribers and advertisers, both.

AS TO THE TREATMENT OF RABIES.

Nearly a year and a half ago, in September, 1912, we called attention to the report on a case of hydrophobia in *Policlinico* by Dr. R. Tonin. The patient, a girl of thirteen, was seized with characteristic symptoms of hydrophobia before the completion of the Pasteur preventive treatment, and was cured, apparently, by the intravenous injection of .3 grams of arsenobenzol.

While conceding that one case was insufficient as proof of the

efficiency of the remedy in these cases, we urged that a prompt resort to this agent be made at every opportunity.

Comparatively recent developments add strength to the position then taken. Noguchi's discovery of the microbe of rabies has been followed by its cultivation in the same manner as that of the spirilli of syphilis and of recurrent fever, to the family of which it seems to belong, and by the reproduction of rabies in rabbits, dogs and guinea-pigs by means of its inoculation in the regular way.

It is easy to understand that arsenobenzol, which is so efficacious for the destruction, directly or indirectly, of these other spirilli, could very well be of the highest value in the treatment of the horrible disease which is still considered necessarily fatal.

The Pasteur preventive treatment, happily, renders rare the opportunity for a test, but every unfortunate who becomes a victim of the disease should have the benefit of a prompt injection of arsenobenzol.

Abstracts, Extracts and Miscellany.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

SECONDARY INFECTION IN PULMONARY TUBERCULOSIS.—Avery and Lyall (*Jour. Med. Research*, 1913, xxviii, No. 1) deal with the subject of secondary infection and its importance in pulmonary tuberculosis. They point out that there are three schools whose opinions differ upon this subject. They first consider that mixed infection plays no essential part in the progress of the disease, a view held by Leyden, Strauss, Fraenkel, and others; the second group, among which are to be found adherents of the Koch School, Cornet, and others, considers that the lesions and the more severe symptoms of pulmonary tuberculosis are due to the secondary and not to the primary infection; the third school, in which are Baldwin, Marmorek, and Romer, considers that the lesions and symptoms may be caused by the tubercle bacillus alone, but in many cases severe symptoms and unfavorable progress are due to secondary infection. Necessarily in such a division of opinion, it is essential to closely define terms, and it may be said that most observers con-

sider that the organisms which are accidental incomers from the air are not properly to be considered as secondary infecting agents, unless they actually invade the blood or the tissues. Avery and Lyall point out that some of the Koch school have receded from their first position, being compelled to recognize that the tubercle bacillus alone is able to cause fever, and that destruction of lung tissue can be brought about without the assistance of secondary infection. Baldwin and Marmorek have shown the power of the tubercle bacillus to cause lesions quite unaided by any other microbe, but, on the other hand, such lesions progress more rapidly and more dangerously in the presence of secondary infections.

J. A. S.

THE TREATMENT OF CHOREA.—The treatment of chorea is essentially that by arsenic. Antipyrin and other antinervines have not given the same satisfaction. To administer arsenic with success, the method of Aran and Siredey should be observed: these authors employed a solution of arsenious acid (1-1,000) known as Boudin's solution. This solution is weaker than Pearson's (1-600). They prescribed in large doses, 25, 30, 35 grams a day, but never prolonged its administration. In acting thus, accidents due to intolerance were possible, but they avoided accumulation; a greater risk is derived from prescribing even very small doses of arsenic during weeks and months than in giving large doses for a few days. Prof. Comby applied this method to hundreds of patients for several years with but one accident (arsenical polyneuritis) and a few cases of intolerance, vomiting, gastric disturbance.

He commences by 5 grams of Boudin's solution and increases the dose daily by 5 grams up to 25 grams.

At this point, he diminishes by the same proportion to the initial dose. The whole arsenic treatment lasts exactly nine days.

His method of proceeding is as follows:

Rest in bed for a fortnight with relative isolation, no amusement with other children allowed, no intellectual work.

Milk diet, a cup of milk every two hours; this diet favors tolerance; it is replaced by the lacto-vegetarian diet on the tenth day, that is to say, when the arsenical treatment is terminated.

First day—Before each cup of milk, a tablespoonful of

Boudin's solution	5 grm.
Sp. of orange	20 grm.
Water	100 grm.

is given.

Second day, 10 grm.; third day, 15 grm.; fourth day, 20 grm.; fifth day, 25 grm.; sixth day, 20 grm.; seventh day, 15 grm.; eighth day, 10 grm.; ninth day, 5 grm.

If, in the course of the treatment, vomiting is observed, the treatment is suspended for one day; if it returns the arsenic is suppressed.

The above doses are for children over seven years of age. Below that age the doses would be: 3, 6, 9, 12, 9, 6, 3.

This treatment is generally well borne, and the effects are rapid. At the end of a week the movements have ceased, and a week later the chorea is cured.

An important observation: Before prescribing the arsenic, the integrity of the kidneys should be examined, and if albumin was observed arsenic should not be given. Further, in very warm weather provoking an abundant perspiration, diminishing thereby the urinary secretion, arsenic would be ill tolerated, as also anti-pyrin and any other active agent.

In such a case the wet sheet is the better treatment; it calms the choreic excitement.

It is possible to replace Boudin's solution by that of Pearson's provided that it is borne in mind that the strength of the latter is nearly double that of the French solution.

Consequently, half of the above progressive doses should be prescribed.—*Medical Press and Circular.*

J. A. S.

RESEARCH ON PELLAGRA.—G. Volpino (*Pathologica*, 1913, v. 174) finds that the intramuscular injection into pellagrins of the aqueous extract of spoiled maize causes fever, nervous and psychic symptoms, vomiting, diarrhea, and tachycardia. The similar injection of extracts of good maize causes none of the symptoms. The active principle of the potent extract is carried down by an alcoholic precipitate, and is active in doses of 1 c.c. of a 0.5 per cent. solution. Such inoculations cause reactions in 9— per cent. of pellagrous subjects, and in about 20 per cent. of the non-pellagrous; the reaction in the latter group, he thinks, may be due to eating maize or other cereals, or it may be an evidence of "latent pellagra." Volpino designates the reagent "pellagrogenina"; it is non-toxic to rabbits fed in the usual manner, but to maize-fed rabbits, 1 c.c. of a 1 per cent. solution is fatal within twenty-four hours. The injections were made intraperitoneally. He also finds that guinea-pigs fed mainly on maize die after being injected with 1 c.c.

of the serum of a pellagrin, whereas normally fed pigs are in no way affected. Maize-fed guinea-pigs treated several times with pellagrogenina readily survive the subsequent injection of serum from pellagrous patients. No micro-organisms could be demonstrated microscopically or by cultural methods. J. A. S.

ANTIPUTREFACTIVE DIET.—When we give the antiputrefactive diet in a case with persistent blood-pressure and the tension returns nearly to the normal and stays there, Cornwall says, we can, as a rule, exclude any considerable amount of chronic nephritis or arteriosclerosis. When the administration of this diet, though it may be followed by great improvement in the other symptoms, fails to bring about much reduction of the blood-pressure (fails to reduce it to much below 200 mm. Hg.) we can be reasonably sure that advanced nephritis is present or sclerosis of arteries supplying regions of the body which are of vital importance. When the administration of this diet brings about a notable reduction of the blood-pressure, but still leaves it considerably above the normal, considering the patient's age, we may suspect arteriosclerosis or an early stage of chronic nephritis. The light which the antiputrefactive diet throws on the diagnosis of conditions, accompanied by high blood-pressure, makes it very much easier to interpret the other signs and symptoms presented by those conditions; and the administration of this diet is not only valuable as a diagnostic procedure, but it is, in general, the best treatment for those conditions.—*Archives of Diagnosis*, New York. J. A. S.

ADDISON'S DISEASE.—Lowry (*Deutsch, Archiv. f. klin. Med.*, 1913, cx. 373) presents a case of Addison's disease, diagnosed clinically, by reason of the marked pigmentation, myasthenia, diarrhea, emaciation, hypothermia, and low blood pressure, these symptoms occurring in association with rapid mental deterioration in a man, aged 21 years, who had previously been of more than average intelligence. Tuberculin tests were negative; there was no marked anemia, but a lymphocytosis of 33 per cent., and a mild grade of eosinophilia. At autopsy the interesting findings were: first, the complete absence of the specific cellular elements of the cortex of both adrenals, which were composed entirely of medullary parenchyma and second, the existence of a well-developed status thymicolymphaticus. Hedinger had previously called attention to the fact that fifteen cases of Addison's disease showed the existence of a status thymicolymphaticus, while in five others there

was pronounced lymphatic hyperplasia, and he expressed the idea first advanced by Weisel that in these cases the normal balance between the lymphatic glands and chromaffin system had been disturbed through deficiency in the latter, to which was to be ascribed both the glandular hyperplasia and the various manifestations of Addison's disease. This theory was opposed to that which assumes that the cause of Addison's disease is to be found in the cortex of the adrenals; it has, however, been shown experimentally in animals that the adrenal cortex is necessary for life, a finding apparently confirmed in this case. The persistently low blood-pressure, despite the apparent integrity of the adrenalin-producing cells, leads to the conjecture as to whether or not the thymus may have been responsible, Mohr having shown that thymus extracts are capable of producing tachycardia, asthenia, and low vascular tonus. Moreover, the embryological relationship between the "interrenal" system and the brain may, in some way, be turned to account for the pronounced mental changes observed in this case. Clinically the frequency with which Addison's disease is accompanied by a status lymphaticus should make one very careful to avoid any procedure apt to induce psychic disturbances, and a sudden lethal result. The relatively characteristic blood picture of Addison's disease finds reasonable explanation in the coincident glandular hypertrophy and recently Weidenrich has shown that the thymus itself may be a source not only of lymphoid elements, but also of the glandular cells and eosinophiles in particular.

J. A. S.

Miscellaneous.

INFECTIOUSNESS OF SYPHILITIC BLOOD.—(Dr. Richard Frühwald, in *Wiener Klin. Wochenschrift*, No. 42, 1913.)—The spirochetæ circulate already in the blood at a time when there is no pronounced glandular swelling, and the Wassermann reaction is negative, that is, in the fifth or sixth week after infection, and two or three weeks after the sclerosis (induration). In older primary affections, from the sixth to the eighth week, the spirochetes are likewise found in the blood; most frequently, however, they are found on the breaking out of the first exanthem about eight or ten weeks after infection; but they can also circulate in the blood in the later eruptive stage, up to the fourth month after infection. The blood is also infectious in relapses, as well as in the primary

eruption; it is immaterial whether the relapse occurs with a widespread exanthem, or consists solely of localized papules on the genitals or buccal mucous membrane, in both cases spirochetes are found in the blood. There are two communications concerning the finding of spirochetes in the blood in tertiary syphilis. It is regrettable that no other reports are at hand on such an important subject.

The finding of spirochetes in the blood is of the greatest importance for the pathology of syphilis. It can serve to decide whether exacerbations are due to a new access of the *materies morbi* from an infected spot, or to virus, which lay on efflorescences for a while, and suddenly become active.

The blood of syphilitic men is a highly infectious agent; on this account, all who come in contact with syphilitic blood should exercise every possible precaution, since, on the one hand, the blood is already infectious in the primary stage, which is a very important point, because in many cases the primary lesion is found in concealed places and investigation is thus made difficult; furthermore, the spirochetes are found in the blood in circumscribed syphilides; and finally, the blood can be infectious even in the latent stage. On the other hand, the virus can be preserved alive in the blood, as well as in serum, at room temperature, and for one or two hours in the refrigerator, and four days in the incubator. On the other hand, there is some consolation in knowing that vocational infections are not very frequent, since a large amount of blood is necessary to cause infection.

Graves has injected the blood from five tabetic patients into rabbits, and he has obtained positive results in two cases. In one case, who had had a chancre eighteen years before the blood was kept for four days at 37° C., and then injected into the testicle of a rabbit. Nine weeks after, there was diffuse orchitis of the right testicle, with spirochetæ. At the same time, there appeared lesions on the eyelid, arms and perineum, that contained spirochetes. In the other case, infection had taken place fourteen years before. Seven weeks after inoculation of the rabbit, then occurred an indurated lesion of the prepuce and thickening of the testicles, spirochetes being found in the former.—*Deutsche Medicinal Zeitung*.

McSHANE.

INTERNAL TREATMENT OF BASEDOW'S DISEASE.—(By Dr. W. H. Becker, in *Deutscher Med. Wochenschrift*, No. 37, 1913.)—

Among the more than forty thousand cases treated in the Giessen Medical Clinic, from the years 1890 to 1912, there were found only sixty-one cases of Basedow's Disease. Only one case was discharged "cured," thirty-six other cases were reported "improved," twenty-one cases "not improved," and one case was "markedly better," after thyroidectomy, 5 months of galvanization of the sympathetic, and administration of thymus gland extract. In the first thirteen years of the time mentioned, none of the cases were treated specifically; the patients received arsenic, bromine, ice-bag over the heart, etc.; galvanization of the sympathetic nerve; Mobius antihyreoidin in five cases (one case unchanged, four cases improved).

Rhodagen, in two cases (one case slightly improved, the other much improved.) In one man, in whom Mobius' antithyroidin had no effect, the Rontgen rays were used, but equally without effect. Of five cases which were put on a diet free from chlorin and meat, four were improved, and one unchanged. One case treated with phosphate of soda and phytin (and antithyreodin) was improved, two others were unchanged, and one "decidedly better."

In the cases treated specifically and reported as "improved," Dr Becker took the trouble to follow up the histories in order to see how long the improvement lasted. In seven cases the improvement was permanent. The condition of the discharged patients was for many years satisfactory; while the symptoms had not entirely disappeared, still the patients were able to return to work. The treatment initiated in the clinic was often continued by the patients.—*Deutsche Medizinal Zeitung.* McSHANE.

CONTAGIOUS DISEASE HOSPITALS.—L. A. Lammoreaux, Minneapolis (*Journal A. M. A.*, January 24), advocates an approach to the skyscraper architecture for contagious disease hospitals, and describes the one beginning to be constructed in Minneapolis, which is to be eight stories high and which will have the advantages of economy of upkeep and of not requiring a large and expensive site. He points out also some conveniences of administration afforded by this type of construction of a city hospital.

Louisiana State Medical Society Notes.

In Charge of DR. L. R. DEBUYS, Secretary, New Orleans.

NEW ORLEANS, February 12, 1913.

To the Members of the Louisiana State Medical Society:

Attention is called to the approaching meeting of the Louisiana State Medical Society, which will be held on April 20, 21, 22 and 23, 1914, at the Hotel Grunnewald, New Orleans.

The Committee on Arrangements, of which Dr. M. Thomas Lanaux is chairman, is actively at work, and expects to make this meeting the best in the history of the Society.

An innovation this year will be a "Board of Health Day," which will be held on the first day of the meeting. Dr. Oscar Dowling is chairman of this part of the program, and it is needless to say that it will be a perfect success. Surgeon General Rupert Blue will take part in this program.

The program of the sections must be completed and in the hands of the chairman of the Committee on Scientific Work not later than March 10, 1914, and the title of paper must be presented to the chairmen in whose sections the papers are to be read before this date. The Committee on Scientific Work will accept only the program presented by various chairmen. For your information, therefore, I beg to state that the following chairmen have been appointed by the president of the Society for the coming meeting:

SECTION CHAIRMEN, 1914 MEETING, AND NUMBER OF PAPERS ALLOTTED TO EACH SECTION.

SECTION.	CHAIRMAN.	No. of Papers Allotted.
Medicine and Sub-Sections.....	Dr. E. Lee Henry, Lecompte.....	12
Hygiene and State Medicine.....	Dr. Oscar Dowling, Shreveport... —	—
Surgery.	Dr. Espy Williams, Patterson....	10
Pathology.	Dr. O. L. Pothier, New Orleans..	2
Physiology, Nutrition and Dietetics.	Dr. Allan Eustis, New Orleans... —	2
Materia Medica and Therapeutics... —	Dr. Philip Asher, New Orleans... —	3
Mental and Nervous Diseases.....	Dr. Clarence Pierson, Jackson....	2
Obstetrics.	Dr. M. Thomas Lanaux, New Orleans.	2
Gynecology.	Dr. C. Jeff Miller, New Orleans..	3
Medical Jurisprudence	Dr. R. M. Littell, Opelousas.....	2
Genito-Urinary and Rectal Diseases.	Dr. Carroll W. Allen, New Orleans.	3

Diseases of Children	Dr. Leon J. Menville, Houma....	4
Ophthalmology.	Dr. John L. Scales, Shreveport...	3
Ear, Nose and Throat.....	Dr. R. F. Harrell, Alexandria....	3
Bacteriology.	Dr. W. H. Seemann, New Orleans	2
Dermatology.	Dr. O. W. Cosby, Monroe.....	2

The number opposite the section above is the number of papers allotted to the section. It will be well, then, to hand in the title of your paper as soon as possible. It was decided at a meeting of the chairmen of sections to limit the number of papers so that each essayist will have the opportunity of reading his paper, and each member may hear every paper on the program, and not be disappointed by missing the particular paper for which he may have come to the meeting.

Annual dues were payable January 1, 1914. Those who did not pay became delinquent up to January 31, 1914, at which time they were suspended. By payment of the dues now the individual members or parish society can be reinstated. If your parish is organized, remit your dues to your local secretary, and see that his report is made to the secretary of the State Society, in order that you may have your proper representation. If your parish is not organized, send dues direct to the Louisiana State Medical Society, 141 Elk Place, New Orleans.

Officers and members of parish societies, and individual members in parishes not organized, are urged to stimulate interest in the coming meeting, in order that the success of the meeting may be long to all.

Fraternally yours,

L. R. DEBUYS, M. D., Secretary.

THE COMING MEETING.

A full program of the coming meeting will be published in the April issue of the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*. All committees are hard at work to make this meeting one of the best in the history of the Society. Among our guests will be Dr. M. L. Graves, of Texas, who will deliver the oration on medicine. A fare of one and one-third is assured, with good prospects of reducing same to one fare for the round trip, plus twenty-five cents.

PARISH SOCIETY MEETINGS.

Dr. Hermann B. Gessner, Councillor, Second Congressional District, announces that the St. John-St. Charles Bi-Parish Medical Society will meet at Reserve on Wednesday, March 4, and the St. James Parish Medical Society at Litcher, on Thursday, March 5.

Medical News Items.

ACADIA MEDICAL SOCIETY MEETS.—At a meeting of the medical men of the Parish of Acadia, in Crowley, La., the Acadia Parish Medical Society was organized on January 30. Dr. Fred J. Mayer, president of the State Medical Society, called the meeting to order and spoke of the value of medical organization to the public and the necessity to the profession. The following officers were elected: Dr. David Douglas Mims, president; Dr. M. L. Hoffpauir, secretary-treasurer; Dr. E. M. Ellis, delegate to the State Society; Dr. D. D. Mims, alternate. The first meeting will be held on April 2, 1914.

THE MEDICAL SOCIETY OF THE MISSOURI VALLEY.—The twenty-sixth semi-annual meeting of the Medical Society of the Missouri Valley will be held at Lincoln, Nebraska, on Thursday and Friday, March 26-27, 1914. The headquarters and meeting-place will be the Lincoln Hotel. The officers of the Society are: Drs. Flavel B. Tiffany, president, Kansas City, Mo.; Granville L. Ryan, first vice-president, Des Moines, Iowa; Austin McMichael, second vice-president, Rockport, Mo.; O. C. Gebhart, treasurer, St. Joseph, Mo.; Chas. Wood Fassett, secretary, St. Joseph, Mo. The meeting of this society will be held under the auspices of the Lancaster County Medical Society.

MEETING OF THE EAST BATON ROUGE PARISH MEDICAL SOCIETY.—The regular monthly meeting of the East Baton Rouge Parish Medical Society was held in the office of Dr. J. A. Tucker on February 11, 1914. The Society had as its guest on this occasion Dr. E. M. Hummel and Dr. A. Caine, both of New Orleans, who read papers connected with their respective lines of work, which were much enjoyed. At nearly every meeting this Society has some visiting doctor as its guest to read a paper on some medical subject in which the visitor is an expert. Dr. Hummel's subject was "Neuritis," and Dr. Caine's, "Anesthetics," and they both proved to be very instructive and entertaining. Another novel feature at this meeting was an address made by Col. I. D. Wall, of the Baton Rouge bar, who spoke on the "Relations Between Medicine and Law." This Society meets once a month, and always has a full attendance, each meeting followed by a late supper at the Istromma, which adds interest to the meetings and promotes a brotherly feeling among the members.

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON.—A board of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 B street, S. E., Washington, D. C., on Monday, March 9, 1914, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service. Examinations will be scheduled to be held at other stations of the service at a later date. Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character, one preferably being from a doctor of medicine. Service in hospitals for the insane, or experience in the detection of mental diseases, will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two years' professional work. Candidates must be not less than 5 feet 4 inches, nor more than 6 feet 2 inches in height, with corresponding weight, from 128 to 183 pounds.

The following is the usual order of the examinations: 1, Physical; 2, oral; 3, written; 4, clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate and that they will serve wherever assigned to duty. The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists of examination in the various branches of medicine, surgery and hygiene. The oral examination includes subjects of preliminary education, history, literature and natural sciences. The clinical examination is conducted at a hospital. The examination usually covers a period of about ten days. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments. After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Assistant surgeons receive \$2,000, passed assistant surgeons, \$2,400; surgeons, \$3,000; senior surgeons, \$3,500, and assistant surgeon general, \$4,000 a year. When quarters are not provided, commutation at the rate of \$30, \$40 and \$50 a month, according to the grade, is allowed. All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years' service, up to 40 per cent after twenty years' service. The

tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For invitation to appear before the Board of Examiners, address "Surgeon General, Public Health Service, Washington, D. C."

FIVE HUNDRED THOUSAND DOLLARS FOR YALE.—Under the will of the late Lord Strathcona and Mount Royal, High Commissioner for Canada, Yale University benefits to the extent of \$500,000. The Royal Victoria College at Montreal receives \$1,000,000. Several other smaller gifts are made to English and Canadian educational and charitable institutions.

NEW YORK SKIN AND CANCER HOSPITAL STARTS CANCER CAMPAIGN.—A campaign of education in the treatment of cancer and other diseases has been started by the New York Skin and Cancer Hospital. With a view to helping to control cancer, a bulletin has been issued, stating that in case of cancer the patient can help greatly in its discovery, and that persons suffering from lumps and mysterious pains and sores should immediately consult competent medical advice. These symptoms are generally—although not always—nature's warning of cancer.

WISCONSIN EUGENIC LAW INVALID.—The Wisconsin eugenic law, which provided for the issuance of marriage licenses only upon a certificate of a clean bill of health, was recently declared unconstitutional by the Circuit Court in Milwaukee. It was held that the eugenic law was of unreasonable statutory limitations so far as physicians' fees were concerned, and that it was an unreasonable and material impairment of the right of persons to enter into matrimony.

WARNING AGAINST RADIUM CURE-ALLS.—The New York City Department of Health has issued a warning against quacks who might seek to take advantage of the popular interest aroused by recent experiments with radium in the treatment of cancer. The department states that there is every reason to believe that the popular interest will be utilized by dishonest, money-getting establishments, conducted by individuals with little or no radium, and who have no knowledge of its use. This has been the experience in Europe. The great danger in all these cures, so-called, is the valuable time which may be wasted, thus frequently dissipating all chances of cure by surgical means.

SMALLPOX IN PENNSYLVANIA VILLAGES.—The presence of ninety cases of smallpox at Northeast, a village near Erie, Pa., alarmed the inhabitants of that place. It is thought that laxity in reporting the first case and maintaining the proper quarantine is blamed for the rapid spread of the disease.

DINWIDDIE SUCCEEDS TO TULANE DEANSHIP.—Dr. A. B. Dinwiddie, dean of the arts and science college of Tulane University, has been appointed dean of the graduate department, to succeed Dr. Alcée Fortier. Dr. Dinwiddie will continue in his former position also.

DR. MCGEE MADE LABORATORY CHIEF.—Dr. Wilfred J. McGee, formerly chief of the New Orleans Branch Laboratory of the United States Department of Agriculture, has been appointed to fill the position of chief of the Washington Branch Laboratory, at Washington, D. C. Since coming to New Orleans five years ago Dr. McGee has conducted the New Orleans laboratory in a very creditable manner. Its efficiency has always been highly regarded by the Department of Agriculture, and some of the work done here in connection with cases arising under the pure food and drug act of 1906 has been quoted extensively throughout the United States. So the recognition given Dr. McGee by tendering him the management and supervision of the big laboratory in Washington is well deserved.

NEW NAVY SURGEON GENERAL.—Secretary Daniels recently nominated Medical Inspector William C. Braisted to be surgeon general of the navy, relieving Medical Director Charles F. Stokes, whose term of four years had expired.

THE FOLLOWING RESOLUTIONS were unanimously passed by the Shreveport Board of Health recently. Dr. G. C. Chandler, President of the Shreveport Board of Health, feels that "they are so fair they should receive the unanimous support of the whole country, regardless of section. The citizens of the United States should have data that fairly represent the real health conditions of the various sections of the country, for none of us know when it may be to our interest to change our home, and we would like to know the real facts as to health conditions of the place in which we desire to locate":

Resolved, The Government method of keeping mortuary statistics has done a grave injustice to the South and kept from the people

in the North most valuable information. We believe that, if the mortuary reports had given the real health conditions of the country, many valuable citizens from the Northern sections of our country would not be expatriated in the cold and bleak country to the north of us, but would be dwelling in our own country.

It is a well-known fact that the deaths among the colored race are usually twice or more to the thousand than among the whites, regardless of the section of the country in which they live. When these colored deaths are included in the rate per thousand of population, the South, with its large colored population, goes into the Government records with about twenty or more to the thousand, while the average for the United States is about thirteen to the thousand. The South is thus heralded to the world as the sickliest part of the United States, when we believe the South is the healthiest section of the country.

It is absolutely misleading and unjust to include these colored deaths in making up the death rate per thousand of population in the Southern States, where negroes are so numerous, and comparing these rates to rates in States where the population is almost entirely white.

The white and colored should be tabulated and rated separately, thus the true health conditions of the country would be fairly tabulated and valuable data as to both races would be obtained.

Another injustice of the Government reports that should be corrected is crediting the deaths of non-residents to cities. Under the present system, a live, progressive city, which may be a medical and commercial center, with its railroads, hospitals and sanitariums, often is published to the world as a pest-hole, while dead cities, with possibly twice the death rate, are often presented to the country as health resorts.

The mortuary reports of a city, to be of value, should show the actual health conditions of the city, for on it are based all intelligent efforts for the improvement of health conditions.

We feel that it is the duty of every Southern Senator and Congressman to use every effort to have these inaccuracies corrected, so that the South and every section of our country can have a fair record in the Government reports.

We urge the Boards of Health and the people of every State and city in the South to use strenuous efforts to have changed this antiquated and worse than useless method of keeping mortuary statistics.

We believe that if the Government would once publish the real health conditions of the South, thousands of our Northern fellow-citizens would come to enjoy our advantages of soil and climate.

Resolved, That the president of the Shreveport Board of Health is instructed to send copies of this resolution to the president of the Louisiana State Board of Health, all of our members of Congress, the *Journal of the American Medical Association* and the press, to the State Board of Health, and use every effort to have these methods changed.

AT THE MEETING OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES, held in Chicago, February 25, 1914, an interesting report was handed in by the Committee on Education and Pedagogics, composed of the following: Jas. R. Guthrie, of the University of Iowa; Wm. P. Harlow, of the University of Colorado; Wm. C. Borden, of George Washington University; K. C. Babcock, of the University of Illinois; Isadore Dyer, of Tulane University of Louisiana, chairman. This report deals with the question of "Uniformity in Standards of Medical Education." The gist of it is as follows:

There has been no thought of superogation on the part of this committee in attempting to review or revise what may have appeared to have been satisfactorily done already by organized bodies engaged in the study of medical education. It has seemed necessary for some one to coördinate ideas of methods as practiced by the different colleges in membership in this Association, and this has seemed all the more desirable because of the wide variance in the published catalogs of such colleges.

The way for some uniformity in standards was laid by the Council on Medical Education of the American Medical Association by formulating what should be acceptable forms for colleges to follow, not only so far as entrance requirements are concerned, but so far as curricular outlines were affected. In the main, these have been followed, but the detail of administration differs so much in many colleges that no standard obtains sufficiently defined for all to follow.

It seems desirable that the Association of American Medical Colleges should arrive at some agreement, subject to regulation, through which the entrance credits may be uniform in standard and uniform in administration, so that when entrance credits are acceptable at one institution the same may be accepted at all others of like grade.

The detail of curricular methods must vary in all colleges, up to a certain point, but the standards which determine grades, work, laboratory periods, and the general scope of any given course should be so uniform that the credits earned at one school should obtain at another school of the same class, without going behind the returns—a thing which is only too frequently necessary at this time.

Other questions have arisen within the last few years which affect the policy and purposes of this Association. We have discussed the fifth or sixth year, and its value in a medical education. We have committed ourselves to formulate the scope of such a year. Hospitals have been discussed in a mass without any basis for establishing the quality or equipment of a hospital recognized for credit in a medical course. No reports as yet have been made on the degree of affiliation with acceptable hospitals and schools of medicine having their graduates as interns in such.

It has seemed the part of wisdom to obtain a survey of these questions for discussion in some authoritative form, and your com-

mittee, through the presumption and assumption of its chairman, has issued a questionnaire giving the opportunity to every college in membership to state, in exact terms, both facts concerning its organization and methods and opinions concerning the questions most alive in our present stage.

Some colleges have not taken the questionnaire seriously. Others have considered that the printed catalog furnished all the desired information, and have left the matters open, though categorical questions were submitted, some of which no catalog could answer. Some colleges have answered some few questions and have ignored others. A few colleges have taken the questions as a serious attempt at organized information, and have, in the most explicit manner, satisfied each point submitted.

There remains only the statement that if all colleges solicited had replied with the same spirit with which the questions were sent, the committee would have had a better report to make. As it is, only a conclusion can be drawn from the opinions expressed.

The questions were sent to all colleges in membership in the Association of American Medical Colleges, under date of December 15, 1913, with a request for early reply.

No replies were received from the following institutions: University of California, University of Southern California, Cornell, University of Georgia, Northwestern University, George Washington University, University of Iowa, University of Kansas, Johns Hopkins University, University of Maryland, Detroit College of Medicine, St. Louis University, University of Nebraska, Wake Forest College, University of Oklahoma.

No deductions drawn from a list of questions such as here outlined and answered from so many points of view can be considered as conclusive of any opinion. They only show the trend of thought of those concerned.

The changes in medical education in the past ten years have been too rapid in this country to permit any one to make any analysis at this time which could be comprehensive, for we are still in the stage of transition, and no one knows what the next ten years may bring.

We may be going too fast, however, in the determination of methods, and even standards. In our search for the ideal we are prone to take the point of view of the educator and to forget entirely the point of view of the one most interested in the educational side, at least, namely, the student.

The study of medicine is undoubtedly more and more attractive, but the necessary preparation for the final gratification grows difficult in its detail, more expensive in its execution, and the student is more inclined to pause than ever before. His time and his money are concerned as well as his capability to undertake the task.

Your committee has undertaken no new thing in this report, but in the endeavor to burnish up old themes and some more recent, we trust that the material may bring some ultimate profit.

REMOVALS.—Dr. O. C. Burton, from Crystal Springs, Ark., to 128 Hickory street, Hot Springs, Ark.

The Rebman Company, from 1125 Broadway to 141 W. Thirty-sixth street, New York.

Dr. E. L. McGehee, from Cusachs Building to 923 Maison Blanche Building, New Orleans.

Dr. E. C. McGehee, from Liberty, Miss., to Halley, Ark.

Dr. M. B. Brandenberger, from Mason, Texas, to Seguin, Texas.

Dr. J. B. Wachtel, from Navina, Okla., to Lee Building, Oklahoma City, Okla.

Dr. R. L. Hargrave, from Quannah, Texas, to Wichita Falls, Texas.

Dr. Edward D. Lovejoy announces the removal of his offices to 1202 Brockman Building, New York City.

Dr. Ralph R. Campbell announces the removal of his offices to 1012 Brockman Building, and will limit his practice strictly to skin and genito-urinary diseases.

MARRIED.—Dr. C. Lewis Gaulden, of New Orleans, to Miss Branch, of Elizabeth, La.

DIED.—On February 3, 1913, Dr. Isaac Stiles Hopkins, founder and first president of the Georgia School of Technology, aged 74 years.

On February 7, 1914, Dr. Nathan S. Marshall, of Knoxville, Tenn, aged 82 years. Dr. Marshall was one of the few surviving veterans of the fleet with which Commodore Perry opened the doors of Japan in 1854.

On February 15, 1914, Dr. Roswell Park, of Buffalo, N. Y., one of the best-known surgeons in America, aged 62.

OBITUARY.

DR. A. B. BROWN.

At a meeting of the Louisiana State Board of Medical Examiners held on January 14, the following resolutions on the death of Dr. Arthur Bernard Brown were adopted. At the same meeting Dr. E. L. Leckert was elected secretary of the Board:

RESOLUTIONS ON THE DEATH OF DR. ARTHUR BERNARD BROWN.

Whereas, the Giver of Life has called to his eternal reward Dr. Arthur Bernard Brown:

Whereas, Dr. Arthur Bernard Brown, by his untiring zeal and constant devotion as secretary of the Louisiana State Board of

Medical Examiners, has notably contributed in raising the standard and requirements of medical practice in the State of Louisiana;

Whereas, by his unbounded enthusiasm in the cause of State medicine he succeeded, through strenuous and unremitting labor, in placing this Board in the third place among the States of the Union; therefore, be it

Resolved, That this Board has sustained in his untimely death an irreparable loss;

Be it further resolved, that while we admit that the paths of glory "lead but to the grave," we believe that Dr. Brown's achievements in his particular field of endeavor must in itself ever remain an enduring monument to his memory;

Be it further resolved, That this Board, deeply impressed with its own great loss, turns to those who were near and dear to him, and extends to the stricken parents and wife its sincere sympathy and condolence in their hour of bereavement;

Be it further resolved, That a copy of these resolutions be sent the father and mother and wife of the deceased, and that a copy of these resolutions be sent to the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL and to the daily press of New Orleans;

Be it further resolved, That these resolutions be spread upon the minutes of this Board.

J. G. MARTIN, M. D.,
President.

HOMER DUPUY, M. D.,
Secretary Pro Tem.

(Signed)

S. L. WHITE, M. D.,
ESPY M. WILLIAMS, M. D.,
E. L. LECKERT, M. D.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

Protein Split Products in Relation to Immunity and Disease, by Victor C. Vaughan, M. D., LL.D.; Victor C. Vaughan, Jr., M. D., A. B., and J. Walter Vaughan, M. D., A. B. Lea & Febiger, Philadelphia, 1913.

Dr. Vaughan, dean of the Department of Medicine at the University of Michigan, with the help of his two sons and the most devoted and skillful services of Drs. Sybil May Wheeler and Mary Leach, has been enabled to enlarge medical literature by a book which incorporates researches extending over fifteen years, and undertaken not for any commercial ends nor with the view of advancing medical problems from the curative point of view, but rather for the sake of pure science. How much the earlier work by the Vaughans has been appreciated by others is shown by the number of people who have done research based on the ideas first put forward by the elder Vaughan. If the book contained nothing else but methods of growing bacteria in bulk, this alone would be a great achievement, but these mass cultures were only a preliminary step to enable the authors to inquire into the chemistry of bacterial life in general and the effects produced by bacteria in the bodies of their hosts.

It is shown in this book how all proteins may readily be split into two groups, namely: a toxophore radical and a haptophore group. The former, or poisonous nucleus, may be extracted from dried defatted material with absolute alcohol containing two per cent of caustic soda. It is characterized by giving the reactions of Millon, Adamkiewicz, the Biuret and sulphur reactions. With the exception of the tuberele bacilli, this poisonous element is quite free from any carbohydrate radical, and is so poisonous that half a milligram will kill guinea pigs weighing 300 grams. Notwithstanding its poisonous character, this toxophore conveys no immunity whatsoever, as its injection into the body does not give rise to any anti-bodies. Whether one obtains the toxophore group from the white of egg or the most diverse bacteria seems to make but little difference, as there is nothing specific about them. It is, however, an entirely different question when we have to deal with the haptophore group which is attached normally to the toxophore group. The haptophore group is that radical which, on coming into contact with the living tissues of the host, calls forth a specific activity of the host, in consequence of which ferments are liberated, which lead to rapid digestion of the haptophore group. It will be seen that, because of this specificity, immunity means a special adaptation of the host to protect itself against whatever specific haptophore group it comes into contact with. If, for example, animals are rendered immune to the haptophore group of the tuberele bacillus, an injection of the haptophore group in an animal containing tuberele bacilli may lead to so rapid a digestion of the latter as to liberate the toxophore group of the tuberele bacilli, and thereby lead to the death of the animal. From this point of view, the pathogenity of an organism is measured by the rate at which an organism can multiply in the body of its host, and it is, therefore, inversely proportional to the power the organism possesses of digesting the bacteria and thereby making it impossible for bacteria to live in the host.

Amongst the highly interesting observations—far too many—to be regarded in this abstract, just the following may be mentioned:

The ease with which egg white is absorbed from the rectum and the peritoneal cavity of rabbits; that blood is a digestive fluid; that fever, *per se*, is a beneficent process, etc.

If any fault is to be found with the book, it is perhaps in the preface, where the assumption is made that electrones play a part in biological processes or that the cell is not the unit of life, because life is said to be molecular. The molecules of a cell in themselves could not keep up the life of the cell, but only in conjunction with one another do they give rise to these phenomena which make it possible for a unit, namely, the cell, to maintain its independence. To all who are interested in medical science this book cannot be too highly recommended.

GUSTAV MANN.

Anatomy, Descriptive and Applied, by Henry Gray, F. R. S. A new American from the eighteenth English edition by Robert Howden. Lea & Febiger, Philadelphia and New York, 1913.

This new edition of Gray's Anatomy gives a happy substitution of the Basle terminology in English for the mixed terminology of the previous American edition, and the arrangement of material is better. The work is divided into histology, embryology, systematic anatomy and surface anatomy, with a glossary of Basle anatomical terms and a comprehensive index. As compared with the preceding American edition, the number of pages has been reduced from 1496 to 1407, the number of illustrations from 1208 to 1126. The pages on systematic anatomy have been reduced from 1452 to 980, largely by the removal of the sections on histology, embryology and surface anatomy to separate parts of the book, and in this reduction in the number of pages the nerves have lost sixty-eight pages, the muscles fifty-eight pages, the blood vessels fifty pages and the bones forty-two pages, whereas the joints have gained twenty-six pages. The sections on the bones, joints and muscles have been materially improved, but the sections on the nerves and blood vessels have been weakened by the omission of many cuts and the brevity of the description. For use in the dissecting-room, the placing of the text dealing with histology, embryology and surface anatomy to separate sections is an improvement. Incomplete, as such always are, they could be omitted altogether. There are now separate courses and adequate text-books for these subjects.

The arrangement of the illustrations has been improved by placing ventral and dorsal surfaces on opposite pages, and many new illustrations of distinct value have been added. Among these are colored illustrations of the bones, of the epiphyseal lines, of the synovial membranes and the lymphatic system. Repetitions in the text and in the illustrations have been omitted, with distinct advantage. The sections on the arches of the foot, the mechanism of the pelvis, the mechanism of respiration, and the descriptions of the fascia are of great value.

The directions for dissecting, especially in the cutting of skin flaps, are distinctly bad in this work, because the old-fashioned, narrow, pointed strips result, instead of the broad, square ones, which aid in preserving the material.

Many deficiencies appear, especially in the nervous system and blood vessels. The results of recent investigations relating to the branching of arteries and to the rearrangement of the nerves of the head have been overlooked. Every large artery in the body occurs in five forms, according to the arrangement of its branches, and at least two of these forms should be given as the most usual condition. The old classification of the twelve cranial nerves should be abolished and three nerves should be added—the masticator, which is now called the motor root of the trigeminal; the glosso-palatine, which is now called the sensory root of the facial; and the equilibrie, or vestibular, which has been considered a part of the acoustic nerve.

The treatment of the sympathetic system is deficient in relation to the ganglia of the head and their connections with the tympanic plexus. The description of the pulmonary plexus is omitted.

The book is, in effect, a return to the text of the early editions of Gray's Anatomy of the last century, with the use of the old cuts, on which the Basle terminology has replaced the old terms, and the addition of many good new cuts and much good new text.

ROBERT BENNETT BEAN.

A Text-Book of Physiology: For Students and Physicians, by William H. Howell, Ph. D., M. D. Fifth edition, thoroughly revised. W. B. Saunders Company, Philadelphia, Pa.

The fifth edition of Howell's Physiology is a careful reprint of the fourth edition, with a few additions in the text and three new illustrations. The manner Howell has adopted of giving his references on the same page that he quotes them is excellent.

In speaking of energy requirements, Howell states that the "discharge of the nerve cells is met by any one of the three energy-yielding foodstuffs." Certainly the nervous system cannot be run on fat and sugar.

F. P. CHILLINGWORTH.

Inebriety, Its Source, Prevention and Cure, by Charles Follen Palmer. The Union Press, Philadelphia.

This is a brochure aimed at the discussion of the various phases of influences causing inebriety, with a view to the raising of youth, the study of the attributes of the drunkard, the uplift of the class and, finally, the consideration of the inebriate in his sociological status in modern society. The subject is presented in a readable and forceful manner.

DYER.

Modern Problems of Biology. Lectures delivered at the University of Jena, 1912. By Charles Sedgwick Minot, LL.D., D. Sc. P. Blakiston's Son & Co., Philadelphia.

This little book of about 125 pages covers a series of lectures by a modern thinker in biology, presenting his ideas to an academic audience. The subjects discussed are of more than ordinary interest and cover the most recent problems in the study of life. The topics embraced are: 1. The New Cell Doctrine; 2. Cytomorphosis; 3. The Doctrine of Immortality; 4. The Development of Death; 5. The Determination of Sex; 6. The Notion of Life. No one chapter is more potential than another in the matter presented, and all are keenly alive with subject for thought. The illustrations are plentiful and apt.

We are reminded of the author's more elaborate essay on "Old Age and Death," which appeared not long ago, in the chapters on Life, Immortality and Death, and much of the thought previously presented is repeated here.

"We biologists, however, are not philosophers," says the author. "We make no assumption to offer you final explanations." * * *

"Life is bound to matter. Vital phenomena are alterations of the living substance, which we describe by saying that they are transformations of energy. But there always remains the possibility that consciousness cannot be explained mechanistically, that it is neither a condition of protoplasm nor a special form of energy, but something of its own kin, not comparable with anything else that we know, and that it reveals itself by causing transformation of energy." This is one of many groups of intensive suggestion, with which the various lectures are filled, and which will satisfy any reader who is searching for the explanations of the vital phenomena which are not within the scope of his own speculation.

DYER.

Causes and Cures of Crime, by Thomas Speed Mosby. Illustrated, C. V. Mosby Company, St. Louis.

A very clear division of the text is made in the consideration of the two topics—causes and cures. A general but comprehensive introduction gives the factors in crime from many points of view—cosmic (communal, climatic, etc.), social (civic, legislative, influences of press, poverty, educational, religion, etc.), and individual (racial, habits and disease), each phase receiving excellent treatment.

With the lure of crime, much more space is occupied and the question is discussed from the standpoints of sociologist and utilitarian as well as of the humanitarian.

Eugenics are fully gone over, followed by the consideration of the present status of asexualization as a means of prevention. The practises of various States are cited, and the author has a good running commentary as each subject is approached.

The book concludes with a chapter on "The New Penitentiary," which contemplates the abolition of the penitentiary system. It must give way to the reformatory, with individualization of punishment. The main argument entertains the criminal as a diseased individual, with various types of infirmities, capable of being studied, and, where they may be probably cured, grouped into cases which may be cured or ameliorated, and some which may be hopeless.

The book is interesting and satisfying to the reader who wants a good review of modern thought in crime, its phases and in new ideas of its relief. DYER.

An Introduction to the History of Medicine, by Fielding H. Garrison, A. B., M. D. Illustrated. W. B. Saunders & Co., Philadelphia and London.

It has been some years since any survey of medical history has been presented in the English language; the most of those in the past have been translations.

The present book should be welcomed as satisfying a general want and, further, for the comprehensive scope of its contents. The material presented deals with all phases of medical history from the earliest records up to the year 1913.

The evolution of medicine, from a merely incidental feature of civilization to an important adjunct, is detailed with many particulars concerning the peoples and the persons who have taken part.

The perusal of the book shows plainly, however, that no effort has been made at any exhaustive presentation of any phase of the subject undertaken; on the contrary, only the most salient features of medical events are presented, and from each country only men related to the topics discussed are presented as worthy of historical notice.

No undue neglect is noticed with respect to any particular period or country, but it is worthy of remark that the Americans who receive most notice are not all dead.

We are glad to observe that Matas has not been overlooked, even if he is dismissed with scant notice; and, of two featural achievements recorded in 1912, Bass' cultivation of the malarial plasmodia *in vitro* is named as one.

The evidences of a desire and intention to present a fair survey of the history of medicine from available sources is quite apparent, and if there are any shortcomings these may be attributed to the necessities arising from condensation, for it would have been impossible to have presented an exhaustive history in the number of pages used.

The matter is arranged in periods and brought up to the most modern advances in the field of medicine.

A chronological table, a medical bibliography and a comprehensive index conclude the book. The numerous photo reproductions of notables in medicine should be also mentioned. DYER.

A Manual of X-Ray Technic, by Arthur C. Christie, Captain Medical Corps, U. S. A. Illustrated. J. B. Lippincott Company, Philadelphia and London.

The author states in the preface that this book was prepared for the medical service of the United States Army. It satisfies its title in a clear outline of all the technical details essential for the practical use of the X-ray for diagnostic purposes.

Beginning with the general definition of electricity, the X-ray and its historical development are related. In successive chapters the various application of the X-ray is set forth.

No suggestion of X-ray therapy is ventured, and the book aims essentially at instruction in the manipulation of the apparatus, in which instruction there should be an entire success.

DYER.

The Doctor in Court, by Valentine Mitchell, LL.B. Rebman Company, New York.

A mass of valuable information is contained in this little book, which covers ground not apparent in the title. The writer of the book has gathered not only those material things which relate to testimony, but has also presented many phases of the physician's obligation to the State and to the patient, not usually brought into court, yet related to the every-day experience of the field of medicine.

Sanitary law, malpractice and its definition, responsibility under the law, compensation and the privileges and rights for recovery, are among many topics touched upon. Medical practice regulations and the scope of the law in relation to these, abortion and its punishment are also covered.

Altogether a timely book, well made, and covering a large amount of valuable information, so presented as to make a useful addition to the library of the modern physician.

DYER.

The Diseases of Children, by Henry Enos Tuley, M. D. C. V. Mosby Company, St. Louis, 1913.

This second edition of the book presents an entirely new book, with the needs of the general practitioner and student in view. The appendix reproduces in full the standards and methods for the production of certified milk as adopted by the American Association of Medical Milk Commission—a valuable document to make proselytes in this most vital problem of procuring pure, clean, natural milk for the young and for the old, for everybody. Pasteurization and sterilization certainly promote a desired object for lack of something better, but while they are, after all, but suitable makeshifts and expedients, under the circumstances they certainly alter the value of the whole milk as a food.

DUPAQUIER.

International Clinics. Volumes III and IV of the twenty-third series, 1913. J. B. Lippincott Company, Philadelphia and London.

In both volumes there is a collection of interesting surgical cases, with many illustrations, among which are colored sketches (frontispiece), marking the different significant colors in pictures of sporotrichosis, indolent ulcers and frost-bite of fingers.

In Volume III are the following articles: "Prophylaxis and Treatment of Malarial Infections"; "Clinical Study of Uncinariasis, and Its Treatment"; "Treatment of Pneumonia"; "Diagnosis and Treatment of Gastric and Duodenal Ulcers"; "Treatment of Diseases of the Heart"; "Treatment of Pulmonary Tuberculosis by Hydrotherapy"; "Practical Points in the Management of Some Pulmonary Diseases"; "Newer Medicinal and Non-Medicinal Diuretics"; "Hydro-Carbohydria and Its Treatment"; "Treatment of the Common Vegetable Parasitic Diseases"; "Gastro-Intestinal Toxemia, Its Cause and Treatment, with

a Criticism of Intestinal Stasis"; "Alimentary Toxemia"; "Acute Osteomyelitis of the Lumbar Vertebra"; "Death from Pyemia"; "Use of Camphorated Oil in Surgery"; "Anemia from a Surgical Standpoint"; "Treatment of Acute Peritonitis"; "Suppurative Pylophlebitis"; "Rape in Children and in Young Girls"; "Use of Certain Physical Agents in the Treatment of Cancer and Allied Diseases: First, Electrocoagulation (Doyen); second, Fulguration (DeKeating-Hart); third, Thermoradiotherapy (DeKeating-Hart)," and last, not least, the "Bergonie Treatment of Obesity and Cardiopathy."
 DUPAQUIER.

In Volume IV are the following articles: "Therapeutic Application of Mechanical Vibration"; "Static Electricity, Its Physical and Physiological Effects and Therapeutic Indications"; "Newer Methods in the Treatment of Neuritis"; "Management of Common Forms of Poisoning"; "Augmented Blood-Pressure"; "Azurophile Micro-Organisms"; "Diagnosis of Extensive Pulmonary Tuberculosis in Obscure Cases"; "Factors in the Clinical Physiology of the Heart"; "Interpretation of Dreams, Based on Various Motives"; "Neurotic Discomfort and the Law of Avalanche"; "The Psyche in Diagnosis"; "Syphilis of the Ponsmedulla and Upper Spinal Cord"; "Traumatic Toxemia and Fatty Embolism"; "Gunshot Wounds"; "Treatment of Hemorrhoids"; "Constitutional Immorality"; "Shall the Deaf-Mute Remain Dumb, or Shall the Dumb Speak?"
 DUPAQUIER.

Musser's Medical Diagnosis, by John H. Musser, Jr., B. S., M. D., Lea & Febiger, Philadelphia and New York, 1913.

This is the sixth edition, revised, of the well-known, practical treatise on medical diagnosis for students and physicians by the late Professor Musser. The original plan and methods of the work have been retained, while all the newest material known to be of practical value has been added in the present edition. The rearrangement, condensation and additions mentioned make of this popular work an entirely new book worthy of the great popularity of the earlier editions.

DUPAQUIER.

Publications Received.

C. V. MOSBY COMPANY, St. Louis, 1914.

Practical Sanitation, by Fletcher Gardner, M. D., and James Persons Simonds, B. A., M. D.

Diagnostic Methods, by Herbert Thomas Brooks, A. B., M. D. Second edition, revised and rewritten.

W. B. SAUNDERS COMPANY, Philadelphia and London, 1913.

An Introduction to the History of Medicine, by Fielding H. Garrison, A. B., M. D.

A Textbook of the Practice of Medicine, by James M. Anders, M. D., Ph. D., LL.D. Eleventh edition, thoroughly revised.

The American Illustrated Medical Dictionary, by W. A. Newman Dorland. Seventh edition, revised and enlarged.

Dietetics for Nurses, by Julius Friedenwald, M. D., and John Rhurah, M. D. Third edition, revised and enlarged.

Materia Medica, Pharmacology, Therapeutics, Prescription Writing, by Walter A. Bastedo, Ph. G., M. D.

A Textbook of Physiology, by William A. Howell, Ph. D., M. D., Sc. D., LL.D. Fifth edition, thoroughly revised.

The Surgical Clinics of John B. Murphy. December, 1913.

Principles of Surgery, by W. A. Bryan, A. M., M. D.

The American Pocket Medical Dictionary, by W. A. Newman Dorland, A. M., M. D. Eighth edition, revised and enlarged.

Anatomy and Physiology for Nurses, by Leroy Lewis, M. D. Third edition, thoroughly revised.

PAUL B. HOEBER, New York, 1913.

The Healthy Marriage, by G. T. Wrench, M. D., B. S.

Textbook of Pathology, edited by A. E. Boycott, M. A., M. D.

Lectures on Tuberculosis to Nurses, by Olliver Bruce, M. R. C. S., L. R. C. P.

Lectures on Medical Electricity to Nurses, by J. Delpratt Harris, M. D., M. R. C. S.

LEA & FEBIGER, Philadelphia and New York, 1913 and 1914.

Dental Electro-Therapeutics, by Ernest Starridge, L. D. S., D. D. S.

Clinical Diagnosis and Urinalisis, by James Rae Arneil, A. B., M. D. Second edition, revised and enlarged.

Anatomy and Physiology for Nurses, by John Forsyth Little, M. D.

MISCELLANEOUS.

Substitution, by Herman A. Metz. (Address delivered at the Joint Conference of Physicians and Pharmacists, New York, October 6, 1913.)

The Institution Quarterly. Volume IV, No. 111, September 30, 1913.

Report of the Department of Sanitation of the Isthmian Canal Commission for the months of October and November, 1913. (Washington Government Printing Office.)

Proceedings of the Seventh Annual Meeting of the Association of Life Insurance Presidents. (December 11, 12, 1913, New York.)

Morbidity Reports. (Washington Government Printing Office, 1913.)

The Mulford Digest. (H. K. Mulford Company, Philadelphia, 1913.)

The Lilly Scientific Bulletin. (Eli Lilly Company, Indianapolis, Ind.)

List of Bulletins and Circulars, published by the Purdue University Agricultural Experiment Station, Lafayette, Ind.

Public Health Reports. Volume 29, Nos. 2, 3, 4, 5. (Washington Government Printing Office, 1913.)

Twelfth Annual Report of the Mortality Statistics for 1911. (Washington Government Printing Office, 1913.)

"The Treatment of Rheumatic Infections." (Press of Parke, Davis & Co.)

"Bill to Repeal Hetch Hetchy Grant." (Washington Government Printing Office, 1913.)

"The Sale of Bichloride Tablets," by Martin I. Wilbert. (Washington Government Printing Office.)

"Public Health Reports." Volume XXVIII, Nos. 50, 51, 52; Volume XXIX, No. 29.

"Ophthalmic Literature." (Published Monthly by Edward Jackson, Denver, 1913.)

Reprints.

"The Friedmann Vaccine for the Treatment of and Prophylaxis Against Tuberculosis," by Profs. C. L. Schleich, Erich Muller, Drs. Hans Thalheim, Immelmann Geheimrat, Prof. Dr. F. Kraus, with closing remarks by Dr. F. F. Friedmann.

"Chronic Intestinal Stasis," by William Seaman Bainbridge, A. M., Sc. D., M. D.

"Poisons and Habit-Forming Drugs," by Martin I. Wilbert and Murray Galt Motter.

"The Citizen and the Public Health," by John W. Trask.

"Some Examples of the Effect of Asymmetric Nitrogen Atoms on Physiological Activity," by P. P. Laidlaw, M. A., B. C.

"The Identity of Trimethylhistidine from Various Sources," by George Barger, M. A., D. Sc., and Arthur James Ewins, B. Sc.

"A Modification of Diphtheria Antitoxin," by A. T. Glenny, B. Sc.

"The Rate of Reproduction of Various Constituents of the Blood of an Immunised Horse After a Large Bleeding," by R. A. O'Brien, M. D.

"Gas Electrode for General Use; The Use of Litmus Paper as a Quantitative Indicator of Reaction," by G. S. Walpole, D. Sc., F. I. C.

"The Effect of Varying Tonicity on the Anaphylactic and Other Reactions of Plain Muscle; On the Action of Ergotoxine; With Special Reference to the Existence of Sympathetic Vasodilators," by H. H. Dale, M. A., M. D.

"Diagnosis and Instructions for the Treatment of Suppurative Diseases of the Nasal Accessory Sinuses; Tumors of the Larynx; The Differential Diagnosis Between Vincent's Angina and Primary Syphilitic Lesion of the Tonsil; The Dignity of Otolaryngology; Laryngeal Tuberculosis," by Robert Levy, M. D.

"The Great Danger of Incomplete Operations for Cancer in the Early Stages of the Disease; The Added Responsibility of the Surgeon when Called on to Treat Surgical Lesions in their Earlier Stages," by Joseph Colt Bloodgood, M. D.

Heat and Infant Mortality, by J. W. Schereschewsky.

Flies and Carriers of *Lambia* Spores, by C. W. Stiles and William S. Keister.

Remarks on Chronic Intestinal Stasis, by William Seaman Bainbridge, A. M., M. D., Sc. D.

Cancer Control, by Joseph C. Bloodgood, M. D.

Pellagra, by C. H. Lavinder, S., U. S. P. H.

Study of Man, by Arthur McDonald.

The Correlation, Unification or Synthesis of Chemotherapy and Psychotherapy, by Henry S. Munro, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for January, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever	2	2	4
Intermittent Fever (Malarial Cachexia)		1	1
Smallpox			
Measles			
Scarlet Fever			
Whooping Cough			
Diphtheria and Croup	8		8
Influenza	15	8	23
Cholera Nostras			
Pyemia and Septicemia	2	1	3
Tuberculosis	49	39	88
Cancer	19	7	26
Rheumatism and Gout			
Diabetes	6	1	7
Alcoholism	2		2
Encephalitis and Meningitis	3	1	4
Locomotor Ataxia			
Congestion, Hemorrhage and Softening of Brain	25	16	41
Paralysis	2	1	3
Convulsions of Infancy		1	1
Other Diseases of Infancy	9	6	15
Tetanus	1		1
Other Nervous Diseases	6	1	7
Heart Diseases	73	41	114
Bronchitis	6	2	8
Pneumonia and Broncho Pneumonia	39	40	79
Other Respiratory Diseases	3	1	4
Ulcer of Stomach		1	1
Other Diseases of the Stomach	7	4	11
Diarrhea, Dysentery and Enteritis	18	17	35
Hernia, Intestinal Obstruction	5	2	7
Cirrhosis of Liver	9	3	12
Other Diseases of the Liver	2	1	3
Simple Peritonitis	1		1
Appendicitis	3	3	6
Bright's Disease	43	26	69
Other Genito-Urinary Diseases	5	6	11
Puerperal Diseases	3	5	8
Senile Debility	8	2	10
Suicide	7		7
Injuries	13	13	26
All Other Causes	23	7	30
TOTAL	417	259	676

Still-born Children—White, 19; colored, 23. Total, 42.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 18.39; colored, 30.77. Total, 21.75.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.	30.09
Mean temperature.	57
Total precipitation.	1.02 inches
Prevailing direction of wind, northeast.	

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Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

ABDOMINAL GUNSHOT WOUNDS; REPORT OF TWO UNUSUAL CASES.

By LUCIAN H. LANDRY, M. D.,

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In considering the question of gunshot wounds of the abdomen it has been debated for some time, especially in this community, whether the patient has a better chance of getting well by an immediate operation or by the so-called "expectant treatment," which consists essentially of absolute rest in bed, morphin and starvation, with other means of introducing stimulating and nutrient fluids, namely: by the rectal and hypodermal routes.

From what I can gather, it appears that the army surgeons have been the chief exponents of this plan of treatment. There is no doubt that in military practice the expectant plan has found its chief justification, though even army surgeons, especially in the more recent wars, freely admit that this is far from being the ideal treatment. There may be no doubt that expectancy is the best, if

not the only, treatment in the field hospitals. The base hospitals are miles away from the fields of action, and, in most instances, twenty-four and more hours must elapse between the initial trauma and the time the patient can be subjected to operation in suitable surroundings. In the meantime, the patient is compelled to undergo the shock and exhaustion of transportation.

This condition does not hold true in civil practice, and there are few communities indeed that cannot rush a patient to a hospital within the time varying from a few minutes to two or three hours.

Without in any way attempting to review the recent literature of the subject, but simply as illustrations of successful interventions in this usually desperate class of injuries, I would mention the results obtained by a few operators whose contributions demonstrate not only the advantages of early intervention, but also the possibility of obtaining most satisfactory results, even in the most unfavorable conditions, for the successful exhibition of the resources of modern surgery.

Dr. J. W. Alsobrook, of Plant City, Fla.,¹ gives us a very interesting account of patients who were operated under very adverse circumstances for grave intra-abdominal conditions, and who made speedy and satisfactory recoveries nevertheless. I will take the liberty of citing three of his gunshot cases.

Case I. A mulatto boy, age 17, was shot in the abdomen with a 22 caliber rifle; rode 10 miles in a wagon to see the doctor; was operated two hours after the traumatism and on opening the abdomen, eleven perforations were found in the small intestines and one in the descending colon. Perforations were cleansed and closed; he was placed in a negro boarding house and nursed by his mother. Made an uneventful recovery and rode ten miles in a wagon to his home on the tenth day.

He reports another case of a robust colored male, age 24, shot in the abdomen with a 38 caliber revolver; fourteen perforations were found and closed with purse string sutures. After the operation, the patient was taken back to his shanty and without a nurse, other than a negro man to give him water and a little soup the neighbors brought in, he made a rapid recovery and was out in two weeks.

His third gunshot case was that of a colored male, age 40, shot with a 38 caliber revolver, bullet entering the abdomen just to the right of the ensiform cartilage and slightly below—coming out just beneath the twelfth rib behind. At operation, the abdomen was found to be filled with blood, which came from a large ragged wound in the right lobe of the liver. Two chromic catgut sutures were put in the liver; a counter opening made through the wound to exit behind, and packed with gauze. He was carried back to his house the following morning in a wagon, making a good recovery in two weeks. His wife was his nurse.

Dr. Maurice Kahn of Leadville, Colo., reports 13 cases of gunshot wounds of the abdomen in which seven were operated and six were not. With the exception of one case, who refused operation

and recovered (a hundred to one hazard), the patients not operated either died of hemorrhage before they could be removed to the hospital, or were moribund when first seen. Ten cases involved only the abdomen and three involved both the thorax and abdomen. These three cases died. Only one was operated on, when the diaphragmatic, stomach and mesenteric wounds were repaired. Patient died of secondary pulmonary hemorrhage, twenty hours after the operation. After excluding this case, as the thoracic injury alone was responsible for death, six cases of gunshot wounds of the abdomen, with intestinal perforation are left; all were operated on within eight hours of the accident with one death,—a mortality of 17 per cent.

Dr. Cunningham Wilson, of Birmingham, Ala.,³ has had probably the largest individual experience in abdominal gunshot wounds in civil practice, as will be seen from his report of twenty-five operated cases in all stages of severity in which he had a gross mortality of 40%. or ten out of twenty-five cases. This is not a high death rate, when we consider that some of these cases were delayed as much as thirty-six hours before coming to operation. His general time average was 9.8 hours.

I now wish to present two personal cases, which came to my hands through the courtesy of Dr. R. Matas, from his surgical service at the Tourø Infirmiry, not that I think any rare surgical judgment or skill was used, but for the rather unusual type of injuries received.

Case I. D. B., age 22, white, longshoreman by occupation. On morning of June 11, 1913, at 8:30, patient was walking up the river front; a riot was going on at the time and he was struck by a stray bullet. When he found that he was shot, he jumped into a passing wagon; he rode a square, when the driver, fearing he would be shot for harboring him, made the patient get out. He remained under a railroad shed for half an hour, walking up and down, as the shooting was still going on and he feared he might be shot again. He walked five squares to a car, and remained standing on the rear platform until he reached the Tourø Infirmiry. He applied to the outdoor surgical clinic where, after examination, a bullet wound of entrance was found grazing the right iliac crest, just one and one-half inches posterior to the anterior superior spine, taking a backward and upward course. The bullet was found lodged just under the skin, two and one-half inches to the left of the spinal column on a level with the body of the third lumbar vertebra. Under local anesthesia, a small incision was made and the bullet removed.

The patient was sent to the ward for further observation. On admission, temperature, 96.4°; pulse, 66; respiration, 32. Complained of being cold and having considerable abdominal pain. Morphine, ¼-gr., was given by needle. When seen at 2:30 p. m. (five and one-half hours after the injury) temperature and pulse were found to be unchanged.

The abdomen rigid and tender and the patient covered with a cold sweat.

On opening the abdomen, a considerable amount of blood exuded. The cecum was pulled out and the appendix found practically severed, one-quarter of an inch from its cecal attachment. The mesenteric border alone being left intact. Another perforation was found in the caput coli about half an inch from the appendix.

The appendix was clamped off and removed; a purse string suture was thrown around the perforation in the cecum and inverted with the stump of the appendix. An extensive extravasation (hematoma) was found in the right retroperitoneum. The cecum and ascending colon were anchored to the parietal peritoneum with the view of walling off the general cavity. Stab drainage was provided in lumbar region, where two large sized rubber tubes were inserted. Two large cigar drains were put in the lower angle of the anterior abdominal wound, leading down to the floor of the pelvis. Patient was returned to the ward; very much shocked; no radial pulse could be felt. Was given proctoclysis, hypodermoclysis and morphia. At 6:00 p. m. (four hours after the operation), pulse, 130; temperature, 101°; very restless.

On June 18 (seven days after operation) the patient developed a fecal fistula which discharged from the anterior and posterior drains. Pulse, very weak; nausea, vomiting and tympanitis.

He reacted nicely to stimulation, however, and gradually grew stronger. On September 10 Dr. Gessner enlarged the opening and inverted the pouting mucosa of the fistula, leaving the skin wound open. The patient made a gradual but uneventful recovery and was discharged October 6, 1913.

Case II. Mrs. S. K., age 23, white. About 5:30 p. m., November 3, 1913, patient, in a fit of dispondency, shot herself with a 38 caliber revolver.

She apparently held the revolver in the left hand, as the course of the bullet showed a point of entrance, three and one-half inches to the right and two inches above umbilicus. The point of exit was found in the midscapular line, on a level with the ninth rib, on the right. Another wound was found on the inner surface of the right arm, in its middle third. Bullet could be felt flattened against the humerus. Bullet was removed and wound drained.

An incision was made in the anterior abdominal wall, with its center corresponding to the wound of entrance. On opening the peritoneum, a very large amount of bright, red blood escaped through the incision. The hemorrhage flooded the cavity and was found to arise from the subdiaphragmatic space. A large jagged wound was found on the convex surface of the liver about four inches from its anterior border. Two mattress sutures of chromic gut were introduced, closing this wound,—but it was evident that the greatest hemorrhage came from the subphrenic space, and was caused by the wound of exit, which is situated in the upper convex surface of the liver, right under the dome of the diaphragm, where it had probably wounded an important branch of the hepatic vein,—judging by the gush of blood that poured behind the liver. This wound was inaccessible to direct inspection and could only be approximately localized by feeling the flow of blood with the hand behind the liver.

It would have been practically impossible to reach the wound except through the transdiaphragmatic route, or by a resection of the costal arch, procedures which could not be considered in the exsanguinated and exhausted condition of the patient. All that could be done was to pack the subphrenic space. This was done systematically, using more than two yards of plain sterile gauze. This was fortunately effective in accomplishing hemostasis, owing to the limitation of the space by the right posterior reflection of the falsiform ligament which offered a firm

resistance to the packing and allowed this compartment of the subphrenic space to be well filled; the pack being wedged in between the under surface of the diaphragm above and the convex surface of the liver below. In addition to the large subphrenic pack, a cigarette drain was left in the lower angle of the wound.

Patient was very much exsanguinated; intravenous infusion was begun at 7:30, while the operation was going on and continued until the operation was completed. 100 c.c. of saline solution with 15 min. of Adrenalin being given. She was in a critical condition for twenty-four hours, pulse ranging from 130 to 160. Following the use of Murphy drip, hypodermoclysis with morphia and stimulation, her improvement was steady, though gradual.

At the present writing she is surgically well, but markedly depressed. She complains of weakness and inability to walk. A few days ago she was transferred to the neurological service, where gentle persuasion, assisted by hot packs, has convinced the patient that she can walk. She will be discharged from the hospital in the next day or two.

1. *Am. Jnl. Surg.*, Vol. XXV, No. 1.

2. *Jnl. A. M. A.*, Vol. LX, No. 13.

3. *N. O. MED. AND SURG. JNL.*, Vol. LXIII, 1910, No. 11.

DRUG ERUPTIONS.

By ISADORE DYER, M. D., New Orleans.

The interest in the borderland eruptions of the skin, related to vaccins, sera and newer drugs has suggested the idea to the writer that a review of the subject might be timely and of service in the differentiation of types of skin lesions, often confusing to the general practitioner.

A variety of evidence may be due to the ingestion of drugs or their absorption through local use, the latter producing direct or constitutional symptoms. The list of eruptions so produced is large and includes most of the primary and secondary lesions.

Some drugs commonly produce disturbances of the skin whenever employed in large enough doses, while others occasion eruptions only in individuals susceptible to the particular influence of the especial drug. Substances in exceptional instances are toxic only to rare, idiosyncreric individuals and in this last category are found drugs which ordinarily may not be classed as belonging to the group, but which must be named because occasional in their effect.

The manner in which drug eruptions are produced is still problematic. Stelwagon reviews the current theories as either an irritation of the skin from the elimination of the drug; irritation of the skin through defective condition of the other eliminative organs; reflex evidences of disturbances in organs other than the skin produced by the effect of the drug and the generation of some toxic or irritant material in the tissues caused as a product of the

presence of the drug in the general circulation. Such substances are prone to occasion eruptions at the sites of local morbid conditions, like scars, seborrhea, etc.

The diagnosis of drug eruptions must be based on the individual predominant essentials and all drug eruptions have certain predilections for location and distribution which aid in the diagnosis. The differentiation usually rests among the inflammations or exudative diseases and rarely in other groups (hemorrhages, appendages, new growths excepted).

Besides drugs of medicinal character, certain medicaments employed in the treatment of disease may produce eruptions similar to drug eruptions, among which may be particularly mentioned diphtheria antitoxin, vaccines, antistreptococcic serum, antitetanic serum, &c.

All these occasional eruptions present appearances which simulate the evidences of known diseases but with differences in their occurrence and their objective essentials which may usually be worked out in the individual case. Most drug eruptions are evanescent and disappear with the discontinuance of the use of the drug; some eruptions disappear with the continued or increased dosage of the drug and some continue their morbid course even after the drug is discontinued.

A brief consideration of each of the drugs and its effects on the skin is submitted below as a guide to the practical recognition of these eruptions.

LIST OF DRUGS AND LESIONS CAUSED BY THEM.

Acetanilid (antifebrin, exalgin) produces erythematous eruptions, sometimes cyanotic in type. Extremities usually.

Antipyrin produces a variety of eruptions: erythematous, papular (urticarial), vesicular, bullous or purpuric (hemorrhagic). The eruption may be limited or general but is always bilateral and symmetrical.

The fine papular eruption is most common, at times found modified as an urticaria after small erythematous areas are seen, in which an intense color of red is pronounced. Extensor surfaces are more often affected, and the exposed parts of the body chiefly. Eruptions with fluid lesions (vesicles or bullae) are rarer. The effect of antipyrin on the vasomotor centers is held responsible for its action

on the skin, a paralysis of the centers with a dilatation of the cutaneous vessels (Crocker).

Arsenic. This drug is responsible for an extensive dermatologic group, simple and grave in types.

Urticaria is common. Erythema, deepseated and with morbid congestion may occur. Papular eruptions on face, neck and hands, erythematous patches on the extremities, herpetic eruptions of irregular distribution, scaling and keratinization of the hands and feet, with even warty growths, are to be noted among the likely eruptions from arsenic. Pigmentation, either apart from or associated with present eruptions, is common and is held by some to be due to the actual presence of arsenic in the skin. It usually follows long continued administration of arsenic. Both epithelioma (Hutchinson) and sarcoma (Pye-Smith) have been reported following arsenic ingestion.

Belladonna (atropin). Intense congestive redness in all degrees may be found on the face, neck and hands after the ingestion of belladonna. More general erythema involving the trunk and extremities is also noted. Such effects may follow local use of belladonna applied in ointment or plasters. An eruption of vesicles, with erythema may be produced in loco by the application of belladonna to the skin.

Benzoate of Soda. Erythema in patches and papular lesions on the extensors of hands and wrists have been reported.

Boric Acid. Either taken internally or used over large raw surfaces as a local dressing, boric acid may produce erythema, with swelling of the mucous orifices.

Borax. Dryness of the mucous membranes, itching papular eruptions, morbilliform rashes and even psoriasis have been reported.

Bromin and Bromids. This group has been long and well known. The eruptions occur frequently and in the order of frequency may be named as bullous, pustular, urticarial, erythematous and squamous. In profound effects from bromid even verrucose and destructive lesions may be seen, with extensive necrosis.

Most bromid eruptions are bullous, quickly becoming pustular and necrotic. Occasional acneiform pustules may be seen when the eruption is very general. The use of bromids in infants and for epilepsy provides the best opportunity for observing these untoward effects of bromin on the skin.

Cannabis Indica. Hyde reports one case of eruption from *cannabis indica* with a general outbreak of disseminated vesicles, from a pin point to a pea in size, with itching, followed by a pigmentation disappearing shortly afterward.

Cantharides. Erythematous papular and vesicular eruptions follow the use of cantharides, with a predilection for the area about the genitals. The local employment of the cantharidal blister may occasion general vesicular eruptions.

Capsicum. Erythematous and papulo-vesicular eruptions may occur.

Chinolin. Erythematous rash.

Chloral Hydrate. Dusky red, papular, eruptions and scarlatini-form rashes followed by desquamation have occurred after the administration of chloral. The mucous membranes are also affected. Bullous eruptions flushing of the face, lichenoid patches, urticaria, have also been noted.

Chloralamid. Rare report by Pye-Smith of scarlatiniform eruption followed by flaky desquamation.

Chlorate of Potassium. Erythematous and papular eruptions, cyanosis and macular eruptions of bluish and icteric (yellow) color, with desquamation, are reported by different observers.

Chloroform. Purpuric spots following patches or erythema, which may grow diffuse in certain areas, have been reported after and during chloroform anesthesia.

Cod Liver Oil. Vesicular and papulo-pustular eruptions are noted.

Codeia. Wide spread erythematous eruption from codeia is reported by Lewin.

Copaiba. Numerous observers have chronicled a variety of eruptions from the ingestion of copaiba. Urticaria is common, as is disseminated papular eruptions. Patches of erythema in circumscribed arrangement have been related. Rose colored elevated, irregular patches, resembling scarlatina have occurred and more rarely bullous and pemphigoid eruptions with subsequent exfoliative dermatitis. Hemorrhagic eruptions are seen, but rarely.

Cubeb. Small papular erythematous eruption generally distributed. Combined with copaiba, cubeb more frequently causes eruptions of scarlatiniform and morbilliform type. Ecchymoses may follow, especially on the lower extremities.

Digitalis. Papular eruptions usually; general erythema patches also reported.

Dulcamara. Erythema, urticaria and red scaly eruptions have been observed.

Ergot. Redness and swelling of face and arm, petechiae, vesicles, pustules and even furuncles have occurred. Necrotic areas in the extremities have been reported. Ergotism from "rusty" rye is a distinct disease with hemorrhagic and eczematoid eruptions.

Guarana. Urticaria has been reported.

Guaiaicum. Miliary erythema with intense itching.

Iodin and Iodids. Vesicles, pustules, bullae, erythema, urticaria, purpura. Acneiform or pustular eruptions are the commonest with iodine salts and usually these are found with irregular distribution. The neck, face, trunk and the extremities of forearms and legs are the more common sites. The lesions vary in size and in individuals especially susceptible the pustules may be deep-seated and indurated. Often nodose masses appear on the face and hands from iodids and these may become phlegmonous. At times vegetating lesions appear on swollen areas and these degenerate. Almost all persons show iodide susceptibility when taking the drug for the first time, but usually the increased dosage and continued use are attended with a disappearance of the early lesions. Other eruptions from iodide are unusual and exceptional.

Iodoform. Eruptions from iodoform are due to the absorption from its local use. No instance of eruption from the ingesting of the drug has been reported. Locally iodoform acts as an irritant epidermicide and frequently a vesicular dermatitis occurs in the skin contiguous to a wound dressed with the powder. When employed near the genitals or near mucocutaneous junctures, congestive erythema affects the genitalia, the eyelids, wings of the nostrils, &c., and the same condition may become general or even universal over the entire body in individuals especially susceptible to iodoform intoxication.

As rare accidents from iodoform, purpuric and urticarial eruptions may occur.

Lactophenin. General symptoms of intoxication, with headache and fever, associated with erythematous plaques and occasional bullae with hemorrhagic tendency have been reported.

Mercury. Rare erythematous eruptions may arise from the internal administration of mercury. Eczema, general desquamative

dermatitis, vesicular eruptions of hands and of genitals, rashes of macular type, have been known to follow various local usage of mercury, as inunction, douches, dressings or vapor, and as an antiseptic with surgeons and nurses. The author has observed a number of instances in which nurses had to restrict their practice to medical cases to avoid the effects of bichloride in surgical nursing.

Morphia (opium). The internal use of opium derivatives may be followed by papular, erythematous, bullous or vesicular eruptions. The habitues of morphin may present desquamation on the lower extremities and even eczematous patches.

Phenacetin. Flushing, followed by papules, chiefly on the extremities.

Phenyl Hydroxylamin. One case reported where accidental spilling of an alcohol solution resulted in profound effects with cyanosis. Blood drawn was chocolate brown, due to the hemoglobin being converted into methemoglobin.

Phosphoric Acid. Pemphigoid bullous eruptions and purpura are reported.

Quinin (cinchona). Many individuals are idiosynceric to quinin even in small doses. The usual evidence of the toxic effects is pruritus (itching) of the extremities, fingers and toes particularly. The eruptive evidences may be erythema, urticaria, purpuric, vesicular and bullous eruptions. The author observed one case with purpura limited to the flexures of the knee joints, in whom the general toxic effects produced such a depression that the patient suicided.

Resin. Swelling of the face with urticaria limited to the chest and arms. (One case reported).

Rhubarb. Hemorrhagic, bullous, pustular and desquamative eruptions.

Salicylic Acid (salicin, salicylate of soda, salol, solipyrin). Scarletiform, morbilliform, purpuric eruptions follow the use of salicylic acid derivatives, due to their action on the vasomotor centers.

Santonin. Urticaria reported.

Silver Nitrate. Either internally administered or used extensively and continuously as a topical application in the throat, silver nitrate causes systemic effects, notably the slate colored pigmentation of the exposed parts of the body (called *argyria*).

Stramonium. Caused an erythematous rash in one case.

Strychnia. Erythema, pruritus and miliaria noted.

Sulfonal. Roseola, purpura, vesicular and scarlatiniform eruptions have been related.

Tannin. General urticaria.

Tar. Miscellaneous by-results from topical use of tar; largely a dermatitis with varying degrees of severity.

Terebene. Papules, itching and bright red.

Toxin (serums). Antitoxins and vaccins produce occasional rashes and eruptions which deserve consideration because of the possible confusion in diagnosis.

Diphtheria antitoxin produces generalized erythema, scarlatiniform eruption on the trunk, papular eruption of the extremities. Tuberculin may cause flushing and swelling of the face and hands. Antistreptococcic serum may cause erythema of the extremities and even vesicopustular eruptions. In rare instances vaccins may produce pustular and vesicular eruptions. Instances may be noted where even purpuric patches followed vaccin treatment.

Turpentine. Erythema of face, with papules and vesicles.

The above list is not exhaustive but sufficient to argue the necessity for considering drugs as a likely factor in a presenting eruption. For this article the author has freely used the text books of Crocker and Stelwagon, to whom the reader is referred for valuable bibliography and more extensive discussion of drug eruptions.

As a cross reference it will be of service now to list the lesions of the skin with an apposite tabulation of the drugs likely to produce such.

LIST OF LESIONS AND DRUGS PRODUCING THEM.

Hyperemia (erythema). Antipyrin, arsenic, belladonna (atropin), benzoate of soda, boric acid, borax, bromin, cantharides, capsicum, chinolin, chlorate of potash, chloral hydrate, chloralamid, chrysarobin, codeia, copaiba, cubeb, digitalis, dulcamara, guaiacum, iodine, iodoform, lactophenin, mercury, morphia, phenacetin, quinin, salicylic acid, stramonium, strychnia, sulfonal, tar, terebene, *toxins*, turpentine.

Macule (roseola). Copaiba, quinin, sulfonal.

Papule. Antipyrin, chloral hydrate, chlorate of potash, cubeb, morphia, quinin, *toxins*.

Wheal, (urticaria). Antipyrin, arsenic, bromin, copaiba, dulcamara, guarana, iodin (salts), quinin, resin, salicylates, santonin, toxins (and serums).

Vesicle. Antipyrin, arsenic (herpes), bromin, cannabis indica, chloral, cod liver oil, copaiba, iodin (salts), morphia, quinin, salicylic acids, sulfonal, turpentine.

Bulla. Antipyrin, bromin, cannabis indica, copaiba, chloral, iodin (salts), mercury, morphia, phosphoric acid, quinin, rhubarb, salicylates.

Pustules (furuncles). Arsenic, bromin, chloral, iodin (salts), salicylic acid.

Tubercle (nodes). Iodin salts.

Tumor. Warty growths from arsenic.

Scales. Arsenic (keratosis), borax, bichromate of potash, chlorate of potash, chrysarobin, copaiba, cubebs, iodoform, mercury, opium, quinin, rhubarb.

Crusts. Bromin, borax, iodoform, potassium bichromate, mercury (bichlorid).

Pigmentation. Arsenic, picric acid, silver nitrate.

Ulcers. Bromin and iodin salts (often vegetating ulcers). Gangrene may occur after arsenic, ergot, iodids and quinin.

Purpura. Antipyrin, arsenic, chloral hydrate, chloroform, ergot, iodids, quinin, salicylic acid, sulfonal.

Cyanosis. Antifebrin, belladonna, exalgin, monobromacetanilid, phenyl hydroxylamin.

Diagnosis: The diagnosis of a drug eruption has to be made in the individual case after other diseases have been excluded.

Treatment: The treatment must also depend upon the drug. Usually cessation stops the eruption. In profound cases, stimulation and antidotes are required *pro re nata*.

PELLAGRA.*

By P. RAYER, M. D., Paris, France.

Pellagra is a disease peculiar to certain parts of Italy, reappearing in an aggravated form every spring, characterized by chronic inflammation of the skin of an exanthematous and squamous description, confined to the parts exposed to the sun, preceded and often accompanied with very serious functional derangement of the digestive organs, and of the cerebro-spinal axis.

* Translation by R. Willis, M. D.

Symptoms (Slight Pellagra). Pellagra is often preceded by lassitude, uneasiness, ennui, dislike of all kinds of occupation, and less frequently by nausea and vomiting. Some patients also experience vertigo, and pains in the head; but pellagra generally shows itself without precursory symptoms.

This disease most commonly appears first on the back of the hands and feet, on the chest, nape of the neck, arms and legs of persons whose clothes do not cover these parts. The face is seldom attacked.

The eruption of pellagra presents three different forms; in the first the back of the hands, the fingers, and feet become the seat of a sensation of heat, smarting or unpleasant pricking which exposure to the sun renders insupportable. These parts redden; this redness is sometime pretty deep, at others paler, or livid; brownish or dusky; sometimes afterward the epidermis splits, is detached and falls off in the form of squamæ, leaving the adjacent skin, which is reddish, shining, and rather swelled and rough, quite bare. In the second variety, this inflammation is sometimes still more intense; the epidermis is raised in vesicles, or more frequently in large irregular bullæ, formed of a yellowish or reddish serum, which produces slight scabs in drying; excoriations and slight cracks are also sometimes, though very rarely, seen in this case. Thirdly, the epidermis thickens, undergoes change, becomes yellowish, brownish or blackish, dry and often hard, and scaly like the bodies of certain fish, without the skin smarting or becoming red.

The morbid appearances of the skin are not at first very marked, and patients pay little attention to what is passing, considering all as the simple effect of exposure to the sun. In fact it almost always only requires the parts affected to be kept covered for them to recover their natural appearance, and indeed the alterations all disappear spontaneously toward the end of the summer, but reappear in the spring with fresh intensity, to vanish again, at least in great part, during the autumn.

The patient may thus continue for a great number of years to present symptoms of a local affection, disappearing in the winter, and reappearing in the summer, without any functional disturbance worth noticing. General symptoms and disorder of the digestive organs sometimes also happen along with the cutaneous affection; a foul tongue, often red at the edges or point, heat in the mouth and throat, thirst, more or less pain in the epigastrium, loss of

appetite, or an irregular and excessive appetite, nausea, sometimes vomiting, bad digestion, eructations, abdominal pains, either spontaneous or experienced on pressure, and diarrhea or obstinate constipation of the bowels.

The nervous system frequently appears affected in a no less remarkable manner. Some patients are much dejected, take a disgust to their former occupation, and suffer from vertigo, giddiness and pains in the head. These symptoms are in general aggravated in the same degree as the alterations of the skin make progress.

But pellagra may appear in a totally irregular manner instead of following this even tenor and progressive increase in its symptoms. Serious symptoms, mostly secondary, occasionally occur without the skin being visibly, or, indeed, in any way affected; sometimes, again, they take place only a very short time after the appearance of the cutaneous affection. These anomalies are more particularly observed in individuals born of parents who have died laboring under pellagra. Pellagra is occasionally seen to commence by *desquamation of the lips*, accompanied by a great heat of the mouth, and ardor urinæ.

Pellagra often shows itself under more serious forms; and then the digestive and cerebro-spinal organs are deranged to a much greater degree, and other systems, and the constitution itself, are more or less deeply implicated.

In these severe varieties of pellagra, the lips become pale and livid, dry and cracked; the nostrils inflamed; the gums red, swollen and bleeding (*scorbuto alpino*); the saliva flows abundantly from the mouth and acquires a salt taste (*salsadina*); the tongue becomes red, sometimes brownish, and presents ulcers and cracks; the mouth is painful and there is a feeling of heat complained of in it which extends to the throat. Other symptoms are also observed; aphthæ, excessive thirst, pains in the pit of the stomach, nausea, vomiting of greenish or yellowish fluids, abdominal pains, liquid-greenish, yellowish, or grayish, and occasionally, though rarely, blackish evacuations from the bowels immediately after drinking or taking food, generally without pain, and still less frequently with *tormina*, tenesmus, etc.

The *nervous system* presents phenomena no less remarkable. Patients are habitually in a state of great dejection; their look is somber and melancholy; their sight is disordered; they see things double; they are subject to giddiness or vertigo, to numbness, sing-

ing, and noises in the ear, and experience the most singular hallucinations. They complain of feeling a heat in the head and spinal marrow, of tingling and darting along its course, and that of the nerves which proceed from it, of pains in the chest, in the belly and in the organs of the senses, which seem to them to be traversed from time to time by the electric spark. Besides this, they have a feeling of heat in the limbs, in the palms of the hands, and particularly in the soles of the feet, very painful at times, and less frequently replaced by a sensation of coldness.

These pains sometimes affect only one side of the body. Some patients suffer from distressing cramps; and Strambio has seen a case of tetanic spasm of the whole body. Irregular muscular contractions are more frequently observed (*Saint Vitus's dance*, *general trembling*); continual motion of the lips; involuntary movements of the head and body forward; convulsions, and sometimes epileptic fits.

A general prostration of strength is also seen without any other serious symptom; a great degree of debility in the limbs, particularly of the legs, with a feeling of weakness at the bottom of the back, to such an extent that the patients tremble when they stand up, and are sometimes even incapable of supporting themselves seated in their beds. Finally, true *contractions* of the lower limbs, by which the feet are drawn up to the buttocks, have occasionally been observed; anesthesia and paralysis of the bladder sometimes take place.

Pellagrous subjects often present all of these symptoms, particularly the nervous pains and cramps, without being affected with delirium. This delirium is of two descriptions: *acute* and *chronic*. The first, which may prove fatal in a few days, is accompanied with a hard and full pulse. Some patients are melancholy, refuse to eat or drink, or answer any questions which are put to them; others are boisterous and cry out: some are even furious; the greatest number in moving their heads backwards and forwards, imitate the sound of bells (Strambio). This acute delirium does not occur in the first stages of the disease.

The *chronic delirium*, or *pellagrous mania* appears under several forms; one of them is a sort of madness; another is a loss of memory (amnesia), and of the faculty of attention; a third and much more common one, is religious melancholy, with the desire to destroy themselves, particularly by drowning (*hydromania*) (Stram-

bio); this chronic delirium is more frequently incurable; sometimes, however, it is cured after lasting years. In the hospitals for the insane in certain countries of Italy, pellagrous mania forms a considerable portion of the cases.

Strambio mentions cough as a frequent symptom among the pellagrous. He believes in the existence of pulmonary phthisis of pellagrous origin.

The menstrual flux is generally suppressed in women on the appearance of the serious symptoms of pellagra. Besides this, the organs of generation often become the seat of inflammation and excoriation, which extend to the surrounding parts, and are kept up by a considerable whitish or yellowish discharge from the vagina. In men pains in the bladder and great heat of the urine occur.

Persons affected with pellagra are observed to have a very slow pulse (thirty pulsations in a minute) (Strambio), before the development of gastro-intestinal inflammation. Two descriptions of fever are also observed in pellagrous subjects; in the one there is a strong, hard and unequal pulse, with prostration of strength and great heat of skin; the tongue is dry, red, blackish; the lips dry, and the teeth black: gangrene of the sacrum, picking at the bed-clothes, and other symptoms analagous to those which are observed in the acute dothinerteritis, also occur, etc. This species of fever is constantly fatal. In another species, which, according to Strambio, is more connected than the former with the cause of the disease, and probably with the internal lesions which accompany it, the fever continues with irregular exacerbations. The pulse is frequent and hard, with heat of skin, followed by a sweating of a particular odor, and which does not afford any relief. This species of fever is tedious, and reduces patients to such a degree as is seldom seen in other chronic diseases; they become like real mummies, and die consumed of the most horrible of all consumptions.

In other cases *anasarca* and *ascites* have been observed; these symptoms occur rarely in the first stages of the disease, but pretty frequently towards its termination. Spontaneous ecchymosis of the skin is also sometimes seen, a phenomenon which, with the swelling of the gums, has induced many to give pellagra the name of "*Alpine scurvy*."

Strambio has seen acute febrile delirium disappear after profuse sweats over the whole body. The sweating which occurs in hectic

fever does not, on the contrary, afford any alleviation, but rather reduces the strength of the patient. Apyretic *local* sweating, particularly of the palms of the hands and soles of the feet, is often followed by an abatement of these symptoms (Strambio). The matter perspired, particularly in the fever with acute delirium, is of a very fetid and peculiar smell; Strambio compares it to that of the larvæ of the silkworm, steeped in water, and half putrid; Jansen thought it similar to that of mouldy bread.

Pellagra is always aggravated by a return of spring, when the patients remain under the influence of the causes which produced the disease; profuse secretion of the saliva with a salt taste, is added to the eruption on the skin, accompanied with heat of the mouth, diarrhea, etc. Dejection is changed to *melancholy*, and acute delirium supervenes, or otherwise various nervous symptoms, pains, cramps, trembling, etc., make their appearance.

These last symptoms increase, becoming continually more and more violent; fever is lighted up, the diarrhea becomes colliquative and involuntary, and death takes place, preceded by spasmodic stiffness or convulsions of the muscles, etc.

Some anomalies have been observed in the nature, progress and succession of the symptoms of pellagra. During its first ravages in Italy, this disease was remarkable for the intensity of its nervous symptoms, cramps, spinal pains, etc., and the trifling development of the cutaneous phenomena. At a later period, alterations of the skin became very prominent features of the disease, whilst affections of the digestive organs, and mania occurred only as *secondary* symptoms. Different symptoms have also been known to predominate; in certain years pyalism was very common, while in others it was not observed, or was replaced by heat in the mouth, aphthæ, and an extremely disagreeable desquamation of the lips. Very recently, the various nervous symptoms, cramps, spinal pains, etc., on which former writers expatiate at such length, have been very little noticed, while pellagrous mania is spoken of as very common, and gastro-intestinal lesions as habitual.

These symptoms have been known to declare themselves during winter, and to be the forerunners of pellagra, which did not appear till the spring. Pellagra has also been known to occur in a mild winter (1796), and to prevail longer than usual.

Pellagra may be complicated with other diseases of the skin, such as lepra, psoriasis, pityriasis, lichen, erysipelas, urticaria,

prurigo, acne, eczema, purpura, syphilis, etc. The spots of the ephelis, which have been marked on the forehead, are, perhaps, an alteration of the epidermis similar to that which is seen in other parts of the body in pellagra. Other diseases, such as intermittent fever, scrofulous affections, white swellings, peritonitis, phthisis, etc., may be complicated with pellagra.

Anatomical Researches. Gaetano Strambio sometimes found lesions in the head, at other times in the chest, and always in the abdomen of pellagrous subjects. Several of these lesions were probably accidental. I have remarked in these *post-mortem* examinations the frequency of local or general peritonitis, either recent or of older date, and of bronchitis and pulmonary tubercles. Fantonetti has given a detail of the morbid alterations found in the body of a woman who had been affected with pellagra for twelve years. This patient had often been insane, and in the last stage of her disease became paralytic; she died laboring under *dementia*, and in a state of *marasmus*. The skin of the back of the hands and feet was like *leather*. This alteration extended to the whole thickness of the skin; examined with a lens, it presented a great number of irregular cracks, very close together, crossing at acute angles, and sometimes implicating the whole thickness of the corium. At the edges of some of these cracks there were small, thin, yellow crusts. Between the cracks furfuraceous lamellæ of a dirty white, adhering very firmly, and of an irregular form, were seen. The epidermis was six or eight times thicker than usual, brownish, cracking, friable and dry, and could not be readily detached from the skin; the sub-epidermic layers were everywhere of a most singular appearance, and once or twice, as thick again as in their natural state.

The cutaneous branch of the radial nerve when laid bare, seemed a little larger than usual; on being divided, serum flowed from it; its pulp was reddish and of soft consistence. The membranes of the brain were injected with black blood. The dura-mater adhered very closely to the right parietal bone; the pia-mater adhered to the cerebral convolutions, in which a slight degree of atrophy had taken place; the substance of the brain was in general rather softer than usual; there were about two ounces of serum in the ventricles, the cerebellum was slightly injected and rather softer than in its natural state; the spinal marrow was very soft and pulpy; its membranes looked thinner than common, and contained a great quantity of serum.

M. Brierre de Boismont has carefully examined the bodies of five

individuals who had died of pellagrous affections. "The result," says he, "of our researches is that lesions always occur in the digestive organs; the mucous membrane of the stomach is often red, intersected with bluish or brownish vessels, soft, pultaceous, or easily removed with the nail. The redness may be confined to the great end of the stomach, or at least appear more marked in this region; it is sometimes of a uniform red color, sometimes of a brownish red, and sometimes bordering upon gray. The mucous membrane may farther be thinner, though in other cases it also occurs thicker than natural. The stomach, again, is sometimes distended and presents no alteration, but the redness is then found in the intestines. The valves of the duodenum partake of this color; the mucous membrane of the small intestines, and those of the great, are generally colored red of a lighter or darker tint, and sometimes brown. Hypertrophy and softening ought to be classed among the number of the lesions of the mucous membrane. Ulcers are common; they may be irregular, round, numerous, surrounded by an inflamed tissue, or one quite white. The subjacent cellular tissue and the muscular coat have been found hypertrophied. In the five subjects that we opened, the intestines contained lumbrici. Dr. Carswell has met with a large perforation arising from the softening of the stomach, in two individuals in whom there had been evident symptoms of chronic irritation of the digestive organs; and in other parts of the mucous membrane showed unequivocal traces of chronic inflammation."

The nervous system presents alterations no less evident. The membranes of the brain, particularly the tunica arachnoides and pia-mater, are injected, infiltrated, adherent, thickened, and opalescent; the consistence of the brain is sometimes increased, the gray substance is more deeply coloured, fuller of blood, the white substance is gritty (*sablée*) and dotted; there is generally no serum in the ventricles. It is not common to find the bones thickened, and a considerable quantity of blood at the base of the cranium. The lesions of the spinal marrow are also very remarkable; the membranes, and particularly the arachnoid and the pia-mater, are red, the vessels gorged with blood; a frothy serum has sometimes been seen. The gray substance is almost always hard to the touch, and injected; the white, on the contrary, is soft, reduced to a pap or cream, along a greater or less extent, and infiltrated with pus; its color is commonly a yellowish or dirty gray.

Causes. Pellagra is endemic in certain parts of Italy and

Spain; particularly in the environs of Milan, Pavia, Padua and in Piedmont, etc. It is not contagious. It is confined almost exclusively to the country among laborers, herdsmen, etc., is more frequent among women than men, and more frequent in full-grown persons than in young people and the aged. It is supposed that nervous, hypochondriacal, hysterical or melancholy persons, particularly those who have been weakened by privations, the depressing passions, excesses, or any previous disease, are more liable to be affected by pellagra than the generality of individual. It has also been remarked that the children of pellagrous parents bring a peculiar disposition to this disease into the world with them, which generally passes as hereditary. Pellagra has been attributed to the use of maize (Margari), to the abuse of common salt (Guereschi), to the habitual use of sour rye bread, or the want of good water in several parts; to dirty and ill-ventilated dwellings (Aglietti), to fatigue and bad food, to depressing passions and misery among the unhappy peasantry, etc. The influence of exposure to the sun upon the production of the cutaneous affection in pellagra is incontestable; ever since pellagra has been observed, it has been well-known that the eruption could be excited or caused to disappear at will in pellagrous subjects, by merely exposing various parts of the body to, or covering them from, the light of the sun. M. Aug. Spessa attributes pellagra to the habit which the poorer inhabitants of some parts of Italy have of *passing the evenings, and sometimes part of the day, in winter, in their dirty and unhealthy cow-houses,** by way of escaping from the cold. He is persuaded that pellagra is not endemical in countries where this habit does not exist; that *where it is endemical it is only seen among those who inhabit stables,** finally, he adds, that pellagra has only attracted attention of physicians since 1770, an epoch when fire-wood had already become exceedingly scarce in countries where this disease prevails. M. Spessa seems to think, besides, that exposure to the sun is the *occasional* cause of this disease.

Diagnosis. Pellagra is distinguished from acute erythema inasmuch as the latter, which may appear on any part of body whether covered with the clothes or not, shows itself not only in the spring but at all other seasons, and generally terminates after continuing for a week or two. As to *chronic* erythema, it is never accompanied by serious symptoms, and the lesions of the digestive organs and nervous system, which are observed in pellagra.

*Italics ours—Eds.

Pityriasis Rubra, in a severe form, has more analogy with pellagra, on account of the gastro-intestinal symptoms which sometimes accompany it during its course; but it differs from pellagra in never being accompanied with secondary lesions of the nervous system, and in the eruption being general.

Of all the diseases seen in France, the epidemic which prevailed in Paris and its neighborhood, in 1828 (*acrodynia*), is, without exception, the one which bears the greatest resemblance to pellagra. In fact, as in pellagra, from the commencement of the disease, redness varying in tint from bright to dark red, was commonly seen on the feet and hands, less frequently on the legs, and more rarely still on other parts of the body; vesicles and bullæ also accompanied this first form of the eruption, and at other times the skin assumed a brown or blackish hue, particularly on the belly, neck, and about the joints, a hue produced by an alteration of the epidermis, which falls off at a later period. Profuse, irregular, periodical *local sweats* also occurred in *acrodynia* as in pellagra. Disorder of the digestive functions, characterized in some by simple loss of appetite, and a feeling of fullness and weight in the stomach, in others by nausea or vomitings, particularly after taking food or drink, by colic, and very frequently by diarrhœa of a longer or shorter duration were almost always superadded to the other symptoms of *acrodynia* either in the commencement of this affection, or at some period during its course. As in pellagra, too, a sense of numbness, and of tingling, and occasionally smart shooting pains were felt in the hands and feet, extending sometimes along the legs, thighs or arms to the trunk, and even to the hairy scalp; the sense of touch was even affected in some cases (anesthesia). Paralysis and contractions, and shrinking of the limbs, tremblings and painful cramps were observed in the one as in the other disease. Edema, mostly partial, but sometimes general, was more frequently seen in *acrodynia* than in pellagra. As has been remarked in pellagrous epidemics, these various symptoms presented a very considerable number of *anomalies* in their progress and succession in *acrodynia*. In some cases the redness and black discoloration of the skin were the principal phenomena of the disease; in others, lesions of the digestive passages seemed to predominate; in others, again, such disorders of the nervous system were observed that it alone seemed to be affected. As in pellagra, also, the small number of bodies which have been examined have exhibited alterations which were owing, perhaps,

as much to accidental and intervening affections as to the disease itself.

Acrodyndia, like pellagra, broke out in the spring, prevailed particularly during the summer, and seemed to become extinct in the middle of the severe winter of 1829-1830. As for the difference between these two diseases, they are much less striking than the analogies which exist; still it must be remarked that the pain in the feet and the impossibility of walking were much more marked in the epidemic of Paris; that exposure to the sun is an evident occasional cause of pellagra, and that this latter affection, which almost always reappears each year in an aggravated form, is more frequently fatal, and gives rise to a species of insanity which was not seen in the epidemic of Paris.

The *mal de la rosa*, a disease epidemic in the Asturias, ought not, it would seem, to be separated from pellagra, of which it presents the principal symptoms. Some difference in the alterations of the skin only are remarked; in the *mal de la rosa* it becomes covered with scabs, sometimes followed by cicatrices, whilst in pellagra, the form of the cutaneous disease is exanthematous or squamous.

Upon the whole, pellagra, the *mal de la rosa*, and the epidemic of Paris, seem to me to form one very natural group.

There is, without doubt, much similarity between pellagra and the epidemic disease which prevailed at Brunn (Moravia), in 1578, and which has been assimilated with syphilis; after the cutaneous symptoms, however, signs of melancholy, and other nervous phenomena, which are so commonly seen in pellagra, are known to have occurred. (See Jordan (T), *Brunno-Gallicus, seu lues novae in Moravia extortæ descriptio*, Frankfort, 1577, 8vo.).

Certain epidemics which have been observed in Europe, and particularly in the North, from the middle of the sixteenth century till toward the eighteenth, and which have generally been attributed to the use of damaged grain, as of spurred wheat or rye, may be assimilated to a certain point with pellagra. Ptyalism, functional disorders of the digestive organs, acute pains, a feeling of heat in the palms of the hands and soles of the feet, swelling and vesicles on the skin, cramps, tremblings of the body, and mania as a secondary phenomenon, have been remarked in these epidemics as in pellagra. Independently of the special cause assigned to these diseases, they are distinguished from pellagra by a variety of characters, and particularly the development and reappearance of their symptoms under the form of *fits* or *paroxysms*.

Prognosis. Medical practitioners have distinguished three degrees of intensity in pellagra. In the *first, local* lesions are seen, produced by exposure to the sun, sometimes only with slight accompanying indisposition; in this case it is sufficient to remove the patient beyond the influence of the causes which have produced pellagra to accomplish a cure. The *second degree* is much more serious, still it is sometimes cured; it embraces those cases in which the alterations of the skin, after several relapses, become of a more decided nature, and disorders of the digestive organs more apparent. Nervous symptoms, vertigo, pains, cramps, slow pulse, etc., are added to pyalism, heat in the throat, vomiting and diarrhea. The *third degree*, or confirmed pellagra, is constantly fatal; it is known by a constant febrile state, involuntary stools, and other phenomena, such as melancholy, pellagrous mania, stiffness of the body, convulsions, loss of flesh, etc.

Acute delirium, although of a serious nature, is a less formidable symptom than chronic delirium.

Upon the whole, the prognosis should be based, not upon the state of the skin, or the alterations it has undergone, but upon due appreciation of the disorders of the various systems of the body generally.

The condition in life of individuals affected with pellagra must also be considered in prognosticating in regard to the issue of the disease. The mischief is aggravated, and the affection generally proves fatal to those who are a prey to poverty and wretchedness, and obliged to remain within the influences of the causes which produce it. The state of the constitution, previous diseases, and complication, must also be taken into account. Pregnancy and lactation exercise a pernicious influence. Writers have particularly insisted upon the serious character which pellagra assumes in those whose parents have died of the disease.

Treatment. Upon the first symptoms of pellagrous affection, the patient ought to change his habits and occupation, or at least, abstract himself from the influence of the causes which appear to have occasioned it. Change of climate, of regimen and habits, will be the most certain remedy; unfortunately, those affected with pellagra, the poor inhabitants of the country, are scarcely ever in circumstances to follow this advice.

In the *slight* forms of pellagra, physicians are agreed upon the necessity of avoiding exposure to the sun, and of placing patients in a healthy and well-aired dwelling. The food should be good and

substantial, consisting of animal and vegetable substances, in quantities proportionate to the wants of the system, and to the powers of the digestive organs. Milk sweetened, or old wine much diluted with water, are appropriate drinks.

In the more serious forms of this disease the treatment should be modified according to the various symptoms which present themselves.

(The article above, found in Rayer's Atlas of Skin Diseases, written in 1835, has so much of acute clinical observation, that we have reproduced it, believing that it will interest our readers, by comparison with modern ideas of a disease not yet worked out in its etiology or specific treatment.—Eds.)

URTICARIA—AN EXPERIMENTAL LESION PRODUCED BY THE LOCAL APPLICATION OF BETAIMIDAZOLYLE- THYLAMIN. ITS RELATION TO INTESTINAL TOXEMIA.*

By ALLAN EUSTIS, B. S., Ph. B., M. D.,

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While working in the Von Noorden Clinic in Vienna in 1911, considerable experimental work was carried on by the writer with betaimidazolylethylamin in its relation to asthma.

During the course of experimentation the forearm was accidentally scratched with a hypodermic needle containing a solution of this amin in water 1-1000. In a few minutes intense itching was felt at the site of the scratch and a localized edema of the skin was observed resembling urticaria.

The following experiments were then carried on:

Experiment I.—A piece of absorbent cotton was saturated with an aqueous solution of betaimidazolylethylamin 1-1000 and bandaged tightly on the forearm. Although left on for two hours no itching or irritation was produced.

Experiment II.—The skin of the left forearm was cleansed with ether, allowed to dry and several superficial scratches made with a clean needle. The same solution 1-1000 was applied.

9:30—Solution applied.

* Read before the Orleans Parish Medical Society, January 26, 1914.



ILLUSTRATING ARTICLE OF DR. EUSTIS.

9:35—The skin adjacent to the scratch marks is red and there is a stinging sensation.

9:40—Itching is intense and the skin on each side of the scratch marks is raised and paler than the surrounding skin.

9:45—The itching continues and is even more intense. There are wheals resembling urticarial lesions extending for one-quarter of an inch on each side of scratch marks.

9:50—Lesions still present. Itching less intense.

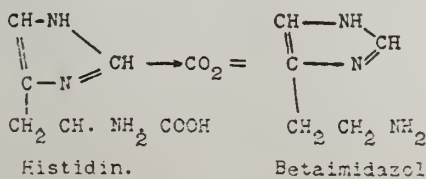
10:00—Lesions beginning to fade. No itching.

10:30—Skin is normal.

Experiment III.—The skin was cleansed with ether, allowed to dry and a 1-1000 solution of betaimidazolethylamin rubbed forcibly into the skin with the forefinger of other hand. In fifteen minutes numerous small wheals were produced, which gradually became more pronounced and in some instances coalesced, giving the typical appearance of an urticarial lesion, with intense local itching. The lesions and itching subsided in forty-five minutes.

No detailed report of these experiments were ever published, as more definite knowledge that the lesion was identical with that of urticaria was desired, but in the report (1) mention was made of the probability of betaimidazolethylamin being concerned not only in the production of asthma, but also of urticaria. In conversation with Dr. Eppinger, one of Prof. von Noorden's able assistants, the writer related these experiments. The notes have been preserved as further experimental work is necessary in order to conclude positively that this toxin is responsible for not only asthma but urticaria as well. The experiments have frequently been repeated. Recently Dr. Eppinger has reported some experiments (2) with this body and concludes that it is responsible for urticaria, at least of gastro-intestinal origin, but no mention of my work is made.

Betaimidazolethylamin is produced, as originally shown by Ackerman (3) when histidin is allowed to putrefy, according to the following formula:



It is therefore formed in the intestinal canal whenever histidin putrefies therein. Histidin is one of the amino acids formed by

the normal pancreatic digestion of proteids, the percentage yield varying with the different proteins. Hemoglobin is especially rich in histidin, yielding 10.93 per cent., according to Starling (4), while according to the same author its content in other proteins is: Caseinogen, 2.5 per cent; legumin from beans, 2.5 per cent; gliadin of wheat, 1.0 per cent.; gelatin, 0.4 per cent.

According to Gilchrist (5), who exhibited, at a meeting of the British Medical Association, numerous photomicrographs of the lesion in urticaria there is an acute inflammation of the true skin. The usual histological picture revealed the presence of enormous numbers of polynuclear leucocytes, increase in the number of lymphocytes and in some sections there were present a large number of mast cells; there were also eosinophiles, which were not present in normal skin. He considered that urticaria is produced by a circulating toxin and this was concurred in by Prof. William Welch, of Baltimore, who examined the sections.

Accepting this hypothesis as the most probable, a rational therapy can be outlined based upon dietetic principles. H. Salomon (6), writing from the von Noorden Clinic at Vienna, recently called attention to the striking results he has obtained in the treatment of rebellious urticaria by having the patients abstain from all albumin for a period of two weeks. In his experience the urticaria did not return after this dietetic restriction for two weeks, although the patients gradually resumed milk, eggs, cheese and meat, still keeping the albumin ration, however, rather below the usual amount. The diet he permitted in these two weeks consisted only of tea, coffee, bouillon, lemon and grape juice, potatoes, rice, cereals and plenty of butter and sugar with 200 gms. of bread made of coarse flour. It will be noted that all of these articles of diet are very low in protein and the proteins contained therein do not yield histidin on digestion. One's aim should be to prevent the putrefaction of histidin in the intestinal canal, and this can be prevented by the diet suggested by Salomon, *i. e.*, not introducing any histidin, or when introduced, by overcoming the tendency to intestinal stasis. This latter can best be overcome by an initial purgative.

The following has given us such uniformly good results, with none of the usual disagreeable effects of calomel, that the prescription is given in detail.

R

Hydrarg. chlor. mitis	grs. jiiij
Phenol phthallein.....	
Pulv. rhei aa.....	grs. vj
M. et. ft. caps. No. jiiij.....	

Sig:—One every half hour at night.

In our clinic at the Charity Hospital we have kept accurate records of several hundred cases in which this combination has been given and the average time of the first stool has been eight hours after the last dose, with little or no nausea, and no colic. As a rule, it is not necessary to give a saline afterwards. Daily evacuations of the bowels should be seen to, and this can best be accomplished by liquid alboline in two to three ounce doses, fig paste containing chopped up senna leaves, or agar-agar taken in oatmeal in the morning. However, by adding beets, celery, spinach and other articles of diet containing much cellulose, to a diet such as outlined by Salomon (7), and instructing the patients to observe regularity in emptying the bowels, and also the taking of a glass of water upon rising in the morning, it is surprising how easily the condition can be remedied by overcoming the intestinal toxemia. The intestinal toxemia can be easily judged by frequent examinations of the urine for indican, and whenever present in more than a trace, protein food should be eliminated from the diet. A virulent culture of the bacillus bulgaricus has also given us good results. The following case seen by me six years ago, is instructive:

D. Y., white male, 19 years old, medical student and son of a physician. Had had chronic urticaria for ten years. He had abstained from shell-fish and strawberries, but he had continued to eat meat and eggs. All organs were normal, but there was a very strong indican reaction in the urine. He was given an initial calomel, phenolphthallein and rhubarb purge; an abundance of water was advised, daily doses of effervescent phosphate of soda, and he was put upon a cereal, fruit and vegetable diet, eliminating from the vegetables those containing high percentages of protein. In twenty-four hours he was entirely free from all lesions of urticaria. His diet was kept under observation, and the intestinal toxemia carefully watched for a period of three months, during which time there were no attacks. He then became careless, indulged freely in meats, neglected his elimination, and a prompt recurrence of urticaria followed. This second attack was cleared up by free elimination, and since then he has been free from attacks, except when he allowed himself to become toxic.

My associate, Dr. Love, is another example of a similar character of urticaria. Until he devoted his attention towards overcoming the strong indicanuria present, he had repeated attacks. For the

past ten years I have carefully made notes on all cases coming under my observation, with special reference to the absence or presence of intestinal toxemia, and I have yet to see a single case of idiopathic urticaria in which there is not an intense indicanuria, and which does not clear up as soon as this latter condition is overcome.

It is not intended to discuss the treatment of the acute attack, but mention must be made of the hypodermatic administration of epinephrine. As originally advised by Swann (8), ten minims of a 1-1000 solution, followed in twenty to thirty minutes by ten minims more, will usually give complete and instantaneous relief, with disappearance of all lesions for a period of from four to seven hours. The fact that locally adrenalin will not prevent an experimental urticaria, and on account of the reappearance of the lesions after a variable length of time lends weight to the theory of a toxic origin of the disease and suggests that epinephrine acts as a hormone stimulating the cells to formation of the neutralizing substance. It is well to bear in mind that intractable cases of urticaria, which do not yield to this form of treatment, may be cases of erythema multiforme. The importance of differentiating between these two diseases has always been strongly urged by Prof. Dyer, and this was well shown in a case of supposed urticaria, recently under my care, and which had failed to yield to eliminative treatment and which was pronounced erythema multiforme when seen by Dr. Dyer, and which promptly recovered when treatment was instituted against this disease.

A few words regarding the etiology of the severe urticaria met with after injections of antitoxin, will not be amiss. Vaughan (9) has shown that whenever a foreign protein is introduced into the general circulation it is digested parenterally and that in its digestion there are certain toxic bodies set free, which may or may not be neutralized by the body, depending upon its power to oxidize them beyond the toxic stage. Inasmuch as all proteins contain more or less histidin and it is seen how easily histidin forms betaimidazolylethylamin, it is not improbable that this poison is set free from the protein molecule of the horse serum after the latter is injected with the antitoxin. Certainly, treatment of the urticaria, following antitoxin injections, yields most readily to therapy based upon these ideas. In presenting my views on the subject of urticaria, I do so with the knowledge that the data at hand is incomplete and insufficient for any definite conclusions, and intend this simply as a

preliminary report, and to claim precedence which is justly mine.

In closing, I wish to thank my associate, Dr. W. A. Love, for his encouragement and assistance in following the cases, and also his enthusiasm in accepting and practicing the ideas regarding intestinal toxemia, which I have worked out in the past few years.

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Bulletin of the Clinical Society of the Medical Staff of the Touro Infirmary.

MEETING, WEDNESDAY, FEBRUARY 4, 1914.

DR. I. I. LEMANN presented two cases. The first, a case of a man with

SPLENO-MYELOGENOUS LEUKEMIA TREATED WITH BENZOL.

The patient, aged 55 years, had had benzol practically continuously from July, 1912, to February, 1913. The dosage had never exceeded sixty drops of benzol daily, with an equal amount of olive oil. In conjunction with the benzol treatment, X-ray exposures to the spleen had been used, averaging one a week, with several interruptions of several weeks at a time. The blood before the beginning of the treatment showed:

Red blood cells.....	2,500,000
Hemoglobin.	35%
Leucocytes.	225,000 of which were
Polymorphonuclears.	18%
Large mononuclears	6%
Small mononuclears	6%
Myelocytes.	66%
Basophilic myelocytes	4%

Whereas, now the blood picture is as follows:

Red blood cells.....	5,510,000
Hemoglobin.....	90%
Leucocytes.....	30,000
Polymorphonuclears.....	67%
Small mononuclears.....	4 $\frac{2}{3}$ %
Large mononuclears.....	7 $\frac{1}{2}$ %
Basophiles.....	$\frac{2}{3}$ %
Myelocytes.....	11 $\frac{1}{3}$ %
Basophilic myelocytes.....	$\frac{1}{3}$ %

Before the treatment, the spleen reached to the crest of the right ileum and occupied practically the whole abdomen. At present it has shrunk so that it reaches about four fingers' breadth below the lower costal margin. The patient has increased in weight from 143 pounds to 168 pounds.

The second case was a man about 50 years, with an

ANEURISM OF THE ARCH OF THE AORTA, DUE TO SYPHILIS
ACQUIRED THIRTY YEARS AGO.

The points of interest in the case were, first, the fact that the man had applied for treatment because of great pain in his left shoulder and arm; second, that the attention was directed to the mediastinum because of the great frequency of arm and shoulder pain in cases of mediastinal disease; third, the diagnosis of aneurysm was made clinically, chiefly upon the basis of percussion findings; namely, flatness of the manubrium and dulness in the left first and second intercostal space, and upon the presence of dilated venules in the left infraclavicular space, and finally upon the presence of a hoarseness demonstrated to be due to a paresis of the left vocal cords. The diagnosis was confirmed by skiagraph and the patient has been entirely relieved of his pain by active anti-tubercular treatment. In this connection the reporter laid stress upon the prognosis and course of the disease under treatment. Dr. Lemmann also called attention to the importance of percussion over the bodies of the vertebrae posteriorly and mentioned a series of cases of aneurysm of the aorta causing whole areas of dulness in the upper part of the chest posteriorly. One of these patients had developed a complete paraplegia due probably to erosion of the vertebrae and pressure upon the cord and was dying in Charity Hospital (since the report at the Clinical meeting this patient has

died and autopsies has confirmed, in every detail, the diagnosis of aneurysm of the aorta with erosion of the vertebræ).

DR. JOHN A. LANDFORD reported

SOME RECENT WORK ON HODGKIN'S DISEASE.

Recently there have appeared in the current medical literature writings from several workers who report the cultivation of an organism from the glands of patients suffering with Hodgkin's disease.

Negri and Meiremet¹ report results from two such cases; Bunting and Yates² obtained cultures from four cases and observed the organism in smears from three other cases; Billings and Rosenau³ report their successful cultivation in twelve cases.

Through the kindness of Dr. Parham, I had an opportunity to attempt its cultivation several weeks ago from a case operated upon at Touro Infirmary. I followed the technic as described by Rosenau and on one tube obtained a single colony of an organism which was of the same morphological appearance as described by all the writers. I transplanted to a number of tubes but have failed to obtain any visible growths on these transplants. However, stained smears from other original tubes showed the presence of organisms and I am still in hopes of obtaining a luxuriant growth.

The organism as described by Bunting⁴ is a "non-acid fast Gram positive bacillus, which is extremely pleomorphic, occurring as plump, short rods resembling cocco-bacilli, small thin bacilli with polar staining, comma-shaped bacilli, granular rods of various sizes and often of considerable length, branches forms and involution forms; it is distinctly diphtheroid in its general characteristics." The name given by Bunting is *Corynebacterium Hodgkini* while Negri and Meiremet⁵ prefer the name *Corynebacterium granulomatis maligni*. This organism answers description of those obtained on smears after treatment of glands of Hodgkin's disease with anti-formin, by Frankel and Much⁶.

In confirmation of this organism being the etiological factor in Hodgkin's disease, Bunting⁷ reports the reproduction of clinical Hodgkin's disease in a Macacus Rhesus monkey by inoculating into the axilla a suspension of the growth and the subsequent cultivation from the lymph nodes of an organism of the same type as injected. These nodes showed the same histological picture as is seen in glands from human patients. In further confirmation Billings and Rosenau⁸ have treated a number of their cases with a vaccine pre-

pared from these organisms and report improvement in six cases and apparent cure in one case.

My work has not advanced far enough for me to report any of my experiences, but I trust to be able to report something more at a subsequent meeting.

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3. The Etiology and Vaccine Treatment of Hodgkin's Disease. *Jour. A. M. A.*, December 13, 1913.
4. See Note 2.
5. See Note 1.
6. Frankel and Much. *Ztschr. f. Hyg.*, 1910, LXVII, 159.
7. An Etiologic Study of Hodgkin's Disease. *Jour. A. M. A.*, November 15, 1913.
8. See Note 3.

DR. H. N. BLUM exhibited a colored woman of 25 years:

A CASE OF APPARENT COMPLETE CONGENITAL ANIRIDIA OF BOTH EYES, WITH CAPSULAR CATARACTS AND NYSTAGMUS.

Vision in the left eye with 2.00 sphere correction was 15/40 and in the right with 2.00 sphere was 15/70—Fundus of both eyes apparently normal—family history did not show any similar case. Dr. Blum also presented a case of a white girl 15 years old. This girl had a congenital partial dislocation of crystalline lens in both eyes. With secondary glaucoma and stretching of eye ball.

In the left eye there was a scar in cornea and partial cataract due perhaps to an attempt at couching the lens.

In the right eye Dr. Blum had done an iridectomy several months ago in order to relieve the glaucoma, but this did not give expected results.

An Elliott corneoscleral trephining was done a week ago. There was a well-marked area of sub-conjunctival filtration and relief of tension.

The following cases were reported by DR. R. MATAS:

(1) TRAUMATIC ARTERIO-VENOUS ANEURISM OF THE FEMORAL VESSELS AT THE GROIN; DETACHMENT AND SEPARATE SUTURE OF THE VESSELS; RECOVERY.

Patient J. H. H., aged 19 years, of Westminster, S. C., admitted to Touro Infirmary January 7, 1914.

Traumatic arterio-venous aneurism of the femoral vessels at the groin caused by a parlor rifle bullet, 22 calibre, inflicted four years before operation, in a young man 19 years of age. Enormous dilation of the epigastric, superficial circumflex veins, and of the iliac veins, and pulsating varicosities of the saphenous tributaries and all

superficial veins. Trophic ulcer of the left leg. Ischemia of the foot with scarcely perceptible pedal pulses.

Operation by Dr. Matas, January 16, revealed an oblique anastomosis of the common femoral vessels just below Poupart's ligament with a large venous sac formed at the expense of the femoral and external iliac veins. Prophylactic hemostasis by temporary elastic ligature of the dilated left iliac artery at its origin and elastic compression of the artery and vein at a lower level just opposite the origin of the epigastric and circumflex iliac veins. Elastic temporary ligature of the femoral vessels at the apex of Scarpa's triangle, and final dissection and separation of the common femoral artery from the vein. Separate lateral suture of the artery and vein with obliteration of the venous sac. Restoration of the circulation in both artery and vein after removal of temporary ligatures. Recovery. (Presentation of patient, photograph and drawings.)

(2) STAB WOUND IN RIGHT POPLITEAL SPACE, WITH DIVISION OF POPLITEAL NERVE AND RESULTING PARALYSIS, NEURORAPHY; RECOVERY.

Patient J. M., of Orville, Ala., aged ten years, admitted to Touro Infirmary December 5, 1913, operated by Dr. Matas December 5, 1913, and discharged December 21, 1913.

Stab wound and complete division of the right popliteal nerve with paralysis of extensor and peroneal muscles and foot drop.

Operation December 5, 1913, three and one-half months after the injury, revealed complete division of the nerve with the formation of neuromata in the stump. Excision of neuromata, followed by: (1) Lateral implantation of the distal or peripheral end of the peroneal into the popliteal nerve, and anastomosis by nerve splitting of the proximal end of the divided nerve into lateral surface of distal trunk. Healing per primam. Voluntary control of toes and foot with rectification of foot drop one month and twenty days after operation.

(3) TYPICAL JACKSONIAN EPILEPSY CAUSED BY TRAUMATIC HEMORRHAGIC CYST OF THE RIGHT MID-CENTRAL ROLANDIC AREA.

Patient A. B. M., of Jackson, Miss., aged 28 years, admitted to Touro Infirmary January 7, 1914, operated by Dr. Matas January 9, and discharged completely healed and in excellent condition January 31, 1914.

Typical Jacksonian epilepsy of one year's duration, caused by traumatic hemorrhagic cyst of the right mid-central Rolandic area in the middle of ascending frontal and parietal convolutions including the fissure.

Operation January 7, 1914, two years after injury, revealed a well defined cyst containing over one and one-half ounces of hemorrhagic fluid in cavity lined with organized plastic exudate. Drainage of cyst, partial suture of dura, removal of oval bone plate, three by two and one-half inches in size, for permanent decompression. Primary healing. Recovery.

(4) ACUTE HEMORRHAGIC PANCREATITIS.

Patient, Dr. J. D. F., aged 43 years, admitted to Touro Infirmary at 2:15 a.m., January 25, 1914. Drained by Dr. Matas at 3:45 a.m. January 25.

Symptoms simulated acute gastritis from corrosive poisoning. Sudden, violent, agonizing pain in epigastrium with constant retching and vomiting of mucus and gastro-duodenal contents. Extreme epigastric tenderness. No muscular rigidity or defensive attitude. Great pallor. Scanty, albuminous urine. Pulse 72, and temperature 98 (rectum).

Median abdominal section revealed a profuse constant ooze of dark bloody serum which escaped in quantities from the neighborhood of head of pancreas and Foramen of Winslow. Numerous large extravasations and ecchymoses in peripancreatic fat, transverse mesocolon and colon. Gall-bladder normal. Fat necrosis with constant bloody oozing from many points in disintegrated fat, requiring suture-ligation to stop it. Pancreas probably entirely necrosed. Retroperitoneal fat and peritoneum infiltrated and edematous. Pancreatic and retroperitoneal drainage with Miculiz's pack and drains. Apparent improvement for seven hours; then persistent vomiting with dilatation of stomach, suppression of urine, and rapid failure of the circulation.

(5) CARCINOMA OF PANCREAS CHOLECYSTO-DUODENOSTOMY.

Patient, Miss E. B. H., aged 64 years, admitted to Touro Infirmary December 23, 1913, operated by Dr. Matas January 16, 1914.

Carcinoma of pancreas in aged woman, causing attacks of pain simulating biliary colic, due to beginning obstruction of common duct.

Operated January 16. Recovery with symptomatic relief, after cholecysto-duodenostomy.

(6) DISLOCATION OF HEAD OF FEMUR INTO OBTURATOR FORAMEN,
WITH NEUROPATHIC SYMPTOMS AND OTHER COMPLICATIONS.

Patient, G. P. R., aged 50 years, admitted to Touro Infirmary January 15, 1914.

Rare dislocation of the head of the femur (left) into obturator foramen. Reduction by Bigelow's method one and one-half hours after the accident. (Automobile collision.) Injury complicated by Pott's fracture in corresponding limb, and mental disturbances (stupor, somnolence, amnesia, mental confusion, involuntary urination and defecation, with blood pressure of 200 to 250), which are only now beginning to clear up on the twentieth day.

(7) PARTIAL GIGANTISM OF RIGHT FOOT AND LEG, WITH
MEGALOSYNDACTYLISM.

Patient, S. A., of Sulphur, La., aged 8 years, admitted to Touro Infirmary January 19, 1914, operated by Dr. Matas January 23, 1914.

An unusual type of partial gigantism of the right foot and leg with megalosyndactylism, of congenital origin, in Mexican boy aged 8 years.

Operation. Cosmetic amputation of the anterior part of the foot at the metatarso-tarsal joints.

(8) THROMBOTIC OCCLUSION OF THE RIGHT COMMON ILIAC
VEIN AT ABOUT THE BIFURCATION OF THE INFERIO
VENA CAVA.

Patient, Mr. H. M., aged 30 years, seen by Dr. Matas at his office February 3, 1914, referred by Dr. Eshleman, Outclinic, Medical Division.

Thrombotic occlusion of the right common iliac at about the bifurcation of the inferior vena cava, in male patient, aged 30 years. Symptoms of venous occlusion apparently followed by a bilateral phlebitis of both lower limbs during convalescence from an attack of pneumonia. Diagnosis based upon enormous varicose dilatation of the epigastric-mammary anastomosis forming a large convoluted plexus of veins on anterior abdominal wall. Varicosities and edema of both legs and thighs. Large patches of dark, pigmentary dermatitis with threatening ulceration on anterior surface of both legs. Total absence of ascites. No "Caput Medusæ," or other evidence of portal obstruction.

(9) EXCISION OF UPPER JAW FOR EPITHELIOMA OF ANTRUM
UNDER REGIONAL ANESTHESIA.

Patient, R. N., aged 53, admitted to Touro Infirmary December 15, 1913, operated by Dr. Matas December 26, 1913.

Excision of upper jaw for epithelioma of antrum in man aged 53 years. Operation December 26, 1913. Very complete anesthesia obtained by blocking the superior and inferior maxillary divisions of the trigeminus at the basal foramina, and by massive infiltration of the sphenopalatine fossa to block Meckel's ganglion and its branches, with novocain-adrenalin solution.

(10) SPECIMENS OF ANTERIOR AND POSTERIOR TIBIAL ARTERIES
IN DIABETIC GANGRENE.

Patient, Mrs. S. P., admitted to Touro Infirmary December 29, 1913, operated by Drs. Maes and Matas January 9, 1914. Died in diabetic coma January 18, 1914.

Specimen of anterior and posterior tibial arteries removed by dissection of amputated leg in case of diabetic gangrene in woman aged 62 years. Specimen showed general obliterative endarteritis with thrombotic occlusion in both vessels in the terminal branches below the ankle. Dry gangrene of the toes and foot; ascending.

Operation January 9, 1914. Circular amputation above the knee. Recovery followed operation, with healing per primam. Death in diabetic coma in spite of alkaline (soda) intravenous infusions. Urine loaded with acetone containing only a trace of sugar at death, while at the time of admission it contained as much as 8% of sugar.

(11) SPECIMEN OF CARCINOMA OF RECTUM.

Patient, Mr. H. D., aged 43, admitted to Touro Infirmary December 11, 1913, operated by Dr. Matas December 12, 1913, and discharged well January 11, 1914.

Specimen of carcinoma of rectum involving the gut at the termination of the sigmoid.

Operation December 12, 1913. Resection of intraperitoneal segment of the rectum leaving artificial anus in left iliac region.

(12) RADIOGRAPH SHOWING OUTLINES OF LARGE MEDIASTINAL
TUMOR OF A CHILD.

Radiographs showing outline of large mediastinal tumor encroaching upon both thoracic spaces, including the entire posterior mediastinum.

Patient, R. K., aged 8 years. Tumor mass extends from the third to the eleventh dorsal vertebræ, and has been causing attacks which simulate asthma, for which the child was treated before admission. Symptoms appeared three months ago and have continued with progressive deterioration of the general health of the patient, viz: emaciation, marasmus, pallor, etc.

The following cases reported by DR. W. KOHLMANN:

SPECIMENS OF CARCINOMA OF THE CERVIX.

(1) Mrs. G., age 47, admitted January 2; Discharged January 24, 1914.

Operated patient five years ago (supra-vaginal amputation for fibroid). Patient was perfectly well until six months ago when she began to have irregular bloody discharges from the vagina. Vaginal examination showed extensive carcinomatous degeneration.

(2) Mrs. C., age 31, admitted February 1, 1914.

Patient shows normal development of the vagina. There is a membrane dividing the vagina and the lower part of the uterus. A cervical opening can be felt on each side of the septum. (*Double vagina and uterus sub-septus uniformis*). Patient complains of pain in the lower abdomen. On vaginal examination an oblong swelling can be felt on both sides of the uterus, larger on the right than on the left. (Most probable tubo-ovarian inflammation). Patient is to be operated to-morrow. Intend to divide the septum and make a laparotomy.

(3) Mrs. X. PATHOLOGICAL SPECIMEN OF UTERUS DUPLEX UNICOLLIS.

Specimen removed about two years ago from a patient who after an abortion from the fundus on the right side developed double pyosalpinx, as specimens will demonstrate.

(4) Mrs. J. B. D. CASE OF PELVIC KIDNEY.

Patient complains of pain in the lower abdomen and incontinence of feces. Examination shows total absence of vagina and a sinus leading from the rudiment of the vagina into the rectum (result of a previous attempt to make a vagina).

By rectal examination, which was very painful, an intra-abdominal swelling could be detected. After opening the abdomen an interesting condition was found. The small pelvis was entirely filled out by a mass the size of a foetal head which proved to be the right

kidney. (Pelvis of the kidney dilated and filled with stones.) The ureter of this kidney was pushed entirely to the left side. The left kidney was found in normal position. The right ovary was found high up near the gall bladder, the left ovary about two inches lower on the left side.

(5) Mrs. C., age 45. Admitted January 27.

Patient has been confined to bed for two months.

Examination shows a large partially fluctuating mass especially in the left side of the lower abdomen. On vaginal examination nothing abnormal could be found. On opening the abdomen extensive adhesions of the omentum to the mass could be detected. This mass consisted of bilateral tubo-ovarian abscess and uterus. This mass, being densely adherent to the rectum and no separation being possible, was removed as a whole. The sigmoid was drawn through an incision in the left side of abdominal wall (artificial anus). Drainage of the cavity through the vagina.

(6) SPECIMENS OF GALL STONES.

These stones of rather good size were discharged most probably through a cholecysto-duodenal communication.

This case is especially interesting as this opening established itself without any degree of local symptoms. Patient was suffering for about a month from an uneasy feeling in the upper abdomen but was not confined to bed. Temperature about 99½. Pulse between 70 and 80.

I saw her about a week ago. On examination I found slight enlargement of the liver. Some pain on deep pressure in gall bladder region. Very slight jaundice, stools of normal color only at times light. The following day her color had decidedly improved. Four days later she discharged ten of these gall stones by rectum at one time and three more at irregular intervals during the next forty-eight hours.

Patient is feeling well and is up and about.

The Plates exhibited by DR. E. C. SAMUEL the night of the Clinical meeting of the Staff at Touro Infirmary were as follows: Two CASES OF CHARCOT'S JOINTS, one involving the metatarsal bones of the right foot and one involving the ankle joint, double cervical rib, tumor of the mediastrum and fracture of the humerus, with bone plate in position after fifteen months.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYEZ, M. D.

THE RADIUM OUTLOOK.

One is inclined to get a variety of impressions of modern therapeutic methods, viewing these from the various angles through which they are presented in the lay and secular press. The public is really concerned, and after all is said, the medical profession is the servant of the public. Unfortunately there is a hidebound system of so-called ethics which has hitherto prevented any direct statements from the profession to the lay press and the press, ready and anxious to satisfy the public, has been compelled to put before the public such matter as it may have gathered from all kinds of sources.

So far as radium is concerned, the proletarian function of the United States government has given the press ample reason for spreading news. The steps taken for the conservation of radium in this country so as to protect the supply for its proper usefulness among our own people has given a note of promise for those afflicted with disease. Radium may have, in fact already has, various uses outside of medical therapy, and as a native American product our government has been wise to safeguard the output, which had already started abroad in some quantities.

The visible supply of radium is so small and the demand for it so great that the price has from the beginning been prohibitive for most persons. This status may change under federal methods of derivation of the mineral and under federal direction of its supply and use.

We as medical men, however, are concerned in the material supply of radium from the purely humanitarian side, for it has a use already demonstrated which has put it among the most modern of therapeutic agents directed at the cure of conditions hitherto considered incurable.

A degree of discredit has been thrown upon the altruistic efforts

of a small group of American surgeons who have been courageous enough to declare a confession of faith in radium as a cure for certain forms of malignant growths and as superior in end results to established surgical procedures. The criticism has been wholesale, and, if analyzed, the criticism has been unreasonable and unjustified, because uttered without due knowledge or investigation of facts.

At the beginning of the therapeutic use of the X-Ray, a wholesale employment was made by everyone who could afford the apparatus. The list of diseases in the catalog of curable ills, under the X-Ray, included practically everything which permitted experimentation. At this time, the use of the X-Ray therapeutically is distinctly limited and its employment requires a more or less expert knowledge of technic. The radiologist has made a distinct place for himself by the development of methods and the range of their application grows more and more diversified.

The analysis of the history of the X-Ray shows that it has required several years to adjust the place of this most valuable adjunct to medical and surgical procedure. The inexperienced X-Ray experimenter has long since abandoned its use and the intelligent physician or surgeon refers his cases, quite properly, to the experienced X-Ray worker, who knows just what to do.

With radium the situation is different, and really not easily comparable with the genesis of the X-Ray. In the first place, the use of radium has been necessarily restricted because of its scarcity. Sporadic experimentation has gone on at the hands of those employing small quantities of radium. Where a large enough supply of radium has permitted extensive varieties of treatment the results have been generally encouraging and in some places highly satisfactory. The work of Louis Wickham and his associates in Paris has perhaps more extensively noticed this remedy than any other, but, because of the commercial character of the "Institut," its results have not been so widely credited as they might have been under different auspices. The same may be said of the London Institute.

In this country, over four years ago Abbe's work was extensively reported and notwithstanding the wide scope of his cases and the remarkable results obtained, they attracted comparatively little notice. When Kelly declared, after fully three years of careful investigation and accurate record, his belief in the great efficiency of radium, especially in malignant growths affecting the mucous

membranes and organs lined with such, there arose an undesirable newspaper notoriety which caused an unexplainable reflex among certain medical journals.

The careful review of the whole matter leaves us in no position to pass criticism. We must admire the patience of the men who have waited for results before printing them and we must respect the courage of conviction of such men, who stand among the highest authorities in surgical procedure in this country.

Radium will not supersede all surgery in cancer, nor will it prove a panacea in all uncertain cases of disease, but it will do what it has already done, namely, offer to the inoperable case of cancer a hope of cure and it appears to offer to many surgical cases of cancer a simpler and surer means of relief with a higher percentage of final cure without recurrence than surgery now affords in similar cases.

We may, then, wait for further reports, with the hope that when radium is available in quantities large enough for proper employment the returns may continue to be favorable where its use is indicated, while to those who are beyond all hope of relief, we may, with due regret, point the way to an easy end.

THE TREND OF MEDICAL EDUCATION.

Few of the medical schools of today are wholly commercial; medical education is too expensive. That is, it costs too much to give the student of medicine a proper training to figure out any profit on the undertaking; the college which does is doomed. No medical school or college of standing ever hopes to come out even. It is proverbial among university authorities that the medical school is far more costly to the institution than any other department. Where research obtains, the cost is indefinitely increased. Yet no division of any university stands for development in public service more than the medical. All of this has come about in scarcely a decade. Nothing has done more to revise the ideas of medical education than the achievement in experimental medicine and the necessity of training the student of medicine to meet the advances and to further them.

The whole aspect of medical education has changed. The intending student of medicine must be better educated than formerly.

He must think in the equations of science and the fields of instruction and of research are more and more full of mathematical hypothesis and precision, developed along higher plans. Biology is transformed today from its former simples into aggregations of problems dealing individually with conjoined ideas of chemistry and physics as well as with relations in anatomical terms. The student must appreciate this. He is on the way to the fulfilment of far winder purposes than his forbears. He must hereafter serve not only as the healer but as the adviser in more than one way. His promise reaches out into the schools and even to the government of the municipality and state in matters of public health.

The college of medicine has of necessity to read the future and to meet these conditions in a reorganized curriculum aimed at the equipment of the medical graduate so as to make him efficient as well as to make him properly qualified.

The future is hard to read, but enough signs are on the way, to indicate that there must be fewer, as there will be better doctors; that there must be better medical schools, as these grow fewer.

The result should be that the profession of medicine will more and more reach nearer the plane of dignity and service which should become it, when the ranks are filled with men above the average, in training and equipment, in intelligence and initiative for the public good.

THE STANDARDIZATION OF HOSPITALS.

The best hospitals of the United States have for a number of years striven for a better organization and administration. The best evidence of this has been shown in the Hospital Association, with a large membership, and recently with a creditable hospital journal devoted to most every side of hospital detail.

Municipal hospitals have been especially active in reorganizing for efficiency and where such hospitals have been located in cities with medical colleges, the affiliation has grown closer all the time.

The latest of these hospitals to break away from tradition is the new municipal hospital of Cincinnati, planned ultimately to have about 1,400 beds. Not only has the City of Cincinnati co-ordinated the hospital with the University of Cincinnati Medical School, but the University has been asked to help plan the hospital with a view

to its control by an organized body of men, engaged in advanced practice of medicine and familiar with the most modern methods.

The State of Pennsylvania has, by legislative act, placed all hospitals in the State under the State Health Commission, and already this body has promulgated the regulations which define a hospital, fixing the duties of a hospital management in the matter of its administration, medical and surgical service, interns, etc. Accordingly, as the degree of qualification is satisfied, the hospital is graded and those falling below a certain grade are made liable and amenable to discipline.

Other States may follow, and it is desirable that they should, for this seems the simplest way to solve the question. Meantime a classification of hospitals is under way, based upon information obtained by the Council on Medical Education of the American Medical Association. Most of the information has been voluntarily supplied by the different hospitals and the first list of hospitals classified will be made up of those which have been willing to supply information. Later on, the matter can be more exhaustively undertaken and a more correct listing of hospitals is bound to result. It will be a matter of much interest to all to study the hospital list and the basis of classification, for the point of view of hospitals must vary.

The hospital stands for many useful purposes, chief among which are the care of the sick, their better treatment, and the prevention of disease insofar as the relation of the hospital to medical education permits the thorough study of patients and methods to that end. The early establishment of hospitals carried along the training of the physicians in attendance and at no time has the hospital been free of the obligation, accepted or indirectly allowed, for the study of disease. The most successful hospitals have always been those with direct relation to teaching institutions and the history of medicine is possible only through hospital opportunities. Nearly all the advances in medical and surgical practice to-day have grown out of hospital records of achievement which have made the practice outside the hospital possible.

The city and State are finally demanding better service in all public obligation and as the servants of the public, the hospitals and their staffs, administrative and medical, must come up to the standard.

THE ROLL OF HONOR.

On March 14, at the City Hall, in the Council Chamber, three New Orleans citizens were honored with the medals of the American Institute for Social Science. These three men were among ten similarly distinguished in the whole of the United States this year.

The gratifying thing about the occasion was the fact that for the first time the honor has been bestowed in the South and that all three selected for distinction should be only of New Orleans, but of the medical profession, viz: Charles C. Bass, Charles W. Duval and A. L. Metz. While to each the donation has been given for distinguished service in social betterment through a variety of achievement, it is noteworthy that all have reached so great a goal, through the work accomplished in the laboratory of medical service, as the work of each man was applied. More than this, none of the beneficiaries have earned the credit and reward through achievement laid on a commercial plan, but upon the altar of preventive medicine.

All three are teachers in Tulane University and the credit of their achievements must bring the natural reflex of credit, as it does of pride, to the University of their affiliation, as well as to the City of New Orleans and the State of Louisiana, which harbors them and their college.

Science has many avenues of endeavor and in each there are many at work; that now and then the light of philanthropy, of recognition of merit, and the summary of reward, should find a few for distinguished preferment, is a matter of supreme satisfaction for those who have watched the labors and who have shared in the encouragement to success. To the recipients the *JOURNAL* extends earnest congratulations for their well-earned tokens and shares with them the glory which belongs to all of us.

Abstracts, Extracts and Miscellany.

MISCELLANY.

THE TREATMENT OF SYPHILIS.—It is most important that treatment should begin at the earliest possible moment, that is, as soon as the diagnosis is certain, which is made possible by the demonstration of the spirochetes in the suspicious sore. This test failing, one must wait for the Wassermann reaction in the blood, or, for the appearance of secondaries.*

For the last four years a great deal has been written by medical men who have been devoting their time to the study of what are the best remedies for eradicating this monster that is ravaging the civilized world. The attempt to determine the proper indications for mercury and for salvarsan in the treatment of syphilis presents the views of the clinic rather than the laboratory. One fact can be accepted—that the length of treatment is no guide as to cure, nor should every person be treated in exactly the same way. We can now determine for each individual case the amount and kind of treatment required, and can tell the patient approximately what is necessary. Mercury has been used for five centuries in the treatment of syphilis and potassium iodide for eighty years. These two remedies, particularly the former, have been the mainstay in the treatment of the disease and have, in a way, given satisfactory results. Under proper mercurial treatment spirochetes disappear from the local lesions and the Wassermann reaction becomes negative. The failure of mercury is often shown by reappearance of symptoms during the time of active treatment. Mercury, although fatal to the spirochetes, occasionally fails to cure because of faulty technic or, because the organism becomes immune to the drug, or, because the spirochetes become so lodged that the mercury fails to reach them. The reason why mercurial treatment can not produce rapid destruction of the organisms is that mercury can not be administered intensively, but requires intermissions of treatment, during which the organisms have opportunity to recuperate.

SALVARSAN AND NEOSALVARSAN.—In 1910, Ehrlich startled the world with the introduction of salvarsan. Although the hopes of many have not been realized, yet in its destructive influence upon the spirochetes and in its rapid effect upon the clinical manifestations the new remedy has demonstrated its superiority to mercury.

* Unless clinical signs are unmistakable.—Eds.

Later, Ehrlich introduced a modification of salvarsan, called neosalvarsan. Comparing salvarsan with neosalvarsan, the percentage of febrile reactions is somewhat higher after salvarsan, even though larger doses of neosalvarsan are used. This febrile reaction may be due to individual susceptibility, to faulty technic, or to the setting free of the toxins of the dissolved spirochetes. Gastro-intestinal disturbances are much more marked after salvarsan, while a reaction similar to anaphylaxis occasionally occurs after salvarsan, but not after neosalvarsan. The effect of neosalvarsan on the symptoms and lesions is weaker than that of salvarsan when used in proportionate amounts. The effect of neosalvarsan upon the serological reaction appears to be twenty to forty per cent weaker than that of salvarsan. Salvarsan is a powerful symptomatic remedy and especially upon active mucous membrane lesions and obstinate palmar and plantar syphiloderms. The early administration of salvarsan or neosalvarsan prevents relapses. Salvarsan and neosalvarsan have proved more satisfactory than mercury in syphilis of the nervous system. Contrary to the general belief, invasion of the nervous system by the spirocheta pallida may show within four months of the onset, such as psychoses with meningitis, paralytic syndromes and various forms of neuritis; these plainly show that the disease has invaded nerve tissue and caused gross lesions. Another most important indication for the early intensive salvarsan treatment is to prevent the spirochetes remaining latent in the nervous system to later manifest themselves as paresis and tabes; the former assumption, that these conditions were parasymphilitic has been proven by Noguchi and Moore to be wrong by their demonstration of the spirochetes in the nerve tissues. That syphilis does produce these conditions so disastrous to the productive usefulness of its victim is a compelling argument to strike early and hard at the cause. The saving to the State by cure of this disease in its incipiency and before permanent damage is done, is proven by the number of helpless invalids from these conditions in public institutions supported by the ever increasing burden of the taxpayer.

The intraspinal treatment for tabes and paresis recently introduced by Swift and Ellis seems to offer much of hope for these poor unfortunates and although too soon to endorse, the experience with many cases where the intravenous injection had but little influence has been very encouraging. Salvarsan and neosalvarsan naturally act well in all types of syphilitic manifestations, but more

especially in those affecting the gastro-intestinal tract, the heart, the throat and nose, and the blood vessels.

The contraindications to the use of salvarsan and neosalvarsan which were formerly thought to be numerous have now narrowed down to only the following conditions, namely, renal insufficiency, Addison's disease and status lymphaticus. The drug should be administered only by those who are thoroughly acquainted with the technic of its administration, for the mortality resulting from its use is almost the same as that from chloroform in anesthesia.

The writer has at present under observation and treatment a score of defective school children, three-quarters of whom have shown almost unbelievable improvement in their mental deficiencies under intensive salvarsan treatment. All these cases gave a positive reaction to the Wassermann serum test and were therefore hereditary syphilitics. Over two years have elapsed since the first case, a boy of twelve years, was tested and treated. The extraordinary results in this case could only be appreciated by contrasting his condition before treatment, when he was underdeveloped, stooping in posture, defective in muscle co-ordination, in speech and in hearing, with the face and bearing of an idiot, remaining in the attitude in which he was placed, with his condition after treatment when, in one year's time, he had become as normal as the average boy of his age. In his school work, after having been in the same grade four consecutive years, he was able to catch up with his class in one year. This experience would seem to indicate that hereditary syphilis is no inconsiderable factor in the production of backward and defective children; there are at home and in institutions, a large number of feeble-minded and epileptic children refractory to mercury and iodides because the very delicate and complicated nervous system which is readily damaged, was involved; these are responding to the treatment by the new arsenical compounds. It would be well for School and Health Boards to consider this promising field in their investigations. At present Boards of Health are offering every opportunity for the prevention, diagnosis and treatment of such diseases as tuberculosis and typhoid fever. Equal opportunity should be offered in the care of syphilis, a disease that is equally prevalent. The extinction of syphilis as a universal scourge could be made nearly as simple as is that of smallpox in such carefully guarded health countries as Germany. While prevention in tuberculosis, typhoid and smallpox is a very

simple expedient, cure of the disease when once contracted is difficult, there being no specific treatment and the prevention of the spread of these diseases is a high and difficult problem. On the other hand, the prevention of syphilis is probably a Utopian idea; its spread may be controlled by curing the disease, or, at least, making its possessor harmless, thereby shutting off the source of infection. The best way to fight syphilis is for the Health Department to render examination easy, and to provide hospital treatment for all prostitutes and for all indigent and detention males. All hospital attendants and managers should ridicule the absurdity of segregating syphilitics, for the danger of infection is no greater than from those having pneumonia or typhoid fever. Indeed, free opportunity to secure the advantages of hospital treatment should be afforded syphilitics.

A notable change in public sentiment in regard to syphilis has occurred since its cause and cure have become better known. The mantle of ignorance and superstition that has ever surrounded syphilis and the vigilance with which all mention of it by the public press was withheld, are rapidly disappearing: to-day, syphilis is being discussed like any other disease menacing public welfare. Now, when placed on a scientific basis, the prevention, diagnosis and treatment of syphilis will undoubtedly appeal to the public as does the prevention of smallpox, typhoid fever and tuberculosis. The scientific battle has been won; the public conscience is aroused and educated as never before. The general indifference of the medical profession regarding the prevalence, diagnosis and treatment of syphilis is deplorable. Medical schools should give this disease as much consideration as is given to tuberculosis or typhoid fever, for it involves not merely the health and life of individuals, but to a much greater degree than the diseases mentioned the happiness of families and the welfare of society.

Education of healthy persons in regard to syphilis and its prophylaxis by proper publicity, the instruction of persons suffering from this disease by some official pamphlet given them by the physician will aid in checking the dissemination of the scourge; but education alone will never solve the problem. The law will have to be invoked in all possible directions before much can be accomplished. By law, better qualification on the part of physicians can be demanded; quacks and false medical advertising can be suppressed; scientific medical treatment can be aided by required laboratory

tests; quarantine, relative or absolute, can be enforced. Much of this seems imaginary and impracticable, but the time is ripe for a beginning under the authority of our Boards of Public Health.—G. W. WENDE, in *Buffalo Sanitary Bulletin*, January 31, 1914.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

FIBROID TUMORS COMPLICATING PREGNANCY AND LABOR.—LYNCH has, in this careful article (*Am. J. Obst.*, N. Y., 1913, lxxviii, 429), given a complete history of the subject and has considered in a comprehensive way the various effects of pregnancy on the tumor and the tumor on the pregnancy. He has analyzed a large number of the reports for operations for this condition in a critical way, and concludes that if indications were present for operation the majority of the case reports failed to show it. The mere presence of a tumor of the pregnant uterus is not an indication for operation. The symptoms must be of sufficient present gravity to justify an operation which has, as its greatest possibility, the sacrifice of not only the existent pregnancy but all future pregnancies also. The greatest percentage of cases run approximately a normal course during pregnancy and labor. Obstruction of the pelvis, even in cases of large fibroids, is rarely noted. When, however, obstruction is present, Cesarean section is indicated before there has been much manipulation, and the uterus treated according to the extent of the disease, hysterectomy usually being necessary. Early interference is advisable in cases presenting multiple growths and infectious processes during the puerperium. As a rule, hysterectomy is indicated as soon as the growth is known to be infected.—*International Abst. Jour.* MILLER.

VULVOVAGINITIS IN YOUNG CHILDREN; ITS CONTROL AND SUCCESSFUL TREATMENT.—(Barnett—*Arch. Pediat.*, 1913, xxx, 650.)—Fifty cases are reported, only twenty-six of which continued systematic treatment. The duration of treatment varied from one week to six years, but the average was eight and one-half months. It was shown in examination of these cases by means of the urethral speculum that the cervix was always affected. Superficial ulcerations were frequently to be seen in this region.

Six cases showed complications: one was complicated with arthritis of the shoulder, one with arthritis of the wrist, one with chronic general peritonitis, one with painful heel (periosteal exostosis), and two with pelvic peritonitis.

Except in complications, Barnett had no results from the use of vaccins. In no case was a culture from the urethra positive. The treatment as given by Barnett was as follows:

"The external genitals are sponged off and the labia separated; the Kelly endoscope is inserted as far as possible, the size of the endoscope depending on the size of the opening in the hymen and not on the age of the child. An endoscope of proper size should cause no pain—this is of the utmost importance. After one or two sittings the little patients will allow this procedure quite readily; the obturator of the endoscope is withdrawn, the light inserted and with no other manipulation than withdrawing the tube one-quarter to one-half inch the cervix presents at the distal end of the tube; any secretion is then removed with the applicator, and iodine (Lugol's solution) is applied directly to the cervix and vaginal walls as the endoscope is slowly withdrawn. These endoscope treatments¹ are carried out three times a week. The important fact to bear in mind is infection of the cervix and the treatment should be directed toward elimination of this focus of infection."

As to prophylaxis he advises that the children should be kept separated from other children in every possible way, and the teachers and social workers should be taught the prevalence of the condition.

Ibid. MILLER.

THE CHANGES IN THE BLOOD DURING MENSTRUATION.—Cantoni (*Arch. f. Gynak.*, 1913, xcix, 541,) investigated the coagulability of blood according to the methods of Wohlgenuth. He examined the test tubes not only after twenty-four hours, but also after the third, fifth, seventh, ninth and twelfth hours, in order to determine the possible changes which occur in the fibrin ferment and fibrinogen content of blood during menstruation. The first examination was made at the height of the hemorrhagic period, and the second about fifteen days before its beginning. Only observations from the same individual were compared. Seven experiments showed that the blood of the menstruating woman coagulates normally. The local cause that prevents blood excreted from the genital organs from coagulating has yet to be determined.

A second series of investigations was made to discover whether there is actually a diminution in the alkalinity of the blood during menstruation. According to the compensation method of Poggen-dorff-Ostwald a determination was made of the apparent lowering of the potential between a hydrogen electrode prepared with a solution of $\frac{1}{8}$ -N NaCl. In two cases there was a slight increase, and in two a slight diminution of the acidity. These differences, however, did not exceed the limits of the changes in the reaction of normal blood.

Investigations were carried out also to determine the total amount of the blood albuminoids before and during menstruation by means of the immersion refractometer of Pulfrich with the assistance of Reiss' table. For this purpose, blood was obtained from five women, fifteen and seventeen days before menstruation, during the highest phase of the hemorrhagic period, and seven days after the cessation of menstruation. The refraction index, and with it the albumin content of the blood, increased slowly with the approach of menstruation. Their maximum coincided with the height of menstruation, and they decreased again with the decrease of menstruation. Whether the change in the refraction index in menstruation is caused by the loss of blood or by other causes still remains to be determined.—*Ibid.*

MILLER.

RISE OF TEMPERATURE BEFORE MENSTRUATION.—(Hansen, *Beitr. z. Klin. d. Tuberk.*, 1913, xxvii, 291.)—Before puberty and after the menopause, the temperature curve of woman is the same as that of men; that is, there is almost a parallel course for the morning of minimum temperature and the maximum temperature of the day. During their periodic life, however, there is a rise in the curve before menstruation and a depression afterward and the minimum curve shows a greater variation than the maximum; so that the post-menstrual type, with its lower minimum temperature, shows a greater daily variation, while the premenstrual, with an increased minimum temperature, shows a relatively smaller daily range. During the first third of pregnancy the temperature shows the premenstrual type, then falls slowly and in the last half of pregnancy approaches the post-menstrual type, but with a lesser daily range. The curves of pregnant women never show period variations.

In the normal puerperium of nursing women, there is a slight rise of the evening and a marked rise of the morning temperature. A

series of experiments shows that an increase of albumin metabolism probably causes the rise in temperature of the premenstrual type. The reason for the greater rise in the morning temperature is that in the morning a decided rise does no harm to the organism, while in the evening the heat-regulating mechanism comes into play. Perhaps also in periods when there are extraordinary demands on the organisms, the resting periods are shortened so that the time of the actual minimum temperature is shifted. The importance of the menstrual period and the first half of pregnancy in tuberculosis is due to increased albumin metabolism. If a menstrual period occurs without any temperature variation it probably shows a failure of the metabolic reaction. Numerous reproductions of curves and an extensive bibliography are given.—*Ibid.* MILLER.

OVARIAN NEOPLASMS COMPLICATING PREGNANCY AND LABOR.—(Norris, *Am. J. Obst.*, N. Y., 1913, lxxvii, 429.)—Serious complications, either during pregnancy, labor, or the puerperium, may be expected in 25 to 30 per cent. of all cases, and from 16 to 20 per cent. of the pregnancies will terminate prematurely. Comparing operation to expectant treatment of an ovarian tumor, discovered during pregnancy, carries a danger to the mother three times as great as that of early operation. If operative interference occurs prior to the fifth month of pregnancy, the chances of saving the foetus are three times as great as those of expectant treatment. An ovarian tumor, whether abdominal or pelvic in situation, recognized prior to the first half of pregnancy, should always be removed without delay, except when cardiac, kidney or other grave systemic condition contraindicates a general anesthetic. In such cases as promise obstetrical complications, the use of local or nitrous oxide and oxygen or spinal anesthesia is justified. The abdominal route is always to be preferred, since the vaginal route shows a large number of abortions.

The frequency of accidents to tumors situated in the abdominal cavity and the relative ease with which they may be removed without disturbing the uterus and without inducing premature labor, justify their immediate removal at any period of pregnancy. In the interest of the child, pelvic-bound tumors, first discovered after the middle of pregnancy, should be under continuous observation, and so long as there are no symptoms of danger their removal may be delayed until just before term, with the expectation of securing a living child at that time.

An abdominal tumor, if not a mechanical obstacle, may be guarded against its greatest danger during labor, namely, rupture, by early and skillful obstetric interference. The patient having been delivered safely, the tumor should be removed during the puerperium upon the slightest evidence of torsion or inflammatory reaction. Tumors obstructing the birth canal call for early and definite surgical treatment. Attempts at reposition should only be made by an experienced man and then only when prepared to perform an immediate abdominal operation. The best treatment for an ovarian tumor obstructing the birth canal is abdominal ovariectomy. In clean cases the removal of the tumor is advised, preceded by a classic cesarean section. If in doubt as to the patient's chances from infection of the uterus, the organ is then to be removed supravaginally and the stump anchored extraperitoneally in the incision.—*Ibid.*

MILLER.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

LEUCOCYTE COUNTS IN CIRRHOSIS OF LIVER.—Rogers has continued his observations on the blood changes in cirrhosis of the liver, and the results confirm, and in some respects extend, the conclusion that leukocytosis is common in ordinary cirrhosis of the liver, a high degree being of immediate very bad prognostic significance. On the other hand, a marked leukopenia is diagnostic of the disease being secondary to kala-azar. It appears that a relative increase of the white corpuscles is of great immediate prognostic value. Five of the nine patients showing an actual leukocytosis died within a short period of time, while in the six patients showing only a relative leukocyte increase four also died while under treatment in hospital. Thus, out of a total of fifteen patients showing either an actual or relative leukocytosis no less than nine, or 60 per cent, died within a short time, while the remainder were discharged from hospital "relieved," mostly without any improvement in their condition. On the other hand, out of nine cases with no increase in the leukocytes, even of a relative degree, and in which kala-azar was not the primary disease, there was only one death, or 11 per cent,

the fatality in that case, moreover, having been from a complicating bronchitis. Even among the eight kala-azar cases only two terminated fatally while under observation, so that, including them, there were still only three deaths in hospital, or 17.65 per cent. among seventeen patients with normal or diminished leukocytes. As most of these patients were in hospital from one to three months, and some of them showed improvement as a result of medicinal treatment, it is clear, Rogers says, that, except in the kala-azar cases with marked anemia or daily fever, surgical procedures might have safely been adopted in those with recurring ascites after repeated tappings, and who thus did not appear to be likely to completely recover under purely medical treatment. On the contrary, several of the patients showing leukocytosis died within a short time of its discovery, although clinically indistinguishable from many of the more favorable cases with normal leukocytes, and had they been operated on only a disappointment would have resulted. In seven out of nine cases in which an actual leukocytosis was found, from 80 to 93 per cent. were polynuclears, the two cases showing over 90 per cent. being both in a cholemic state which rapidly ended fatally. This polynuclear leukocytosis points to a terminal bacterial infection, very possibly due to the bacillus coli comunis. In the kala-azar cirrhosis cases a marked degree of anemia was always present, while the proportion of white to red corpuscles was usually reduced to much below the normal figure of about 1 to 666. The occasional absence of a marked relative leukopenia is due to the fact that cirrhosis is a very late complication of kala-azar, only ensuing after the patient has suffered from fever for several years, and has to some extent become immune to its effects, and partly due to the frequency of dysenteric complications, which tends to increase the leukocytes.—*Lancet*.

J. A. S.

CYCLIC VOMITING IN CHILDREN.—Hugh T. Ashby (*Practitioner*, 1913, xci, 53), gives this following description of cyclic vomiting. The chief feature is incessant vomiting lasting from twelve hours to several days. The attacks come on without any warning during a period of good health. Children subject to them are nearly always of a neurotic stock. The diagnosis is often difficult where no history of a previous attack can be obtained. Other signs of disease are usually lacking. The absence of much rise in temperature, quick pulse, sweetish smell of the breath and the presence of acetone and diacetic acid in the urine will aid in forming a definite diagno-

sis. As many other diseases of childhood begin with vomiting, these must be excluded. If the vomiting continues more than twenty-four hours without any other signs appearing, it is usually cyclic vomiting. The prognosis is generally good, although the condition is accompanied by much exhaustion and a rundown condition. The condition seems to be allied to delayed chloroform poisoning, although the results are not so fatal. The attacks may begin soon after the twelfth month. They tend to become less frequent and severe and usually die out by the time of puberty. Intervals between the attacks vary from three to four weeks to once or twice a year. The chief pathological feature determined is the presence during the attacks of an acidosis, or acetone and diacetic acid in the urine and breath. The most plausible theory is that there is an intestinal toxemia due to disturbance of the liver function causing the presence of acetone and diacetic acid. Post-mortem findings show fatty degeneration in most of the internal organs similar to that of chloroform poisoning. Mellanby found creatin excreted in the urine only under such conditions, the amount increasing as the attack came on. On the theory that the carbohydrates are absent or not utilizable in this condition, the treatment is to give large quantities of sugar by mouth during the attacks, in the form of glucose and soda-water. Glucose is also given by rectum in large quantities. The intestine is kept free by enemas. This treatment gives better results than sodium bicarbonate in large doses.—J. A. S.

LIME IN THERAPEUTICS.—Von der Velden limits his discussion of this subject here to the action of calcium salts on the endothelium of the vessels and on the coagulation of the blood. He gave patients 1 gm. tablets of calcium lactate up to a total dosage of 4 or 6 gm. a day. To a few others he gave calcium chlorid 0.5 gm. three times a day. In a few cases he gave the lime by intravenous injections of a 5 per cent. solution of calcium chlorid. His experience has demonstrated that the calcium enhances the coagulating power of the blood and also renders the morbidly permeable vessel walls less permeable. The latter effect is strikingly evident in hemorrhagic affections, such as scorbutus; the calcium renders the vessel walls less porpous. This hemostatic effect therefore can be anticipated only in case of bleeding by diapedesis. It is unfortunate that the absorption of the calcium salts depends on a variety of factors, especially on good gastric secretion and on the absence of fermentation acids in the intestine. He detected the abnormal permeability of

the vessels responsible for the rebellious scorbutus hemorrhage in one case by applying a cupping glass for five minutes. The vacuum glass drew blood just the same after two weeks of the ordinary measures. Then he gave the man 3 gm. a day of calcium lactate for five days, after which the cupping glass no longer drew blood, and complete recovery followed in three weeks of the same treatment. He also found calcium lactate useful in two cases of iodine poisoning from a course of potassium iodide. A further useful application of the calcium lactate is in curing the cutaneous manifestations of anaphylaxis. In pleurisy with effusion the fact that the calcium renders the vessel walls less pervious has an unfavorable side, as this checks absorption. The calcium is indicated, therefore, only when the effusion constantly recurs after puncture. When the walls of the pleura are severely modified by chronic inflammation, the calcium will naturally have no effect. He found that animals developed cachexia when given calcium salts over a long period. In fifteen cases of hemorrhagic nephritis the results of the calcium medication were conflicting. No pronounced favorable results were obtained in any case and the condition was aggravated in some.—*Therapeutische Monatsheft* (Berlin). J. A. S.

TREATMENT OF ANKYLOSTOMIASIS.—A point of great importance in the successful treatment of ankylostomiasis, in Keith's opinion, is the percentage of hemoglobin in the blood. If the percentage of hemoglobin is in the neighborhood of 60, he says it may be reckoned that with suitable treatment the ova will disappear in the course of a few days. With a percentage of between 45 and 55, treatment will be more difficult. Anything below 40 per cent. will indicate that great patience will have to be exercised before recovery can take place; it will not be a question of weeks but of months, and this is certainly so when the percentage of hemoglobin is as low as 10 to 20. The general condition improves with rest and diet. As a rule, the edema soon disappears and the patient feels better, but the ova, though they decrease in number rather quickly at first and then more gradually, do not disappear entirely for months, while the hemoglobin index remains persistently about its original level. From recent results, Keith has come to the conclusion that betanaphthol in 30-grain doses the first thing every morning is likely to prove more effectual than eucalyptus or thymol. The necessity for starving patients while the treatment is being carried out is by no means evident; indeed, in bad cases it may even be harmful.

More especially is it unnecessary if the drug is given the first thing in the morning. There will not be much food found in the upper part of the small intestines five or six hours after an ordinary meal, so that if the drug be given the first thing in the morning there is no necessity for starvation. Energetic treatment is needed, and Keith has never seen any ill-effects follow from such measures.—*Lancet*.

J. A. S.

Miscellaneous.

INSOMNIA AND ITS TREATMENT.—Dr. E. L. Monin, in *La Semana Medical*.—Nocturnal repose is the repose that restores strength, sustains physical resistance and promotes assimilation. Sleep signifies and corresponds to a need of conservation which cannot be evaded. Insomnia, therefore, inevitably leads to denutrition and debility. Eight or nine hours of sleep are needed every day, or about one-third of human life; this period of inaction in which we are far from contact with the outer world (only the organic functions and the reflexes remaining active), represents a physiological need for every living being. It is also probable that sleep favors the elimination of certain products of retrograde metamorphosis (toxins, the homogenic bodies of Preyer), the accumulation of which in the system causes inhibition of function and fatigue.

Insomnia calls for different remedies, according to the causes that produce it. Cerebral insomnia is relieved by chloral, trional and veronal, and avoiding opiates when there is any congestion.

Medullar insomnia is quieted by granules of monobromid of camphor, narcein, codein, or Gregory's salt; and when there is congestion of the medulla, hyoscyamin produces very good results, as in tabes, paraplegias, etc. Equally we should avoid opiates in bulbar insomnia, because they often aggravate the asphyxia. For the relief of pain that prevents sleep, e. g. neuralgia, we advise the use of aconitin, cannabin and kenarol, using the last named particularly when there is fever. Ergotin and cannabin are useful in insomnia from mental causes; spartein, bromide of camphor and valerianate of quinin are valuable in patients suffering from cardiac troubles.

Sleep is the true antidote to alcoholic intoxication. The insomnia of neurasthenics, when persistent, can be cured by open-air life at an elevation, cold douches to the feet and suppression of all

stimulants, which are always antihypnotic; furthermore, in these cases narcotics are always uncertain and never produce a beneficial sleep, while a reform in the patient's hygiene frequently suffices to secure the repose that he needs and yearns for.

In cases of hypotension, Dr. Manon advises a lotion of lukewarm water and vinegar over the whole body, and a cup of hot beef tea internally. When there is habitual hypertension, Monin gives a sixth of a grain of calomel at each meal, and a minute dose of veratrin at bedtime, with two drops of the officinal solution of trinitrin. This treatment always gives good results. In chronic constipation, with insomnia due to absorption of toxic products, an enema and a Seidlitz powder every morning will soon restore what Lasegne aptly terms the "appetite to sleep."—*Revista de Medicina y Cirujá de Habana*.
McSHANE.

VALIDOL IN PEDIATRICS: ALSO IN OXYURIS.—(Dr. M. Neubauer, Charlottenburg.)—Since the introduction of validol in 1897 it has become very widely used. It consists of the isovalerianester of menthol plus 30 per cent. of menthol itself. The valerianic acid marks the remedy as a nervine, and the menthol as an analeptic. From this arises its varied applicability to many kinds of nervous disorders, in cardiac pains without valvular deficiency; also in seasickness, vomiting of pregnancy, in certain cases of migraine, in acute alcoholism and as an intertinal disinfectant in *Oxyuris vermicularis*. It did not, however, sustain the claim advanced for it as a succedaneum to *digitalis*.

In pediatrics, Neubauer found it a prompt remedy in night-terrors, and also a reliable anthelmintic. From five to fifteen drops at night quited the nervousness and the oxyuris to disappear from the stools. The explanation of this anthelmintic action is to be found in the fact that menthol belongs to the cymol derivatives, like thymol, which has long been used in the treatment of hookworms.—*Deutsche Medicinal Zeitung*.
McSHANE.

PATHOGENESIS AND THERAPY OF GENUINE EPILEPSY.—(By Dr. Bolton (*Nederl. Tijdschrift f. Geneesche*.)—Genuine epilepsy is a toxicosis caused by the products of molecular changes of the cells, and retrograde products of foodstuffs. All of these substances are neutralized by the thyroid and parathyroid

bodies. Insufficiency of these organs depends on disturbance of the lowest sympathetic ganglion. The cerebral changes in genuine epilepsy are secondary, and are due to chronic toxemia. Genuine epilepsy, in many cases, cannot be clinically distinguished from a symptomatic epilepsy which is a sequel to meningitis or meningoencephalitis. The administration of freshly expressed thyroid juices by the rectum has given excellent results in genuine epilepsy. Of forty cases so treated, eight were cured in a short time; others required months of treatment, during the first two or three months of which absolutely no improvement was noted. Only two patients failed to derive any benefit; but in these two cases there were already well-marked secondary phenomena and pronounced dementia.

—*Deutsche Medizinical Zeitung*. McSHANE.

CASE OF LEGUEU'S OPERATION—NEPHROFIXATION AND APPENDECTOMY BY THE LUMBAR INCISION.—By Prof. Francisco Dominguez, Havana.)—The patient of Dr. Dominguez was a mulattress, twenty-five years of age, married. She was healthy and all during her childhood, menstruation normal in amount and duration, but always painful. Three years ago she had her first child, a forceps delivery, followed by puerperal infection, which left her with intense pains in the hypogastrium and both iliac fossæ, particularly the right; leucorrhœa, disordered menstruation. On June 11, 1911, Dr. Avagon performed hysterectomy. She made a good recovery, but as soon as she went back to her work she began again to suffer pains, though these were not as intense as before the hysterectomy, in the right iliac fossa and right flank. In the course of time there arose veritable crises, consisting at times of intense pain in the right iliac fossa, accompanied by nausea and at other times by pain in the right flank with nausea also; the temperature rose to 39.5 C., the urine became scanty and high-colored. In the intervals between these attacks the pain was almost continuous, but slight, radiating to the right leg, and being aggravated by exercise. She had to live on a milk diet, for solid food was difficult to digest, and provoked nausea and exacerbation of pain.

When the patient was admitted to the hospital she had pain over McBurney's point, and presented a round, smooth, movable tumor in the right flank, which could be displaced to the median line, and could be pushed upward until it disappeared under the costal arch, but descending again easily as soon as the patient sat up. A diagnosis of renal ectopia and chronic appendicitis was made. Dr.

Dominguez decided to perform nephropexy and appendectomy, selecting for the purpose the operation of Dr. Legueu, which would enable him to perform two operations with a single incision, thus saving the patient the ordeal of a second operation.

Before anesthetizing the patient, Dr. Dominguez examined the ribs carefully and found that the twelfth rib was very long. When anesthetized the patient was placed on her left side on a cushion, the left leg was doubled up and the right leg extended. The classical incision of Prof. Guyon was made, extending from a little above the twelfth rib, following the outer border of the sacrolumbalis and curving forward in its lower third, paralleling the crest of the ilium in this part of its course. After cutting through the skin, the aponeurosis and the muscles, the subperitoneal cellular tissue was reached and the displaced right kidney was found in the right flank. The kidney was pushed to the upper part of the incision and the peritoneum was incised. When the fingers were introduced into the peritoneal cavity to pull out the cecum, the prolapsed stomach was encountered in the right iliac fossa, and this, in spite of the fact that the patient was lying on her left side. After some careful manipulation, the cecum was drawn into the incision and the appendix was removed; the peritoneal wound was then closed and the kidney was fixed according to the method of Abarrary or decapsulation.

The day after the operation the patient had no fever, and her pulse was 94. Her convalescence was uneventful. In eleven days the sutures were removed and she continued to improve all the time.—*Revista de Medicina y Cirugia de la Habana.* McSHANE.

Louisiana State Medical Society Notes.

In Charge of DR. L. R. DEBUYS, Secretary, New Orleans.

PRELIMINARY PROGRAM OF THE THIRTY-FIFTH ANNUAL MEETING
TO BE HELD AT NEW ORLEANS.

MONDAY, APRIL 20, TO THURSDAY, APRIL 23, 1914.

(A complete program will be mailed to each member of the Society two weeks before the meeting.)

SECTION ON HYGIENE AND STATE MEDICINE.

Dr. Oscar Dowling, Chairman.

LOCAL HEALTH ADMINISTRATION—PRACTICAL PHASES, CONFERENCE, LOCAL AND STATE OFFICERS, MAYORS, PRESIDENTS OF POLICE JURY.

TENTATIVE PROGRAM.

Greeting—Honorable Martin Behrman, Mayor of New Orleans; Dr. Joseph Holt, New Orleans; Dr. Fred J. Mayer, President Louisiana State Medical Society.

Public Health Law—The Sanitary Code—Hon. Benj. T. Waldo, New Orleans; Dr. Wm. C. Woodward, Health Commissioner, Washington, D. C.

Address of Welcome—Dr. Chas. N. Chavigny, President Orleans Parish Medical Society.

The Community's Right to Health Protection—Dr. A. H. Gladden, Monroe; Dr. Edmond Souchon, New Orleans; Dr. A. A. Herold, Shreveport.

The Whole-Time Health Officer—Hon. W. W. Whittington, Jr., Mayor of Alexandria; Hon. J. W. Elston, President Police Jury, Haughton.

The Educational Work of the Health Officer—Dr. T. T. Tarlton, Grand Coteau.

Model Vital Statistics Law—Dr. G. Farrar Patton, State Registrar, New Orleans; Dr. T. A. Roy, Mansura.

Application of Model Law in Louisiana—Dr. Geo. Kreeger, City Health Officer, Lake Charles.

Local Statistics Problems—Dr. C. C. Chandler, City Health Officer, Shreveport.

The Sanitary Survey; Communicable Diseases—Dr. R. H. von Ezdorf, Surgeon, Public Health Service, Mobile; Dr. G. M. Corput, Quarantine Officer, New Orleans.

Sewage Disposal—J. H. O'Neill, Sanitary Engineer, State Board of Health.

Water Supply—Geo. G. Earl, Superintendent Sewerage and Water Board, New Orleans.

Garbage Disposal—Hon. E. E. Lafaye, Commissioner of Public Property, New Orleans.

Sanitary Inspection and Regulation of Public Buildings and Places of Public Assembly—Dr. B. S. Warren, Surgeon, P. H. S., Washington, D. C.

Drug Inspection—Dr. E. S. Kelly, New Orleans; Mr. Edw. H. Walsdorf, President Louisiana State Pharmaceutical Association, New Orleans.

Dairy and Milk Inspection—G. B. Taylor, Analyst, State Board of Health; Dr. B. H. Rawls, Chief Dairy Division, Washington, D. C.; Dr. A. D. Melvin, Chief, Bureau Animal Industry, Washington, D. C.

Meat Inspection—Dr. W. H. Dalrymple, Baton Rouge; Dr. R. W. Tuck, Bureau Animal Industry (United States).

Nuisances—Dr. W. T. O'Reilly, Superintendent of Public Health, New Orleans.

The Sanitary Office, Service and Equipment—Dr. Wm. Ernest Walker, Orthodontist, New Orleans; Dr. B. A. Ledbetter, New Orleans.

Medical Inspection School Children—Dr. Edmund Moss, New Orleans; Dr. S. D. Porter, New Orleans.

Medical Inspection School Children's Teeth—Dr. A. G. Friedrichs, New Orleans.

Objections Answered—Dr. F. J. Frater, Shreveport; Dr. Frank H. Walke, Shreveport.

Malaria: Its Remedy—Dr. J. H. White, Public Health Service, New Orleans; Dr. Hermann Oechsner, New Orleans.

Community Protection—Hon. Walter Lemann, Mayor, Donaldsonville.
State Bacteriological Service—Dr. Wm. H. Seemann, Bacteriologist, New Orleans.

SECTION ON NERVOUS AND MENTAL DISEASES.

Dr. Clarence Pierson, Chairman.

Private Institutional Treatment of Nervous and Mental Diseases—Dr. C. V. Unsworth, New Orleans.**Arterial Sclerosis with Relation to Nervous and Mental Diseases**—Dr. L. L. Cazenavette, New Orleans.

SECTION ON MEDICAL JURISPRUDENCE.

Medico-Legal Aspects of the Traumatic Neuroses—Dr. R. M. Van Wart, New Orleans.

SECTION ON EAR, NOSE AND THROAT.

Dr. R. F. Harrell, Chairman, Alexandria.

Some Important Considerations of Chronic Middle Ear Suppurations for the General Practitioner—Dr. Isaac Erwin, New Orleans.

To open discussion: Dr. J. A. Caruthers, Baton Rouge.

The Naso-Pharynx: A Neglected Field—Dr. Arthur I. Weil, New Orleans.

To open discussion: Dr. F. C. Bennett, Monroe.

SECTION ON OPHTHALMOLOGY.

Dr. John L. Scales, Chairman, Shreveport.

The Operative Treatment of Glaucoma—Dr. J. Ashton Blanchard, Shreveport.

To open discussion: Drs. Henry Dickson Bruns and Marcus Feingold, New Orleans.

SECTION ON DISEASES OF CHILDREN.

Dr. Leon J. Menville, Chairman, Houma.

Diagnosis of Smallpox in Children—Dr. Leon J. Menville, Houma.

To open discussion: Dr. J. J. Ayo, Bowie.

Orthostatic Albuminuria—Dr. L. R. De Buys, New Orleans.

To open discussion: Dr. Solon G. Wilson, New Orleans.

Dactylitis Syphilitica in Infancy—Dr. Robert A. Strong, Pass Christian, Miss.

To open discussion: Dr. W. W. Butterworth, New Orleans.

Significance of a Sore Throat in the Child—Dr. C. P. Gray, Monroe.

To open discussion: Dr. J. O. St. Dizier, Walls.

SECTION ON GENITO-URINARY AND RECTAL DISEASES.

Dr. Carroll W. Allen, Chairman, New Orleans.

Colliculitis—Dr. Charles Chassignac, New Orleans.**The Modern Diagnostic Methods of Genito-Urinary Surgery**—Dr. H. W. E. Walther, New Orleans.**Treatment of Bladder Tumor with Oudin Current**—Drs. Joseph Hume and Samuel Logan, New Orleans.

SECTION ON OBSTETRICS.

Dr. M. Thomas Lanoux, Chairman, New Orleans.

Observations in the Use of Pituitary Extract in Obstetrical Practice—Dr. M. Thomas Lanoux, New Orleans.

To open discussion: Dr. C. Jeff Miller, New Orleans.

Fibroids Complicating Pregnancy—Dr. Charles N. Chavigny, New Orleans.

To open discussion: Dr. W. D. Phillips, New Orleans.

SECTION ON GYNECOLOGY.

Dr. C. Jeff Miller, Chairman, New Orleans.

Necessity for an Educational Campaign for the Control of Cancer—
Dr. C. Jeff Miller, New Orleans.

Discussion.

The Obligation of the Medical Profession in an Educational Campaign on Cancer, Dr. S. M. D. Clark, New Orleans; **Early Recognition and Pre-Cancerous Lesions of Cancer of the Intestinal Tract,** Dr. F. W. Parham, New Orleans; **The Early Recognition of Cancer of the Skin and Pre-Cancerous Lesions,** Dr. Isadore Dyer, New Orleans; **Early Diagnosis of Cancer of the Urinary Tract,** Dr. Joseph Hume, New Orleans.

Radical Operation for Cancer of the Uterus—Dr. Wm. Kohlmann, New Orleans.

NOTE.—The above subject is for a joint discussion for the Surgical and Gynecological Sections.

SECTION ON SURGERY.

Dr. Espy M. Williams, Chairman, Patterson.

My Experience with Bismuth Paste, with Remarks on Pleural Reflex—Dr. Hermann B. Gessner, New Orleans.

The Lane Plate in the Treatment of Compound Fractures—Dr. L. B. Crawford, New Orleans.

The Regeneration of Bone—Dr. Isidore Cohn, New Orleans.

Autogenous Bone-Grafting, with Exhibition of Lantern Slides—Dr. John F. Oechsner, New Orleans.

Surgery of the Gall-Bladder, with Special Reference to Excision—Dr. J. M. Batchelor, New Orleans.

Gunshot Wounds of the Abdomen; Their Treatment—Dr. J. G. Martin, Lake Charles.

Anoci-Association; Science in Surgery—Dr. E. E. Sanderson, Shreveport.

Paper (title not yet given)—Dr. F. W. Parham, New Orleans.

The Removal of the Rectum by the Perineal Route—Dr. Carroll W. Allen, New Orleans.

SECTION ON DERMATOLOGY.

Dr. O. W. Cosby, Chairman, Monroe.

Some Observations on the Treatment of Pellagra—Dr. E. H. Martin, Hot Springs, Ark.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Dr. Philip Asher, Chairman, New Orleans.

Fisher's Alkaline and Saline Therapy—Dr. J. T. Halsey, New Orleans.

To open discussion: Dr. I. I. Lemann, New Orleans.

Physician, Pharmacist and Pharmacist—Dr. Philip Asher, New Orleans.

To open discussion: Dr. J. O. Weilbacher, New Orleans.

SECTION ON BACTERIOLOGY.

Dr. W. H. Seemann, Chairman, New Orleans.

Subject to be announced—Dr. W. H. Seemann, New Orleans.

Rabies—Dr. M. J. Couret, New Orleans.

SECTION ON PHYSIOLOGY, NUTRITION AND DIETETICS.

Dr. Allan Eustis, Chairman, New Orleans.

Dietetics of Typhoid Fever—Dr. Allan Eustis, New Orleans.**Heat Coagulation of Muscle**—Dr. Ralph Hopkins, New Orleans.

SECTION ON PRACTICE OF MEDICINE.

Dr. E. Lee Henry, Chairman, Lecompte.

Comparative Medicine—Dr. W. H. Dalrymple, Baton Rouge.**Aneurisms, with Arterio-Sclerosis**—Dr. George S. Bel, New Orleans.**The Care and Treatment of Tubercular Patients in the Country**—Dr. G. M. G. Stafford, Alexandria.

To open discussion: Dr. R. M. Penick, Shreveport.

Cerebrospinal Meningitis—Dr. Randolph Lyons, New Orleans.**The Dyspepsia of Phthisis**—Dr. J. A. Storck, New Orleans.

To discuss this paper: Drs. J. L. Wilson, Alexandria; J. W. Lea, Jackson; T. W. Young, Clinton.

Aneurisms of the Aorta, Illustrative of the Importance of Certain Methods of Examination—Dr. I. I. Lemann, New Orleans.**Cardiac Dilatation as a Cause of Sudden Death**—Dr. A. E. Fossier, New Orleans.**Enteroptosis**—Dr. Otto Lerch, New Orleans.**Treatment and Prevention of Malaria**—Dr. C. C. Bass, New Orleans.

To discuss this paper: Drs. W. S. Rutledge, Ruston; H. L. Ducrocq, Lafayette; I. J. Newton, Monroe; D. J. McAnn, Atkins; T. T. Tarlton, Grand Coteau; F. V. Gremillion, Alexandria.

Dietetic Features of Malaria, Preventive and Curative—Dr. H. L. Ducrocq, Lafayette.**The Role of Internal Secretions in the Etiology of Diabetes**—Dr. L. J. Genella, New Orleans.

To open discussion: Dr. A. E. Fossier, New Orleans.

What Shall We Do With Our Tuberculous?—Dr. E. Lee Henry, Lecompte.

To open discussion: Dr. W. J. Durel, New Orleans.

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TRANSPORTATION.—While nothing definite has yet been arranged, the Committee on Transportation is working hard to get a one-fare round-trip rate for the meeting. At all events, a rate of one and one-third is assured.

HOTELS.—The principal hotels of this city have agreed to allow all those attending the convention a discount of 25 per cent. on the regular rates.

ENTERTAINMENT.—The Committee on Entertainment has nothing definite to announce, but will have all information ready for the Official Program, which will be mailed to each member two weeks before the meeting, in accordance with the provisions of the by-laws.

ANNUAL ORATOR.—Hon. J. M. Parker, of New Orleans, will be the annual orator, and will speak at the public meeting, Wednesday, night, April 22.

Medical News Items.

INTERNATIONAL SURGICAL ASSOCIATION.—The Fourth Congress of this Association will be held at the Hotel Astor, New York City, Monday, April 13-16, 1914. This is the first time that the Congress has ever had a meeting outside of the City of Brussels, where the first one was held in 1905 and repeated every three years. The membership of the Association is limited to a certain number from each country. The membership in the United States is about one hundred. The officers of the Fourth Congress are: Prof. Depage, Brussels, president; Prof. Willems, Ghent, president of the International Committee; Dr. L. Mayer, Brussels, general secretary; Dr. J. P. Hoguet, New York City, local secretary. The American Committee is composed of Dr. Roswell Park (deceased), Buffalo; Dr. L. L. McArthur, Chicago; Dr. C. L. Gibson, New York City, and Dr. R. H. Hart, Philadelphia. These last three, with the addition of Dr. Rudolph Matas, New Orleans, and Dr. R. G. LeConte, Philadelphia, constitute the committee designated to represent the American Surgical Association in making preparations for the entertainment of the foreign members. The program is limited to the consideration of three main topics: gastric and duodenal ulcers, grafts and transplantations, and amputations.

THE UNITED STATES CIVIL SERVICE COMMISSION announces a competitive examination for medical intern, for both men and women, on April 8, 1914, at the places mentioned in the printed notice. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the Government Hospital for the Insane, Washington, D. C., at \$900 per annum, with maintenance and vacancies as they may occur in positions requiring similar qualifications. The positions are tenable for one year and pay \$75 a month and maintenance. During the year, however, a post-graduate course in mental and neurological diagnostic methods is given, an examination is held, and promotions to the next grade, junior assistant physician, are made. Beyond this there is regular advancement for men whose services are satisfactory. The Government Hospital for the Insane has over 3,000 patients and about 800 employees to care for. In addition to the general medical practice offered, the scientific opportunities in neurology and psychiatry are unsurpassed.

As considerable difficulty has been experienced in filling vacancies in the position of medical intern in the Hospital Service during the past several years, owing to the limited number of eligibles available, qualified persons are urged to enter this examination.

Graduation from a reputable medical college is a prerequisite for consideration for this position.

Applicants must not have been graduated previous to the year 1909 unless they have been continuously engaged in hospital, laboratory or research work along the lines of neurology or psychiatry since graduation, which fact must be specially shown in the application.

Age, twenty years or over on the date of the examination.

This examination is open to all persons who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply to the United States Civil Service Commission, Washington, D. C., or to the secretary of the Board of Examiners at New Orleans. No application will be accepted unless properly executed and filed with the Commission at Washington in time to arrange for the examination at the place selected by the applicant.

WEBSTER PARISH MEDICAL SOCIETY.—The Webster Parish Medical Society met at Cotton Valley, La., March 10-14, 1914, with the following members present: Dr. H. H. Smith, Jr., president; Dr. W. McDade, secretary-treasurer; Dr. C. G. Coyle, Dr. C. L. Hoyle, Dr. J. R. Browning, Dr. C. T. Deloach, Dr. E. B. Middleton, Dr. S. M. Richardson, Dr. J. D. Kilgore. Dr. Mayer, president of the State Medical Society, was present and made a very interesting talk. The Society is waking up and expects to be well represented at the State meeting.

ORLEANS PARISH MEDICAL SOCIETY.—The regular meeting of the Orleans Parish Medical Society was held on March 9, 1914, at 141 Elk Place. A scientific program was presented, the following papers being read: "Cleft Palate; Report of Case," by Dr. John F. Oechsner; "Comparative Efficiency of Various Digitalis Preparations," by Dr. John T. Halsey; "Gastro-Intestinal Gout," by Dr. F. E. Lamothe; "Presentation of Cases," by Drs. E. D. Martin and A. C. King. The membership committee reported the following applicants were elected: Drs. J. Herbert Page and Clothilde J. Preis.

TENTH ANNUAL CONFERENCE ON MEDICAL EDUCATION AND PUBLIC HEALTH, EDUCATION AND LEGISLATION was held at the Congress Hotel, Chicago, February 23-24, 1914, under the auspices of the Council on Health and Public Instruction and the Council on Medical Education of the American Medical Association. A very interesting program was furnished and the subjects discussed were entertaining and profitable.

NEW YORK SKIN AND CANCER HOSPITAL.—The Governors of the New York Skin and Cancer Hospital announce the annual course of clinical lectures and demonstrations in the out-patient hall of the Hospital, by Dr. L. D. Bulkley and Dr. Wm. Seaman Bainbridge, beginning April 1, and ending April 30. The lectures will be illustrated by cases, models, colored plates, photographs, etc. The course will be free to the medical profession on the presentation of their professional cards.

GEORGE WILLIAMS HOOPER FOUNDATION.—The JOURNAL acknowledges an invitation from the Regents of the University of California and the Directors of the George Williams Hooper Foundation to partake in the opening ceremonies of the Institute for Medical Research, which was held on March 7, 1914, at the University of California Hospital, San Francisco.

SAMUEL D. GROSS PRIZE.—The Samuel D. Gross Prize of the Philadelphia Academy of Surgery is to be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty pages, octavo in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens. Essays will be received in competition for the prize until January 1, 1915, and must be sent to the Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 S. 22nd Street, Philadelphia. The prize is for \$1,500. Each essay must be typewritten, distinguished by a motto and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

THE SIXTH CONGRESS OF THE ASSOCIATION OF PHYSICIANS OF THE FRENCH LANGUAGE OF NORTH AMERICA will meet in Quebec on August 31 to September 3, 1914. Among the subjects on the

program to be discussed are: "Les Accidents du Travail dans la Province de Quebec," by Dr. A. Simard; "L'Alimentation des Enfants dans la Province de Quebec," by Dr. A. Jobin; "Les Nephrites," by Dr. J. O. Leclere; "Les Eaux Potables dans la Province de Quebec," by Dr. A. Berner; "Les Cures D'Altitude dans la Province de Quebec," by Dr. Ethier; "Les Eaux Minerales dans la Province de Quebec," by Dr. Baril.

AMERICAN THERAPEUTIC SOCIETY.—The next meeting of the American Therapeutic Society will be held in Albany, New York, May 29-30, 1914.

MEETING OF THE EAST BATON ROUGE MEDICAL SOCIETY.—The East Baton Rouge Medical Society held its regular monthly meeting in the office of the President, Dr. J. J. Robert, on Wednesday evening at 8 o'clock. Owing to the bad weather conditions, the attendance was not up to the usual mark, only fourteen members being present, but this fact was more than counterbalanced by the interest shown in those present and the good program rendered. Dr. D. P. West was present by special invitation, and his paper on scurvy was thoroughly enjoyed and brought out full discussion. Dr. Clarence Pierson, the superintendent of the East Louisiana Hospital for the Insane, was also present, and his paper on "Strain and Shock" was pronounced to be one of the best ever read before the Society. After discussion of several interesting clinical cases, the Society adjourned to the Istrouma, where the usual good supper was enjoyed.

GEORGIA'S SURGEONS' CLUB.—The series of clinics and demonstrations held at Touro, Presbyterian and Charity hospitals and at Tulane University, on the occasion of the visit of the Georgia Surgeons' Club to this city, on February 27-28, 1914, were most successful and instructive. All the physicians who participated in the program gave their best efforts toward making it a success, and no delays were experienced in carrying out the program on scheduled time. Dr. Charles Mayo, of Rochester, Minn., was an interested visitor at the first day's clinic. Dr. E. C. Davis, president of the Club, and Dr. R. M. Harbin, secretary, expressed their gratification at the reception accorded the Club by the local physicians. Resolutions were adopted by the Club thanking the profession of New Orleans and the Committee for the hospitable courtesies and the interesting clinics and demonstrations given. The sentiment of the

local profession is that we may soon have the pleasure of another more extended visit from the Georgia Surgeons' Club, whose object is to stimulate not only surgical advancement, but expand the congenial relationship of the profession.

TULANE BOARD.—The Board of Administrators of Tulane University held its monthly meeting on March 11. Some discussion was had regarding the better care of students who may become ill, and it is planned that something in the nature of a permanent hospital or infirmary may be arranged. Under the present system students who are ill are cared for in the dormitories or at the hospital or sent home.

PLAN SURGEONS' HOME.—Plans for a centrally located home, contemplated by the American College of Surgeons, to be the Mecca of American surgeons, are being discussed. New York, Boston, Cleveland, Washington and Minneapolis are considered as sites for the building. Surgeon-General Stokes, of the United States Navy, is chairman of the committee in charge.

A WOMAN'S NUMBER.—The May issue of the *Medical Review of Reviews* is to be a woman's number. All the articles contributed will be from the pens of women physicians, whose work has achieved national importance. With the growth of the feminist movement, the economic position of women has attracted universal attention. As medicine was among the first professions opened to women, it is only proper at this time to consider whether their entrance into the medical profession has been of benefit.

INDEX OFFICE.—The Index Office, which has recently been established in Chicago, is making a specialty of supplying the medical profession with exhaustive or selected bibliographies on medical subjects, translations or abstracts of articles or monographs, copies, photographic or otherwise, of manuscript, printed or illustrative material. Dr. Bayard Holmes is president of the Office. The Office is located at 31 West Lake street, Chicago.

THE MISSISSIPPI STATE MEDICAL ASSOCIATION will hold its forty-seventh annual session at Columbus, April 14-16, under the presidency of Dr. L. C. Feemster, of Tupelo. An excellent program has been circulated in advance of the meeting.

CHILDREN'S TEETH EXAMINED.—Under the direction of the State Board of Health, Dr. F. H. Walker began work last month

examining the teeth of the school children in Jefferson Davis Parish. The eyes, ears, throat and teeth of the pupils will be inspected and passed on.

FEW DEATHS AT STATE HOSPITAL.—A statement has recently been issued from the Jackson (Miss.) State Charity Hospital, showing the number of patients treated, operations, deaths and other data, from January 1 to March 1, 1914. During that period there were 294 admitted, with a total of operative cases of 151. There were deaths from operative cases for the two months of 13, and from diseases 17, a total of 30 altogether. The operative mortality for the period was 8.6 per cent.

REMOVALS.—Dr. C. S. Means, from Jenny Lind, Ark., to Charleston, Ark.

Dr. C. A. Williams, from Alexandria, La., to Biloxi, Miss.

Dr. Charles Eaton Phillips, formerly chief of Surgical Clinic, Colon Hospital, Canal Zone, Panama, has opened up offices in the Wright and Callender Building, Los Angeles, Cal.

PERSONALS.—Dr. Isadore Dyer, who represented Tulane University at the recent Chicago Educational Conference, at the end of February, was elected president of the Association of the American Medical Colleges for the coming year.

Dr. E. C. Register, formerly editor of the *Charlotte Medical Journal* for twenty-five years, was elected president of the Tri-State Medical Society of the Carolinas and Virginia.

Dr. Paul Mazzuri, formerly of New Orleans, now of Paris, France, recently visited New Orleans.

Dr. Henry S. Pritchett, chairman of the Carnegie Foundation, recently visited Tulane, investigating its medical and law schools.

Mr. Wallace Buttrick and Abraham Flexner, of the General Educational Board, recently visited New Orleans and Tulane University in the interest of their investigations of Southern educational institutions.

Mr. Charles I. Denechaud was appointed a member of the Board of Trustees of the New Orleans Charity Hospital, vice J. B. Sinnott, whose term expired.

Dr. Beatrice M. Victory, of Philadelphia, was recently given the degree of Doctor of Philosophy in Germanics at the University of Philadelphia.

MARRIED.—On February 25, 1914, Dr. M. M. Magee to Miss Heganson, both of Bude, Miss.

On March 19, 1914, Dr. Harry Everett Nelson to Miss Marie Rose Richard, both of this city.

DIED.—On February 25, 1914, Dr. O. G. Browne, of Baton Rouge, La., aged 57 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

Cunningham's Text-Book of Anatomy. Fourth edition. Edited by Prof. Arthur Robinson, Edinburgh. William Wood & Co., New York, 1913.

The many friends of this most excellent work have received this edition with great interest, in that, it is the first revision undertaken since the death of Prof. Cunningham. The remarkably attractive style of expression maintained in the former editions by Prof. Cunningham and those chosen to collaborate with him contributed largely to the peculiar popularity the book has enjoyed. Added to this, the excellent arrangement of the material, the unusually full section dealing with the embryology of the body, and especially the emphasis laid upon embryology as the basis for the study of Anatomy left little to be desired. One notes with pleasure that these features have been quite well retained in the present edition.

Each of the eleven sections has been revised and certain of them wholly rewritten by their respective authors. Of the sections originally written by Prof. Cunningham personally, that on the Nervous System, is revised by Prof. Elliott Smith; that on the Respiratory Apparatus by Prof. Berry, and that dealing with the "Ductless Glands" by Prof. A. Campbell Geddes. The Embryology has been completely rewritten by the editor. Throughout, the sections contain a commendably small amount of space given to microscopic structure. Since the development of Anatomy has rendered Histology and Microscopic Organology very extensive fields in themselves, which have to be covered by the student in separate courses with separate texts, it is folly to swell a text of Gross Anatomy with descriptions and illustrations of the microscopic other than barely sufficient to suggest the link connecting, or the transition from, the gross to the microscopic. It is very necessary, however, to keep this transition in mind. Medical students always pursue the two courses of instruction simultaneously.

This edition carries 1,596 pages, 1,124 illustrations, 627 of which are in colors, and two excellent skiagrams of the skull. In comparison, these comprise 169 more pages and a total 208 more illustrations with 221 more colored than are in the third edition. To the above, there is added,

in the front of the book, a glossary of eleven pages, giving the International (B N A) Anatomical Terminology and comparing its names throughout with those of the old Terminology most commonly used in English. Since the use of the B N A is now imperative, this glossary will prove of great convenience to those unfortunately familiar with old names only, and its incorporation within the new edition is to be commended.

The B N A names are used quite consistently throughout; the terms in "black-face" type, headings of paragraphs, etc., are given in the Latin forms, followed usually by the English equivalents of the Latin and, in parenthesis, by the old Terminology when this is materially different from the English equivalents of the B N A. As stated by the editor, we have at last reached the period when it is no longer necessary to urge reasons for the use of the B N A, it being in universal or international use, based upon sound principles, less cumbersome, and a more definitely instructive system of names. It is adopted throughout the book "except," as stated in the preface, "in those cases where the results of recent researches have shown that the terms of the nomenclature are incorrect, or where the terms themselves do not conform to the principles of the terminology." It may be noted that such exception is not made in some cases in which the strict use of the unrevised B N A is misleading. For example, the cranial nerves are referred to as "Cerebral Nerves," when only four of them are attached to the cerebrum; and the "Nervus Acousticus" is referred to as composed of a medial, vestibular root and a lateral, cochlear root, when the vestibular nerve is not acoustic in function and is and should be referred to as a separate nerve.

The cochlear nerve is described as giving off as branches a saccular nerve and an inferior ampullary nerve, when it is correct and more instructive to consider these as given off by the vestibular ganglion and accompanying the cochlear nerve a short distance prior to its ganglion of origin. The so-called *Nervus intermedius* is still considered as a part of the facial when recent researches show it to be a separate glossopalatine nerve; the new *Nervus terminalis* is not mentioned, but probably does not deserve mention; and conservatism is further manifest in still considering the cranial ("cerebral") nerves as comprising only twelve pairs of nerves, and these are often referred to by number when the use of their descriptive names is pedagogically far better. The statement that the radial fibers of the iris are innervated by the sympathetic and the circular fibers of the iris and the ciliary muscle are innervated by oculomotor nerve may mislead the student to think that this smooth muscle is given motor supply by a cranial nerve direct. The term *commissural fibers* should be strictly restricted to fibers connecting homologous structures situated on opposite sides of the mid line, but on page 755, for example, this is not done. In the description of the cephalic portion of the sympathetic system, none of the more properly cephalic sympathetic ganglia are mentioned, the larger of these ganglia (the submaxillary, otic, sphenopalatine and ciliary) being considered, as is the old custom, only under the captions of the cranial nerves. The newer term, "ganglion crest," should be used as more instructive than "neural crest."

The illustrations are remarkably adapted to the purposes of teaching, being very clear as to important fine details. Not only has the total number been increased, but many of those of the previous editions have been replaced by new ones. The print is clear and easily read and contains few typographical errors, considering this is the first issue of the edition. One such and rather glaring error occurs in the heading on page 756.

IRVING HARDESTY.

Modern Medicine. Vol. I. Second edition, thoroughly revised. By Sir William Osler, Bart., M. D., F. R. S., and Thomas McCrae, M. D. Lea & Febiger, Philadelphia and New York, 1913.

This standard work in English on the theory and practice of medicine makes its second appearance in a new dress. We note the contents of the preface of this new edition, Vol. I.

The revision has been thorough. Throughout every article has received from the authors' careful and complete revision.

Important changes have been made: By a general condensation, an increase in the size of the page, and by augmenting the number of pages in each volume, it has proved feasible to reduce the number of volumes from seven to five without impairing the practical character of the work.

The condensation has been especially in the etiological and pathological portions, and increased stress has been laid on diagnosis and treatment.

Subjects which have not undergone very radical changes since the first edition, have been omitted, and can be referred to in the first edition.

On the other hand, new sections will be found on pellagra, beriberi, trypanosomiasis, Malta fever, and Dr. Thomas Lewis has contributed a special section on electrical diagnosis in cardiac diseases.

Volume first is entirely devoted to infectious diseases. It commences with an introduction to the study of infectious diseases and is divided in three parts: Part first, bacterial diseases; part second, diseases of doubtful or unknown etiology; part third, non-bacterial fungus infections—the Mycoses. The remaining four volumes will be issued with as little delay as possible. There are very good reasons to predict that this condensed and progressive edition of *Modern Medicine* will be appreciated by the profession as fully as the original one. DUPAQUIER.

Principles of Surgery. By W. A. Bryan, A. M., M. D. W. B. Saunders Co., Philadelphia.

To the practitioner as well as to the student the principles of surgery are essential, especially so to the former who has been in active practice a decade or more, for in recent years much that is new has been learned in pathology, bacteriology, and the regeneration of bone and tissue, and, by a knowledge of these facts only can one arrive at a definite and intelligent idea of existing conditions as well as the prognostication of results. In the work just completed the author furnishes the student with a most comprehensive idea of these principles and in a manner both practical and interesting.

The style is good, very readable and most instructive and has the advantage of condensing in one volume a fund of knowledge indispensable to the practitioner, the surgeon and the student.

MARTIN.

Pathology. By John Stenhouse. Second edition. Lea & Febiger, Philadelphia, 1913.

This little handbook is gotten up for medical students' use and apparently chiefly for the purpose of preparing them for state board and other examinations. A list of state board examination questions is given in the back of the book. In addition to this, questions are asked at the end of the several chapters. The book is well gotten up, fairly accurate and deserves to be recommended to those who require such a work for the purpose of hurriedly reviewing the subject preparatory to standing examinations. C. C. BASS.

Treatise on Diseases of the Skin for the Use of Advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D. Seventh edition, thoroughly revised. W. B. Saunders Company, Philadelphia and London, 1914.

This standard reference and text on skin diseases has been brought up to date and now represents the best authority for students speaking English. As in former editions, full credit is given to American literature as well as to that of foreign origin, and the revision has been in great degree based upon the recent contributions to dermatology as found in journals and in the work of authoritative writers.

The new fields of tropical diseases have been covered by added articles and the new therapy has found proper notice in the text. The illustrations are judiciously placed and altogether the work takes a place in the first rank of dermatological texts.

DYER.

Progressive Medicine. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Vol. XV, No. 4. December, 1913. Lea & Febiger, Philadelphia and New York.

With the usual judgment in selection of subjects and authors, the publishers again present a valuable contribution of current medical literature, embracing extensive discussion of the Diseases of the Digestive Tract and Correlated Organs (by E. H. Goodman); Diseases of the Kidneys (J. R. Bradford); Genito-Urinary Diseases (C. W. Bonney); Surgery of the Extremities, etc. (Joseph C. Bloodgood), concluding the number with nearly one hundred pages of revised of recent therapeutic literature.

It is not easy to take any particular part of the book for review, for all are good, but Dr. Landis' Section on Therapy is of especial interest to the general reader. This part deals with the recent findings in serum treatments; the use of new drugs (atophan, benzol, emetine, luminal, melubrin, etc.) and the annotation of many subjects of current therapeutic interest. Altogether Progressive Medicine in this number is up to standard.

DYER.

The Healthy Marriage. A Medical and Psychological Guide for Wives. By G. T. Wrench, M. D., B. S. (Lond.). Paul B. Hoeber, New York.

The perusal of this book will be good for any person of mature years; mature enough to understand plain English. In a series of charming chapters the author carries the young girl through the period of approach to the consummation of marriage in child-bearing and at every point propounds wholesome advice with the sort of discussion which will leave some thought in the clear mind.

Altogether worth while for young women, and young wives; and perhaps for both physician and nurse who may have the chance to discuss the subjects treated in the book.

DYER.

The Human Body and Its Enemies. A Text-Book of Physiology, Hygiene and Sanitation. By Carl Hartman, B. A., M. A., and Lewis Bradley Bibb, B. A., M. D. World Book Co., Yonkers, N. Y.

While evidently primarily intended for the school children of Texas, this little book will have a wide usefulness because of the practical way in which the contents have been prepared for the person of average intelligence. A good survey of the organisms occasioning disease is given, with enough illustrations to make the subject graphic. The

knowledge thus imparted is applied to particular organs of the body, and with reference to especial diseases. Throughout the elements of physiology are embodied and the general information imparted is extensive. Each chapter is summarized and further checked by a group of questions bearing on the book.

DYER.

First Book of Health. A Text-Book of Personal Hygiene for Pupils in the Lower Grades. Hartman-Bibb. World Book Co., Yonkers, N. Y.

This primer of health is brought down to the intelligence of the very young child. It is presented like a story book, with one idea after another developed into a general plan of health study. The pictures are selected for the stories they tell and, for the most part, they are apt in this particular. The text is as practical as it is simple.

DYER.

Dorland's American Pocket Medical Dictionary. Eighth edition, revised and enlarged. W. B. Saunders Co., Philadelphia and London.

This handy dictionary attests its popularity by the demand for a new edition, in which many new terms have been added. The convenient size must make this little dictionary always useful. It is comprehensive, too, for so small a book. The thin paper and flexible covers add to the convenience of this edition.

DYER.

Diseases of the Rectum and Pelvic Colon. By Martin L. Bodkin, M. D. E. B. Treat & Co., New York, 1913.

This work describes in a simple manner the common diseases of the colon, sigmoid flexure, rectum, and anus. The author has condensed the sum total of the results of his own practice and a study of the opinions and methods of other specialists.

He presents his theory as to the origin and formation of hemorrhoids, ascribing same to a catarrhal inflammation of the rectum. His views are original and interesting, though they will probably not prove convincing to the majority. A feature of the work is the chapter on the relation of rectal diseases to gynecology.

We are glad to see that Dr. Bodkin does not favor the Whitehead operation for hemorrhoids, but regret that he does not even mention spinal analgesia as one of the methods ensuring painless operations upon the rectum.

The numerous illustrations, ninety, are large, well executed by Mr. Francis A. Deck, original and, in our opinion, constitute one of the most important features of the book.

C. C.

Genito-Urinary Diseases and Syphilis. By Edgar G. Ballenger, M. D. E. W. Allen & Co., Atlanta, 1913.

In preparing this, the second edition of the work, Dr. Ballenger has been assisted by Dr. O. F. Elder and has added a chapter of some twenty pages on the Wassermann reaction by Dr. J. E. Paullin. As the latter treats the subject mainly technically, we are in doubt as to the value of the article in a work of this scope and are inclined to think that another score of pages on medical affections of the kidneys could have been omitted.

The first edition was designed mainly as a text-book for students, but the additions made to the present one give it greater value as a

book of reference for the practitioner. An interesting detail is a good description of the "sealing-in" treatment in incipient gonorrhoea.

Fundamental principles are given first place, being considered adequately, though briefly, details being supplied only concerning matters of prime importance.

We believe this edition quite an improvement on the first and hope it will meet with success in proportion. C. C.

The American Illustrated Medical Dictionary. By W. A. Newman Dorland, A. M., M. D. W. B. Saunders Co., Philadelphia and London.

The most significant line on the title page reads, "Seventh Edition, Revised and Enlarged," because in a few words it demonstrates success, 786 *Publications Received.*

improvement and expansion. We have reviewed previous editions in terms of commendation and need only call attention to the above and supply the further detail that over five thousand new terms have been added and defined in this edition.

Despite its completeness the book is not unwieldy and, notwithstanding its more than 1,100 pages, it is convenient for easy reference. The illustrations are full-page and the majority are colored plates. C. C.

Pharmacology Clinical and Experimental. A Ground Work of Medical Treatment, Being a Text-Book for Students and Physicians. By Dr. Hans H. Meyer, of Vienna, and Dr. R. Gottlieb, of Heidelberg. Authorized translation into English by John Taylor Halsey, M. D., Professor of Pharmacology, Therapeutics and Clinical Medicine, Tulane University. J. B. Lippincott Co., Philadelphia and London.

At the outset, I desire to say that we owe to our fellow-townsmen a debt of appreciation and gratitude for rendering into English this most excellent work by two masters—not hitherto available to practitioners unable to read the original in German. Works of this character must exert a healthy influence as a check on the excessive drugging of patients by physicians. We feel assured that the careful study of this book will lead to knowledge of a saner drug therapy—a result devoutly to be desired.

The time has arrived when we know the manner in which many drugs act, and this knowledge should be common to all members of the medical profession. The time is past when only the trained pharmacologist, or an elect few, possess a monopoly of this knowledge, and the physician who does not avail himself of this information should rightly be censured. Books of such character as the one here reviewed blaze the way to a safer and more rational therapy.

This work presents scientific drug therapy in a most attractive and interesting manner. If the translation at times appears clumsy, the remarks of the translator in his preface should be remembered: "It has been the translator's aim to present a faithful rendition into English of the original work, and if in seeking to do this he has occasionally or frequently built up sentences which are unwieldy or un-English, he hopes that this will be borne in mind in extenuation therefor."

It is impossible in the space allotted to a review to do full justice to the many good qualities of the work.

The original and careful work of the authors and the stupendous labor of the translator are to be commended.

This work should appeal to every progressive practitioner.

STORCK.

Publications Received.

LEA & FEBIGER, Philadelphia and New York, 1914.

Infections of the Hand, by Allan B. Kanavel, M. D. Second edition, thoroughly revised.

Diagnosis in the Office and at the Bedside, by Hobart Amory Hare, M. D., B. Sc. Seventh edition, thoroughly revised.

Modern Medicine, edited by Sir William Osler, M. D., F. R. S., and Thomas McCrae, M. D.

J. B. LIPPINCOTT COMPANY, Philadelphia and London, 1914.

Pharmacology—Clinical and Experimental, by Hans H. Meyer, M. D., and R. Gottlieb, M. D. Authorized translation into English, by John Taylor Halsey, M. D.

MISCELLANEOUS.

Mortality Statistics for 1912. (Washington Government Printing Office, 1913.)

Report of the Department of Sanitation of the Isthmian Canal Commission for the Year 1913.

Saunders Descriptive Catalog of Books. (W. B. Saunders Co., Philadelphia and London, 1913.)

University of Virginia Record. (Catalog No. —, 1913-14.)

Pennsylvania Health Bulletin—January to May, 1913. (Published monthly by the State Department of Health, Harrisburg, Pa.)

Clinical Excerpts. (Published by the Bayer Co., New York, 1913.)

Public Health Reports. Volume 29, Nos. 6, 7, 8. (Washington Government Printing Office, 1914.)

Experimental Insect Transmission of Anthrax, by M. Bruin Mitzmain. (Washington Government Printing Office, 1914.)

The Wilmington (N. C.) Water Supply, by Earle B. Phelps. (Washington Government Printing Office, 1914.)

Tuberculosis Sanatorium, Fort Stanton, New Mexico, by F. C. Smith. (Washington Government Printing Office, 1914.)

Tuberculosis in Switzerland, by W. C. Rueker and R. A. Kearney. (Washington Government Printing Office, 1914.)

Malarial Index Work; Malarial Fevers, by R. H. von Ezdorf. (Washington Government Printing Office, 1914.)

Typhoid Fever and Gastroenteritis, by Hugh de Valin. (Washington Government Printing Office, 1914.)

The Migratory Habit of Housefly Larvae as Indicating a Favorable Remedial Measure, by Robert H. Hutchison. (The Bulletin of the United States Department of Agriculture, Washington, D. C.)

Reprints.

The History of Preventive Medicine in the South, by Joseph Holt, M. D.

Possibility of Reducing Mortality at the High Age Groups; The Full-Time Health Officer and Rural Hygiene; The Insurability of Women, by Louis I. Dublin, Ph. D.

An Experiment in the Compilation of Mortality Statistics, by Louis I. Dublin and Edwin W. Koff.

Intravenous Anesthesia, by William Francis Honan, M. D., and J. Wyllis Hassler.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for February, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....			
Intermittent Fever (Malarial Cachexia).....			
Smallpox.....			
Measles.....	1		1
Scarlet Fever.....	1		1
Whooping Cough.....		1	1
Diphtheria and Croup.....	4	2	6
Influenza.....	12	3	15
Cholera Nostras.....			
Pyemia and Septicemia.....		2	2
Tuberculosis.....	53	47	100
Cancer.....	24	7	31
Rheumatism and Gout.....			
Diabetes.....	2	1	3
Alcoholism.....			
Encephalitis and Meningitis.....	2		2
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	22	7	29
Paralysis.....	1		1
Convulsions of Infancy.....	1	2	3
Other Diseases of Infancy.....	12	6	18
Tetanus.....	1	2	3
Other Nervous Diseases.....	5	1	6
Heart Diseases.....	60	47	107
Bronchitis.....	2	3	5
Pneumonia and Broncho Pneumonia.....	30	49	79
Other Respiratory Diseases.....	2	4	6
Ulcer of Stomach.....			
Other Diseases of the Stomach.....	3		3
Diarrhea, Dysentery and Enteritis.....	12	9	21
Hernia, Intestinal Obstruction.....	4		4
Cirrhosis of Liver.....	5	1	6
Other Diseases of the Liver.....		1	1
Simple Peritonitis.....			
Appendicitis.....	1		1
Bright's Disease.....	29	23	52
Other Genito-Urinary Diseases.....	9	10	19
Puerperal Diseases.....	5	2	7
Senile Debility.....	8	5	13
Suicide.....	5		5
Injuries.....	15	13	28
All Other Causes.....	30	15	45
TOTAL	362	263	625

Still-born Children—White, 14; colored, 11. Total, 25.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death Rate per 1000 per Annum for Month—White, 15.97; colored, 31.25. Total, 20.11.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.14
 Mean temperature 53.
 Total precipitation 6.43 inches
 Prevailing direction of wind, northeast.

New Orleans Medical and Surgical Journal.

VOL. LXVI.

MAY, 1914.

No. 11

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

COMPARATIVE MEDICINE.*

By W. H. DALRYMPLE, M. R. C. V. S., Louisiana State University, Baton Rouge, La.

Just eleven years ago I had the privilege of presenting a paper before the State Medical Society, my subject at that time being, A Few of the Differential Characteristics in the Anatomy of Some of the Lower Species Compared with That of Man.

Today, I can assure you, I fully appreciate the honor of this further opportunity of taking part in your proceedings, as the more I think of the breadth of the great subject of medicine the more I am convinced, and this impression seems rapidly to be gaining ground, of the importance of closer co-operation between the two great branches—human and comparative—more particularly in their relation to the conservation of the public health. And, in substantiation of the fact, viz., that the necessity for closer co-operation is being more generally recognized, by the medical profession itself, I believe I could not do better than quote, briefly, a few paragraphs from an address of welcome delivered by Dr. C. P. Caldwell, president of the Chicago Medical Society, last

* Read at the Thirty-fifth Annual Meeting of the Louisiana State Medical Society, New Orleans, April 21-23, 1914.

December to the United States Live Stock Sanitary Association, which is composed mainly of members of the veterinary profession.

Among other things, Dr. Caldwell said: "I consider it a great honor, as it is a pleasure, to be invited to address an association of scientific gentlemen whose main object is the protection of public health through the study of the question of a pure and adequate food supply; and, as president, and in the name of the Chicago Medical Society, which is the largest and best organized local medical society in the world, with a membership of 2,500 physicians, I desire to pledge your organization our earnest support and hearty co-operation. * * * Your association constitutes an agency of progression, not only essential to the great live stock industry, but in a large measure to the maintenance of the public health. * * * The veterinarian, who enjoyed scanty respect twenty years ago, has evolved into a skilled professional man, indispensable in the growing complexity of modern civilization. Gradually but surely the medical and veterinary professions have engaged in co-operative work, until today they are allied forces working for the public weal. The veterinarian has succeeded in securing state laws for the advancement and elevation of his profession; veterinary colleges have improved their standards of education, and you have attained the standing of professional men in every sense of the term. * * * I desire to assure you that the medical profession fully realizes the growing importance of the branch of science you represent, and as time works along co-operation will be even closer than at present. * * * We welcome the veterinary scientists, realizing that the greater the degree of efficiency reached by your sanitary boards the more effectively will diseases of the human family be controlled. * * * The battle for the eradication of tuberculosis has merely begun, and in that fight the veterinarian must be an important factor.

"Another sphere for co-operative work by the two professions is that of securing proper inspection of municipal slaughtering.

"Where federal inspection is enforced, the public health is well safeguarded, but scattered all over the country, from the Atlantic to the Pacific, are abattoirs, large and small, where sanitary conditions are deplorable, no restrictions whatever being enforced. Such slaughterers are able to remove evidence of disease and sell the carcass without hindrance. It is such conditions which warrant

among its members, that the meat and milk supply be placed above suspicion. Each profession needs the other and the public needs us both. * * * The medical profession realizes the importance of your work, assures you of its willingness to co-operate, and congratulates you upon the splendid success which has attended your scientific labors.”

Of course, in European countries the veterinary profession has for very many years been recognized along with the other so-called learned professions; but it is extremely gratifying to find its work in this country, where it is as yet much less known, being spoken of by a leader of the medical profession in such an earnest and appreciative manner. It seems a good augury for successful co-operative work in matters which have to do with the public health.

Comparative medicine, as applied to the domesticated animals, or as it is more commonly known, veterinary medicine, as a science, is relatively young in this country.

Last year, in the City of New York, there was celebrated the semi-centennial of the American Veterinary Medical Association, the initial meeting having been held in that city in 1863, where but a very few graduates met together and organized the association. And, parenthetically, I should like to take the opportunity of stating that the fifty-first anniversary meeting of the association will be held in the City of New Orleans this year, with its present membership of over 2,000, from all over this country, our colonial possessions, and from Canada. This will be only the second annual meeting held in the South since the organization of the association.

But, while the science of veterinary medicine is still in “swaddling clothes,” if you will, on this Western Continent, Old World history dates it back to very ancient times.

There is evidence that the Assyrians and Egyptians practiced veterinary medicine and surgery at a very remote period, as we find information bearing upon the existence of veterinary practitioners in the Assyrian Empire contained in the laws of Hammurabi, who flourished about 2,100 B. C. as ruler over the whole of Babylon. In this code of laws, which was discovered at Susa, in 1897, and has now been deciphered and the text of the inscription fully detailed, we find a scale of fees laid down for treatment. In the case of a wound, for example, the following occurs: “If a doctor of oxen or asses has treated either ox or ass for a

severe wound, and cured it, the owner of the ox or ass shall give to the doctor one-sixth of a shekel of silver for his fee."

"If he has treated an ox or ass for a severe wound and caused it to die, he shall give the quarter of its price to the owner of the ox or ass."

The fees obtained in those days were evidently small.

A medical practitioner received five shekels for treating a similar injury in the son of a plebian and ten shekels for one of higher class. But, while the penalty for nonsuccess was relatively small in the case of the veterinarian, it was much more serious for the medical man in those days, as he lost both hands should his aristocratic patient die; or, in the case of a slave, he had to replace him.

It is rather remarkable, however, that while the flocks and herds of ancient Egypt were considered of such importance, and the fact that certain animals were sacred and their lives preserved at immense expense, no treatise has been found in which the diseases of animals is dealt with; and, notwithstanding the further fact, according to Sir J. Gardner Wilkinson, F. R. S., in his *Manners and Customs of Ancient Egypt*, that the art of curing disease among animals was carried to great perfection by the Egyptians, and that medical and surgical aid was not confined to quadrupeds, but that poultry, also, were the objects of skilled attention.

It is not until we turn to the Greeks, however, that we obtain any very definite information with regard to the state of veterinary, as well as human, medicine, in antiquity.

One of the earliest of the Greek writers connected with veterinary science, of which there is any record, was Democritus, of Abdera, 470-402 B. C., who is said to have been the first writer on anatomy.

The celebrated Aristotle, B. C. 333, in his *History of Animals*, refers to matters full of veterinary interest. Veterinary medicine is dealt with in his Book VIII. The ass is described as suffering chiefly from a disease known as "melis." It arises in the head, there is a blood-stained discharge from the nostrils, and if the disorder descends into the lungs the animal dies.

In this case Aristotle was doubtless describing glanders.

In dealing with the pathology of swine, he says they suffer from three diseases. One, called "branchos," is accompanied by swelling of the throat and jaw, often the foot, and occasionally the ear. He states that the neighboring parts soon rot and decay, the disease reaches the lungs and the animal then succumbs.

The above condition may represent one of two diseases, viz., anthrax or epizootic aphtha.

He also clearly describes the so-called measles of the hog, mentioning the cysts as being visible under the tongue.

These cysts are the cystic or hydatid stages of the *tænia solium* of man.

Aristotle also refers to ovariectomy, or oophorectomy, having been practised in the sow, the operation being performed after two days of fasting. The incision was made in front of the pubes, and the wound subsequently stitched up. The position, although Trendelenberg is not mentioned, was something after that fashion—the patient being hung up by the hind legs.

He describes three diseases in the dog, viz., rabies, quinsy and sore feet. Curiously enough, however, he states that man is the only animal that will not take rabies if bitten by an affected dog. In this he was evidently behind the times; that is, our times.

From these few brief extracts from this remarkable work of Aristotle it is evident that at a very early period in the history of civilization a considerable amount of sound knowledge existed on matters bearing upon veterinary medicine.

Hippocrates, 460 B. C., “the father of human medicine,” while he did not write on veterinary medicine, refers to the usefulness of comparative pathology in its application to human medicine. Hippocrates evidently knew what he was talking about, and possessed a broader viewpoint in this respect than many of us in the twentieth century.

Until after the conquest of Greece the Romans do not seem to have known of veterinary medicine. In fact, speaking generally they took no interest in either human or veterinary medicine. For five centuries the medical art was unknown at Rome. The physicians came from Greece, and the practice of medicine remained in their hands until displaced by the Arabs. Domestic remedies and incantations were the usual methods of meeting disease, both in man and the lower animals.

Virgil, B. C. 70, in his *Georgics*, deals largely with the hygienic care of animals. He refers to the ravages of the bot-fly, scabies in sheep and severe animal plagues prevalent in Italy at that time. Among these, anthrax is clearly indicated, as he speaks of the dangerous condition of the fleece and hides to human beings handling and using them, resulting in “fiery pustules and filthy sweat over-spreading his noisome body.”

He also describes anthrax in swine and rabies in the dog.

Columella, a Roman citizen who lived about the beginning of the Christian era, was quite a prolific writer on husbandry, including the diseases of animals. It was he who, for the first time, urged the segregation of the sick. He says: "The diseased must be separated from the sound, and not so much as one may come among them which may with contagion infect the rest." We could do with a few of the Columella type in our midst today.

Galen, who lived some 600 years later than Hippocrates, or 131-201 A. D., and was one of the "fathers of medicine," believed that veterinary observations and methods might be utilized in connection with human practice.

Vegetius Renatus, who flourished about 450-500 A. D., was the first writer in the Christian era to produce a work entirely devoted to veterinary medicine. He was a man of letters, a lover of animals, especially horses, deeply interested in veterinary science, and anxious to restore it to the position it occupied in Ancient Greece. Vegetius had traveled widely, and his learning gave him access to the records which remained of the old writers. He deplored the neglected condition of veterinary education in Italy, and was determined to make an effort to resuscitate it, being stimulated in this direction by heavy losses among animals as each successive epizootic swept over the country.

Vegetius expressly points out that knowledge can never be mean and contemptible, and that there can be no shame attached to practising a profession which can save the State from loss. He urges that the saving of animal life is economically sound, and as the curing of slaves is not considered vulgar, why, he asks, should the curing of animals, which frequently cost more to buy, be so? He appealed to the Roman public not to allow their animals to die without some attempt being made to cure them, and pointed out that, in the matter of fees, it was cheaper to pay a doctor's bill, as the saving of life, even of the cheapest horse, would suffice for the restoration to health of many.

Space forbids my following down the line of the "ancients" who were interested in the subject of veterinary medicine, nor is it feasible in a paper of this character. I would, however, like to allude, briefly, to some of the veterinary literature of the Later Roman, or Byzantine, Empire.

In the tenth century there reigned as emperor of this empire a

Constantine known as the seventh, with the designation Porphyrogenitus, which means born in the purple.

Constantine realized how greatly literature and culture were degenerating in his empire, and he endeavored to revive them in the decaying nation he was governing. He, himself, was an author and scholar, and so well read that he was described as a walking encyclopedia. He founded a learned circle for the writing of history; and literature and arts were encouraged.

Among other matters taken in hand by Constantine was that of bringing together the works of the old Byzantine authors on the veterinary art and agriculture. He employed aid to deal separately with these two arts, collect every fragment of what had been written on the subjects, and bring them together as treatises on the veterinary art and agriculture. The writers of these fragments had all been dead for some 400 or 500 years, however, and during this time much had been irretrievably lost. But Constantine saw that, as matters were then going, the entire literature would disappear unless some effort was made to collect what still remained. All fragments dealing with the veterinary art, whether in Greek or Latin, were collected and arranged under the names of the writers, and the work was entitled the *Hippiatrika*; and all dealing with agriculture were collected and produced under the title, *Geoponica*.

These two remarkable works saved to Europe the veterinary and agricultural opinions of the Later Roman, or Byzantine, Empire, and it is through them that we are enabled to know the condition of both these arts in the Eastern Empire, just as the works of Vegetius tell us of the condition of veterinary knowledge in the Western Empire.

This remarkable work, the *Hippiatrika*, which contains ten books, gives evidence of the advanced character of the Byzantine school.

One of the earliest writers on the history of veterinary literature appears to have been C. F. Saboureux, a French lawyer and member of Parliament, who, in 1773, published, in six volumes, "Translations of Old Latin Works Relating to Agriculture and Veterinary Medicine."

There was also a work published by P. J. Amoreux at Montpellier in 1772, which gives a list of veterinary authors from the earliest times up to that date.

In 1783, Vitet published at Lyons "An Analysis of Authors Who Have Written on the Veterinary Art Since Vegetius;" and Amoureux, whom I have just mentioned, published at Montpellier, in 1810, his "Historical Precis of the Veterinary Art," which was intended to serve as an introduction to a general veterinary bibliography.

In more modern times there are some highly important references. The earliest is entitled "Researches in Comparative Pathology," by J. C. F. Housinger, published in French at Cassell in 1853.

Count Ercolani, of the Veterinary School of Turin, published, while in exile in 1851 "Historico-Analytical Researches on the Writers on Veterinary Science."

In 1885, Dr. Friedrich Eichbaum published at Berlin "An Outline of the History of Veterinary Science."

In 1887, Dr. A. Postolka, of Vienna, published "A History of Veterinary Science From Its Beginning to the Present Time."

France, strange to say, did not do any really serious work in the production of histories until the appearance, in 1891, of the "History of Veterinary Medicine," by L. Moulé, of Paris, with three parts issued up to date, bringing the history down to A. D. 1600. It is a complete account of all that is known of veterinary literature, recorded by one who has laboriously examined everything that was accessible; and is a work possessing all the characteristics of the talented nation to which the author belongs.

It is said that the celebrated Huzard, inspector general of French veterinary schools, formed a private library containing some 40,000 volumes, probably not an entirely professional collection, although very few veterinary works are said to be missing from it.

I am afraid I may have occupied too much time with this phase of my subject, even to the point of being tiresome; but there seems, as yet, to be so little known by a great many professional men regarding the science of veterinary, or comparative, medicine, and I was rather anxious to show that it was by no means without its history or its literature, which may be news to some of my present auditors.

As I have already remarked, the science is young in this country, and it was only in 1857 that the first veterinary school in America was successfully established, viz., the New York College of Veterinary Surgeons.

In the Old World, however, it is somewhat different. The necessity for a scientifically educated and trained profession was much earlier recognized, and the first European veterinary school was founded at Lyons, France, in 1762, by Bourgelat.

Bourgelat was an eminent lawyer and an able writer; but although learned in philosophy and reared to the glories of the Forum, he abjured the French bar in order that he might found that school, which was subsequently patronized by royalty, and to which students flocked from every part of France, Germany, Italy, Switzerland, Denmark, and Sweden.

Following the Lyons school was the establishment of the Alfort institution, in 1765. Perhaps one of the most famous directors of the school was the immortal Nocard, who died in 1903. Nocard's achievements were many and great, and for which honors were proffered him by the people of France, but which he declined, preferring to remain just plain *veterinaire*. A monument was erected to his memory at the Alfort school, and to which the veterinary profession of this country subscribed generously.

Then followed the school at Copenhagen, in Denmark, in 1774; at Vienna, in 1777; at Hanover, in 1778; at Budapest, in 1786; at Berlin and Munich, in 1790; at London and Milan, in 1791, and at Madrid, in 1793.

In addition to these schools of the eighteenth century, many have been established since. In fact, there is scarcely a country in Europe that does not have one or more veterinary schools, and which, as a rule, are supported by the State.

Japan has her veterinary institution at Tokyo, and one of the largest veterinary associations to be found in any country.

India has her college, or colleges, and so has Australia, etc.

In our own country and in Canada are to be found some excellently equipped veterinary institutions, the majority of which are either affiliated with, or departments of, our universities and State colleges; some of them with three sessions of nine months each; some with four sessions; but none of the recognized schools with less than three sessions of eight months. The University of Pennsylvania has its veterinary department; Cornell has her New State Veterinary College, and Harvard had such a department.

Quite a number of the Land Grant Colleges have regular veterinary departments or schools of veterinary science, and there are a few well equipped institutions of a private character.

At least some of the European schools prepare young men for army veterinary service, which in England is accomplished at a regular army veterinary school, after the diploma of the Royal College of Veterinary Surgeons has been obtained.

Incidentally, I might be permitted to mention in this connection that the United States is the only civilized country on the face of the earth that does not have a regularly organized army veterinary service. There is a bill before Congress at the present time, however, "to consolidate the veterinary service, United States Army, and to increase its efficiency," and it is hoped that, for the good of the country, it will pass at this session, as not only will the cavalry and artillery arms of the service be maintained in a much more efficient condition, but the subsistence department, such as the inspection of meats, etc., for the soldiers themselves will be in charge of this service.

One of the greatest gatherings of comparative pathologists ever held will be in London, England, next August, when the Tenth International Veterinary Congress will meet in that metropolis. The whole civilized world will be represented by its most eminent scientists in this great branch of work. Great Britain will be represented by her McFadyean and Stockman, both of whom have received the honor of knighthood for meritorious services to their State, and others of almost equal eminence; the United States, by her Melvin, Salmon, Mohler, Dorset, Merillat, Williams, and several other veterinarians of prominence; all the countries of Continental Europe will be represented by their leading scientists. In short, as I have just mentioned, all countries of the world will be represented.

What topics, if any, it might be asked, will be discussed at such a congress that would be of interest to the medical profession? Besides the purely veterinary aspects of their deliberations, such subjects as the following will be taken up under their special sections:

Tuberculosis; Public Control of the Distribution and Sale of Milk in the Interests of Public Health; Meat Poisoning: Its Pathogenesis and the Measures Necessary to Guard Against It; General Principles to Be Observed in the Inspection of Carcasses and Organs of Tuberculous Animals with a View to Determine Their Safety as Articles of Human Food; Disinfection of Wagons; Anthrax; Glanders; Ultravisible Viruses, etc., and those who are to discuss these subjects are among the world's most noted experts.

The only real difference between the medical scientist and the comparative medical scientist is that the former applies what knowledge he has gained of medicine to the human being; while the latter applies it to the inferior creatures, of which, however, there are several types. The one studies anatomy, physiology, pathology and therapeutics just as does the other, the difference being mainly in their application. There is one important difference, however, and that is in the type, or class, of patients, or, might I say, the difference between sentiment and economics. If only life can be preserved by medical or surgical interference in the case of the human patient the procedure is considered a pronounced success, no matter the physical disabilities that may result, especially in surgical cases; but in the case of the animal while life may be preserved, unless the patient can be left in a condition of economic usefulness the effort of the veterinarian is looked upon as a rank failure. The difference as to success or failure, therefore, would seem to be mainly in the patient, and not so much in the difference in the knowledge of pathology or therapeutics, per se. But I must hasten to a close.

The student of medicine, whether human or comparative, who expects to attain to anything, must begin when he enters college and continue to study throughout the remainder of his active life. "Once a student, always a student," must be his motto. The man who "knows it all" in this day of rapid advancement in investigation and research is simply deceiving himself; no one else. In fact, he is unjust to himself.

As in other phases of human activity, so it is in the medical profession, whether human or veterinary—"many men, many minds." Or, to put it more appropriately, perhaps: Many men, varied adaptabilities. Men in all walks of life occasionally make failures of otherwise useful lives by not first carefully considering and selecting that branch of work for which they are, by nature and training, best adapted. And such, no doubt, is the case in each of our branches of medicine.

However, in these days of greater division of labor, so to speak, or greater diversity in the options offered our younger men, especially, the risk of failure may be greatly minimized if they but know themselves, their shortcomings and their capabilities; or, in short, their adaptability; then choose the department of work to which they may apply themselves with the hope of greatest

success. Know thyself, then choose wisely, might be a motto worthy of adoption today by our graduates in either of the branches of medicine.

Just another word or two and I have finished.

I think it is unquestionably true that no other phase of medical work offers greater opportunities, from the purely mercenary side of the question, than the field of active practice. Yet, while the so-called "practical" man is lining his pockets with the "golden shekels," he must not forget his brother, the "pure science" man, who labors at his subject indefatigably, with the sole object of acquiring knowledge; of investigating the laws of nature, etc., without any special thought of practical application, perhaps, but of which the practitioner is, ultimately, the chief beneficiary.

But there is not, and should not be, any conflict between science and practice. Science is simply accurate knowledge acquired; practice, the intelligent application of that knowledge.

In fact, I think we should realize more fully than is often done that the "pure scientist" and the "practical man" are both equally necessary, and that the one is the corollary of the other.

In his address before the British Association two or three years ago the president, in referring to the work of modern universities, stated "that abstract thought is not antagonistic to practical work, or scientific research to the labor of the factory or foundry. The one and the other can harmoniously co-operate in the advance of knowledge and the progress of civilization—which is somewhat germane, I think, to the point I desire to emphasize.

There seems to have been a tendency on the part of the practical man, although I think it is gradually dying out, to scoff at and ridicule the scientist and his work. But in this day of greater enlightenment and wider grasp, such shallow and visionary notions are as foolish as they are fallacious. For, as Dryden says,

"Errors, like straws, upon the surface flow:

He who would search for pearls must dive below."

All work is good, if it is honest work, whether it be of the head or of the hand; and all honest workers deserve credit for their work, whether it be skilled or unskilled, scientific, or so-called practical. And this, I should say, applies with equal force to the great field of human medicine as it does to that of comparative medicine.

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MEAT INSPECTION.*

By W. H. DALRYMPLE, M. R. C. V. S., Louisiana State University, Baton Rouge, La.

An eminent authority once made the statement that, "On no question of social economy is the general public more ignorant than that of the wholesomeness, or otherwise, of the flesh they consume, and, on that ground, alone, low as it is, it is incumbent upon sanitary authorities to guard them against abuse and injury."

As time for individual discussion of the subject is somewhat limited, I have deemed it necessary to draw attention to a few of the main points only.

It is unnecessary to state here, of course, that the sole purpose of meat inspection, whether municipal, parochial, or state, is to protect the public health; and in alluding, briefly, to some of the conditions found in meat which call for inspection as a necessity, I should like to mention, at the outset, that an animal whose flesh is intended for human consumption should be inspected while still alive; and I might here be permitted to add that the inspector, or, where more than one is employed, the chief inspector, at least, should be a graduate of a reputable veterinary school, and who has had training in meat inspection work, including bacteriology.

Ante-mortem examination, or inspection, will often reveal to the inspector conditions which would render the animal unfit to be slaughtered for human food, or suggest a closer investigation on post-mortem inspection.

Some of these conditions may be: General emaciation, indications of extensive febrile disturbance, extensive bruising of the flesh, compound or complicated fractures, skin diseases, evidences of tuberculosis in an advanced stage, actinomycosis, advanced pregnancy, etc.

But when once an animal has been slaughtered, and its carcass dressed, trimmed and hung up, the evidences of a number of these conditions may no longer be visible; they may be gone, and a carcass may be exposed for sale, which, had it been inspected in the living state, would, or should, have been condemned as unfit for consumption by human beings.

Inspection of the animal before slaughter, therefore, is of the greatest importance.

Coming to some of the conditions met with in the carcass, or

* Read at the Conference of Local and State Health Officers, etc., New Orleans, April 20, 1914.

on post-mortem examination, we find a number which are inimical to the health of the consumer, and, therefore, render the whole, or part, of the flesh unfit for use as human food. Of these, I may mention:

(1) Diseases due to pathogenic, or disease-producing, organisms of various kinds, but more particularly those which may occur in man as well as in meat animals. Or, in other words, infectious or contagious diseases which are communicable to man from meat animals, such as anthrax or charbon, tuberculosis, etc.

(2) Parasitic cysts, or immature forms of certain internal parasites in meat animals which, when consumed along with the flesh, develop into the mature stage in man.

The condition known as "measly pork," for example, is due to the occurrence of parasitic cysts embedded in some part of the musculature of the hog, and when pork in this condition, and in an insufficiently-cooked state to destroy the cysts, is consumed by the human being, the latter develop into one of the tape-worms of man—the *taenia solium*.

Another condition, somewhat similar to that found in pork, is observed in beef, and known as "measly beef;" the only difference being that the cysts found in beef develop into another tape-worm which infests the human being, viz., the *taenia saginata*.

Then there is the condition "trichinosis," although, fortunately, somewhat rare in this country, does occur among people who eat hog products in a rare or insufficiently-cooked state.

Trichinosis is caused by a very minute round worm, the *trichinella spiralis*, and if the cyst, or immature form of the worm, is not destroyed by cooking, or in the digestive tract, it produces in the human being the disease I have just mentioned.

(3) Then there may be the presence of poisonous substances in the carcass resulting from the breaking down of the tissues owing to the entrance of bacteria of a septic nature. Or, when an animal has died from the effects of poisonous drugs, such as strychnin, arsenic, etc., after being unsuccessfully treated for some ailment.

(4) Again, there may be structural changes in the flesh rendering it repellant and unsightly, resulting from bruises, abscesses, or other conditions.

(5) And, further, there is flesh which is rendered innutritious, either as the result of internal parasitism, starvation, or other

causes, such as that of very old or very young animals. Yet, while such flesh may not be injurious to those consuming it, it does not contain sufficient nutritive qualities, and should not be considered in a fit condition to be exposed for human consumption.

These, then, are some of the abnormal and repugnant conditions met with in post-mortem inspection of meat animals; and I feel sure you will all agree with me in saying that no flesh so contaminated or diseased should be permitted on any market to be consumed by an unsuspecting public. And yet, where no proper inspection obtains, such meat does, doubtless, enter the market, through ignorance, let us hope, on the part of the vendor; and we eat it, through ignorance, also, of course, of its true condition.

Truly, in such a case, "where ignorance is bliss 'tis folly to be wise." But how much better, and more satisfactory, did not only the consumer, but the vendor, know that his beefsteak, or mutton or pork chop, had passed the eye of the trained inspector, and that it bore on it the stamp of purity, wholesomeness and nutritiousness.

Just a word or two about the abattoir or slaughtering plant, and I have done.

There can be no question, and it is the opinion of those familiar with and engaged in meat inspection service, both at home and abroad, that modern public health requirements favor the centralized or public abattoir under supervision of the health authorities, where all animals intended for human food must undergo an ante-mortem inspection, and where the carcasses, with their internal organs, must be thoroughly examined post-mortem, and passed or condemned, as the case may be, by competent inspectors.

A suitable abattoir or plant for this purpose may readily be constructed to meet conditions in the smaller as well as the larger communities. The principle in all of them is the same; it is only a question of size or capacity.

A few of the advantages of such a system as against private or individual slaughter-houses, or pens, located at different points, with their usually filthy and repugnant surroundings, are only too obvious, some of which I may here mention, as they are important:

1. Rendering possible the exclusion from the market the carcasses of animals which have been slaughtered on account of disease which might render the flesh injurious without producing any apparent anatomical alteration in the flesh itself.

2. Facilitating the work and reducing the cost of inspection.
3. Enabling an inspector to pass certain carcasses which he would have to condemn in the absence of an ante-mortem examination.
4. Prevention of animals at the point of death being killed, or those which had been bled after dying a natural death, and their carcasses getting into the market to be sold for human food.
5. Prevention of meat condemned in one place being taken to another place where strict inspection is not maintained, and there to pass to the market for human food.
6. Making the work more thorough and reliable by having all meat animals, both before and after slaughter, pass directly under the eye of the inspector.
7. Insuring thorough sanitary surroundings where animals are slaughtered and the meat prepared for the market to be sold for human consumption, etc.

A sanitary meat supply for our people is one of the crying needs of our time. Those in authority, whether lay or professional, who may be intrusted with this important duty, and who do not fully realize the importance of that duty, are not only recreant, but are casting reflection on their ideas of civic and sanitary progress.

THE COMMUNITY'S RIGHT TO HEALTH PROTECTION.*

By A. H. GLADDEN, M. D., Monroe, La.

Mr. President and Gentlemen of the Health Conference:

The Community's Right to Health Protection is one that I am sure will be admitted by every one here to-day, for it is beyond doubt an inherited right, an indisputable right, an inalienable right, and is justified by all physical and moral laws, as well as by the laws of the land.

The question that seems most important to me is how the community can best carry into execution his vested right to health protection.

The manner in vogue to-day is to have Parochial, Municipal and State Boards of Health that are supposed to work hand in hand to prevent disease by looking after sanitary and hygienic conditions

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in their respective communities; by insisting on drainage to get rid of the mosquito, the transmitter of the malarial plasmodium and the causative factor of the yellow fever; by advising a system of sewerage so as to avoid the pollution of drinking water, which is one of the most frequent channels of contracting the dreadful typhoid; by condemning the open toilet, the rendezvous of the house fly, a familiar little figure that takes all kinds of privileges by visiting you during the meal hour and depositing upon your food filth and germs, and, no doubt, in typhoid fever, as well as the summer diarrhea of children, plays the most important part in their spread; and by insisting on screening of houses so as to prevent these self-same flies and mosquitoes from carrying on their deadly work.

The community has the right to health protection because the greatest asset of any community is the health of its citizens. What matters it to you if you are possessed of the wealth of a Croesus if you are utterly unable to enjoy it? It has been very properly said that the greatest evidence of the civilization of a community is that it leads in matters pertaining to the public health. We would unhesitatingly guarantee to any one who might desire to come and live with us such laws as may be necessary to protect life and property, but if such person should ask, have you first-class health officers who see to the proper preservation of the health of your citizens, and you were unable to say that you had such officers, do you not think that you would lose this prospective resident?

Boards of health are the most important and, perhaps, the least thought of officers that we have connected with our government today. Local health officers are frequently appointed without regard to their ability to do the work; they are paid practically nothing as salary, and practically nothing is expected of them until some epidemic has attacked the community. Very often the people do not know who their health officer is until some outbreak of disease scare them out of their wits.

Communities have the right of health protection, and they should demand that proper men be put at the head of boards of health, men who are capable of doing scientific work along the lines of sanitation, and hygiene.

And, if such men are employed at a salary commensurate with the service expected and demanded, they to devote their entire time to matters pertaining to the public health, a community will have

made the very best step forward towards the betterment of health conditions.

The public should be protected against the unscrupulous quack, who is ever ready to gull the unsuspecting by promising quick cures, for cash in hand, of any and all diseases.

They should also be protected against the sale of patent medicines that promise to raise you from the grave and to make you immune against all kinds of sickness forever more. Our boards of health should see that these conditions be stopped.

It is a thousand times better that we have competent men handle our health matters, thus preventing the many contagious and infectious diseases than to have able physicians who can cure them.

At one time disease was considered an evidence of the displeasure of the Almighty, but education has taught us that it is due to disregard and ignorance of health laws.

It has been estimated by a reliable authority that a life is lost every fifty seconds from preventable diseases, which means the total loss of 630,720 during one year, and if each life lost is appraised at \$1,700, and each man's average earnings for the year at \$700, the economic gain to be obtained from preventing postponable diseases, measured in dollars, exceeds one and one-half billions annually. Kober estimates the cost of typhoid fever to the nation to be \$350,000,000 annually.

Howard estimates malaria costs us \$100,000,000 each year from loss of labor, deaths, reduced values in real estate, etc. And Wyman says that the yellow fever epidemic of 1878 invaded 132 towns, caused a death loss of 19,954, and a monetary loss to the country of not less than \$100,000,000.

In the United States 1,000,000 are constantly ill with preventable diseases. Irrespective of heartaches and disruption of homes, it means a monetary loss of one-half billion dollars a year to the nation, and a large per cent. of all who die are carried off by these preventable diseases.

Small-pox, cholera, and yellow fever have been banished as scourges from civilized communities by competent health boards.

Health boards are necessary to stop the spread of typhoid fever through drinking water polluted by sewerage;

To enforce adequate quarantine regulations so as to keep out plague and other similar diseases;

To supervise interstate common carriers, insofar, as without such

supervision, they prove a menace to the health of the traveling public;

To influence the people to enact reform legislation in relation to health matters;

To draw up a scheme of sanitary legislation for the community;

To establish chief causes of preventable diseases and unnecessary ill-health;

To study causes and conditions of diseases recurring in different communities;

To reduce death rate;

To collect vital statistics.

Health protection is necessary to check the many communicable diseases, for if a disease whose etiology depends on bacteria, assume, if not checked, a geometrical progression of increase, and if the ratio of increase is as little as two-fold, the eighth term of such a series, commencing with one case, would be 128, and if the ratio is three-fold, the eighth term would be 2,187; whereas, if the ratio is six-fold (a ratio observed in a commencing small-pox outbreak checked at this exact point), the eighth term of the series of an unfettered outbreak would have reached the enormous total of 279,936 cases.

Again, health boards are necessary to instruct the public on the dangers of tuberculosis, perhaps the most prevalent disease now affecting the American people. It has been shown that a high percentage of adults show tuberculosis lesions, healed, latent or active, and, although many develop active tuberculosis, especially during their years of greatest stress, the majority successfully resist it. It is common knowledge that sputum containing the tubercle bacillus is the chief means of spreading the infection. Drafts of saliva from a coughing tubercular subject, dust, flies, door-knobs, drinking cups and towels are common means of spreading infection. It is further said that 1,000,000 people in the United States are constantly sick with tuberculosis, many of whom are careless and ignorant and do not realize what a menace they are to the public. The patient, as well as the people, should be instructed on a matter of so vital importance, so as to limit, as far as possible, the danger of contracting so terrible a disease. How often have you seen practically an entire family wiped out of existence by tuberculosis, simply for the reason that they knew not how to care for the patient so as not to allow the other members of the household to become

infected? Competent boards of health should educate the people on such lines and prevent unnecessary spread of any and all contagious and infectious diseases.

Our asylums are being rapidly taxed to their fullest capacity by people, both black and white, suffering with some form of insanity. Heredity is the most potent factor of insanity, criminality and degeneracy in all of its allied forms.

We are what we are because of heredity modified to a limited degree by education and environment.

An inherited abnormal nervous system, together with poor environments and bad influences, is almost sure to be followed by some kind of mental derangement. Inherited tendencies toward insanity may lie quiescent during the whole lives of individuals by proper precautions to prevent the development of those tendencies.

As a weak constitution may be built up by healthy habits, so may mental instability be made stable by good mental and physical practice.

The individual whose family has had mental trouble may often escape the disease by proper surroundings, healthful and temperate activities, and proper mental and physical habits.

Heredity should create a public conscience regarding marriage, and boards of health should insist on laws being passed that would require persons, when making application for a license to marry, to furnish a health certificate showing they are of sound mind and body. We have seen the wonderful advance made in the lower order of animals by proper mating, then why should we not be careful in the mating of the human family?

If men and women suffering with transmissible diseases do not realize their obligation to their maker, do not appreciate their responsibility to the community wherein they reside, and are willing to marry and likely bring into the world diseased children to suffer the iniquities of their forefathers, laws should be passed to prohibit their so doing.

In conclusion, I will say, gentlemen of the Health Conference, go home to your work with renewed energy, fully realizing that what you do as health officer means much to your community, and is not an empty honor, a name only.

If you are active, capable and courageous you may save your people many tears and heartaches by preventing unnecessary deaths, to say nothing of the saving of dollars and cents. You may cause

your community to be recognized as the most sanitary, scientific and healthy to be found in your part of the State, and you may cause your name to be emblazoned on tablets of stone to remind future generations of your splendid achievements.

The grand and glorious Southland is as great a country as ever the sun shone on. Our lands are as fertile as the valley of the Nile; our climate is salubrious; our flowers bloom the whole year round; the wintry winds are tempered by our Southern sun; our men are brave, chivalrous and true; our women are as beautiful as God ever made, and all we need to make our homes a veritable paradise is proper health protection for our communities. I thank you.

Clinical Report.

PHYLACOGENS IN TUBERCULOSIS TO CONTROL TEMPERATURE DUE TO SECONDARY INFECTION.

By ROBERT H. CHILTON, M. D., New Orleans, La.

Many years ago Dr. Cartwright advised vaccination with small-pox vaccin for the relief of whooping-cough with results far better than any other treatment then in use. Just why this was so no explanation was offered. To-day, on the same principle—i. e., that of multiple infection—we use mixed multiple vaccins and phylacogens for the same purpose. The tubercle bacillus is a very weak organism without the pneumococcus, streptococcus, staphylococcus and bacillus coli communis. If we take these away the tubercle bacillus is so badly crippled that the phagocytes are able to cope with it far more successfully than in pus-infected cases.

As an example of the use of phylacogens in tuberculosis I cite two cases:

Case 1. H. S., had been running a sub-normal temperature in the morning, with occasional rise to 102° or 103° in afternoon, accompanied by pleuritic pains and hard cough. On August 5, in the midst of one of these exacerbations, he received 2 minims of mixed infection phylacogen intravenously (2 minims phylacogen and 1 cc. saline solution). Mild reaction occurred. August 6 1/4 cc. of phylacogen, with 1 cc. saline solution, was given intravenously. A half hour afterwards the chill came on, which lasted an hour; temperature gradually went to 104°, and diminished then to normal in twelve hours. Cough now free, sputum being brought up more easily. At 3:30 p. m. August 9 patient was examined and general improvement noted. He said he felt better than any other time since he had been under treatment. From this time

on patient received 1/2 cc. subcutaneously every Friday until October 1, when he resumed his vocation. He is at present at work and feels well. Examination of lungs shows a dry condition of all the former moist lesions; that is, there is no green or yellow expectoration. This case took tuberculin up to original solution after phylacogen had been injected four times, and with very little reactions during the two months (August, September), whereas, before administration of phylacogen, he could tolerate only 1 minim increase every five days in tuberculin old.

Case 2. M. G.; age 26; weight 105; hemoglobin 50%. Patient suffered from night sweats; temperature 99° to 100-3/5°. Vomited everything he ate on some days; on others able to retain egg-flips only. Whisky toddy three times a day was principal food. September 16 a tablet of calomel gr. 1/6, leptandrin gr. 1/6, podophyllin gr. 1/6, irisol gr. 1/6, was given every hour for six doses, followed by a saline in the morning. All creosote, syrup iron iodid and similar corrosives were stopped. September 18 a hypodermic of strychnin 1/60, digitalin 1/150, acontin 1/8, was given at 8, 10, and 12, mixed infection phylacogen 1/8 cc. was administered intravenously. In two hours patient suffered from drowsiness, tingling of skin, increased cough, and two watery stools, followed by temperature of 102-3/5°.

September 20 patient ate during day three eggs, soup, lamb chop, one piece of toast, and stewed fruit. Temperature at 10 P. M. 99-1/5°. Slept well that night; no sweat.

Sept 21 patient awake at 5 A. M.; saline given followed by cup of hot malted milk, and egg shake with a little sherry. Patient again slept. Awake at 7:15, copious stool, old hard feces; 7:40 bowel movement black with streaks of green. Eight A. M.: Breakfast of one-half teal duck and few potato chips. Patient enjoyed meal.

September 23, temperature 98-4/5°, 10 A. M.; weight 109. Phylacogen 1/2 cc. subcutaneously.

September 24, no apparent reaction. Temperature 10 A. M. 99°. Patient feels good. The administration of iron cacodylate gr. 1/2 was begun.

September 30, patient has been receiving iron cacodylate gr. 1/2 daily, Saturday and Sunday excepted. No phylacogen. Temperature 98-4/5° at 10 A. M.

October 15, patient complained of all-night cough and at 9 A. M., when he came to office, he seemed in poor condition. Pulse 104; temperature 100°, respiration 31, shallow. Phylacogen 1 cc. subcutaneously.

October 16, patient reported the free raising of sputum; at first sticky plugs and froth; later the green color disappeared. Syrup hydriodic acid 1 dr. every four hours for three does each day until October 20, at which time the temperature was 98-4/5°; weight, 110-1/2. Phylacogen 1 cc. was given. From this time on to date patient has been kept free from fever with mixed infection phylacogen 1/2 to 1 cc. The weight at present, November 20, is 112 pounds.

He eats well, sleeps soundly, Tallquist hemoglobin scale shows 70%, a gain of 20 since September 16. The weight had increased 5-1/2 pounds. No sweats present and patient works six hours a day. During treatment he passed a quantity of round worms on October 16, after a few capsules of a vermifuge.

To sum up: Multiple infection is essential to high temperature and the rapid advancement of tuberculosis. Phylacogens will control the temperature in these cases and build up the resistance of the patient. No harm results if small doses are administered with intervals of at least forty-eight hours between those given subcu-

taneously and seventy-two hours between intravenous doses. The reaction should entirely subside before another injection is given.

The most annoying and most serious symptoms of tuberculosis—that is, fever—can be eliminated by phylacogens. Bacterins will give fair results if sufficiently mixed, but phylacogen give results that are excellent.

Bulletin of the Clinical Society of the Medical Staff of the Touro Infirmary.

The meeting of the Clinical Staff of the Touro Infirmary was held on March 4, 1914, Dr. J. N. Roussel, presiding. The following case reports were made at that time:

DR. URBAN MAES: I have nothing specially new to show you. For some time I have been dissatisfied with the end results after

BREAST AMPUTATIONS.

The cosmetic result after the Meyer-Halstead and Jackson flaps has been disappointing in some instances. The limitation of motion and the swelling of the arm after these incisions caused me to adopt the suggestion of Rodman, which is to keep the scar off the arm and out of the axilla as much as is compatible with a thorough removal of all the gland-bearing tissue.

Case I. Amputation of breast. Adeno-carcinoma. This patient, from the service of Dr. Matas, was operated on January 16, 1914, for an adeno-carcinoma, becoming very active eleven weeks after the birth of a child. She noticed the tumor eleven weeks ago while nursing her newborn child. A radical removal was done after a frozen section diagnosis. The excision was as complete as possible. The tumor involved the inner portion of the breast. We did not bind the arm to the chest. The forearm was carried in a sling for two days and then full use was permitted.

Case II. Amputation of breast. Paget's disease. This patient had a very typical Paget's disease of eight months' duration. I performed a radical removal. The glands of the axilla showed no involvement. There was some tension in the wound, so I made a series of nicks in the skin, which accounts for the small scars you see. This patient left the hospital on the eighth day, using her arm. The scar is movable, as you see, and the functional result very good. Both of these are recent operations, and nothing can be said about the permanency of cure at present.

Case III. Femoral hernia. Service of Dr. Matas. This patient is still in the house. She was operated on three weeks ago for a large femoral hernia.

In a recent article in *Surgery, Gynecology and Obstetrics*, by Seelig and Tuholske, of St. Louis, attention was drawn to the high percentage of recurrence in femoral hernia. In cases operated by ligation of the sac (Ochsner) without closure of the ring there were 36% recurrences in one series. The operation done here is the one advocated by Seelig and Tuholske, and credit is given by them to Moschowitz for its use. The operation consists in opening the inguinal canal in the usual way, protecting the round ligament. With a little further dissection we can separate the peritoneum from the pelvis, and while doing this extract the hernial sac from the ring. The sac is then opened and ligated high. Cooper's ligament is then sutured to the under side of Poupart's ligament and the remainder of the wound closed as in inguinal hernia. Patient has made a very good recovery and we hope for a permanent result.

DR. EDWARD S. HATCH:

CASE I. INFANTILE PARALYSIS.

This patient is shown to illustrate what can be done in a bad case of Infantile Paralysis. About 18 months ago I was asked to see this patient, who is an inmate at the Home for Incurables. She has suffered from infantile paralysis and from early childhood has been confined to the bed or a chair.

When I saw her she had double knock knee and the right foot was held in a position of marked equino-varus from contractures.

With silk ligaments and tenotomy, and later osteotomies I have been able to get the legs into good position and have just measured her for braces.

All of these cases of old infantile paralysis can be helped and the patients, while they are in many cases far from normal, are able to get about with great comfort.

It is only fair to say that they should never be allowed to get contractures, but many of the cases are not under medical attention for long periods.

X-ray pictures illustrating the position of the bones after the osteotomies were shown.

CASE II. RESECTION OF METATARSAL BONES.

This case is one in which I resected the heads of all the metatarsal bone because the patient was walking on the heads of the bones; he was unable to walk without great pain, and was sent to me by Dr. Matas. The operation done was first described by Dr. Hoffman, of St. Louis, at our meeting there last spring.

I have done the same thing in a minor way before, but I have always resected by a cut on the dorsal surface of the foot, but Hoffman advised making the scar just behind the toes on the plantar surface, it is much the best way, and as can be seen in this case the patient walks very comfortably now.

CASE III. PARALYSIS OF SERRATUS MAGNUS.

This case came to my clinic yesterday; it is a case of paralysis of the serratus magnus muscle on the right side and I have asked him to come and see if anyone could suggest the cause of the paralysis.

There is no history of strain or accident of any kind, but the boy has noticed a weakness of his right arm since Christmas.

DR. R. M. VAN WART. (Discussion of Dr. Hatch's Case of Serratus Magnus Paralysis.) It is a very interesting and very uncommon condition. Occasionally, it occurs from a strain of the shoulder. One very interesting case that came under my observation arose from pulling during parturition. I have seen a number of cases and all of them gave a similar winged scapula.

Electricity is the form of treatment giving the best result.

DR. ARTHUR I. WEIL:

CASE I. TUBERCULOSIS OF NOSE.

This patient I show on account of a condition in the nose that is unusual as far as I know, as I don't think I have ever seen a condition just like this. She came into the clinic on the 26th (February), reminding me that I had seen her two or three years before when she had complained of some obstruction to the nasal respiration, one one side. When she came back this time she couldn't breathe from the nose at all. She had to breathe with her mouth wide open. I found attached to the septum and extending quite far back a flat attachment all the way back on the septum: a large, soft mass, cauliflower-like, but softer, resembling the growth of an epithelial papilloma of the nose. It looked like that and from the history I rather expected to find something of that nature.

On the left side I removed a large growth, which was about the size of the end of my thumb. It was examined by the pathologist and the report came back a typical tuberculosis of the nose. She gives no history of tuberculosis that she knows of. One of this character, as far as I know, is very rare. I have never seen one before. I sent her to the medical clinic to see if there were any signs of tuberculosis and she came back and said she was treated for pleurisy with effusion.

Physical examination was negative.

CASE II. GUNSHOT INJURY IN ANTRUM.

Now, this boy came in the other day with the history of having been shot about ten days ago. He says he was shot in the neck. At this point you can see the sinus through which the bullet penetrated. He was shot in the neck and spit the bullet out of his mouth at that time. He complained, however, of pain in his mouth on swallowing, occlusion of the right nostril and swelling in that region. I examined first the throat and could see down to the larynx perfectly. But the thing which surprised me was when I located in his mouth a jagged hole through the hard palate through which you could pass your fingers. Then in the nose on that side the turbinates are very much swollen and as you pass the probe into the nose you can feel a great deal of dead bone. I also feel a hard substance which I think might be another bullet there. The X-ray shows very distinctly a bullet lodged there. The chances are he must have been shot twice; the second time without knowing it. So it is possible that he was shot here and that the other bullet may have entered his mouth. He was evidently shot in his mouth after he had fallen and was unconscious. I can't conceive how a bullet could have gotten through the neck, then passed through the hard palate and entered here into the antrum.

(Dr. Weil showed X-ray pictures of the bullet as shown in the profile, etc.)

DR. FEINGOLD:

ANGIOSCLEROSIS OF THE RETINA.

Dr. Feingold reported a case from his clinic which shows the value of thorough examination; it often revealing, as in this instance, a more remote and important disease than the one for which the patient applied for treatment. The case under question is one of an employee of this institution, who applied for relief from head-

ache and inability to read. The routine examination revealed that an error of refraction and the beginning presbyopia were sufficient to explain the discomforts of the patient. But careful ophthalmoscopic examination made by Dr. Bahn revealed pale optic nerves and a peculiar condition of the main arterial trunks in each fundus. Instead of the arteries being bounded on each side by more or less straight and regular lines, the main trunks near the disc were bounded by irregular lines, which created the impression of a string of beads, as if constrictions and dilatations of the arteries would follow one another. Other more frequent signs of *angio-sclerosis of the retina* were also found and the patient was at once referred to the medical clinic with a request for an examination of the cardio-vascular system. The preliminary report from Dr. Lemann confirmed our suspicions: "Corbovinum; arteriosclerosis."

(Since the presentation of this case aneurysm of the aorta has been proven by the radiograph.)

DR. J. W. NEWMAN:

CASE I. CESARIAN SECTION IN A MIDGET.

I wish to present a case which I consider of unusual interest,—both from the standpoint of the patient's family history and the treatment which patient was compelled to undergo.

As you will readily see, the patient is far below the average size; her height being only 48 inches. This is the brother of the patient, who is about the same height. It is remarkable that both parents are far above the average size. The measurements are as follows: Height, 48 inches; arm length, 15 inches; chest, 29 inches. You will readily see that the proportion between the extremities, chest measurement and height, are normal, and this is not a condition produced by disease.

The patient is thirty years of age, and has always enjoyed good health. The pelvic measurements are the smallest throughout I have ever seen. They are as follows: Sp. I., 23 cm.; Cr. I., 26 cm.; Bi. T., 31 cm.; Diam. Band, 17 cm.; C. V., 6½ cm.

As soon as labor pains commenced, patient was transferred to the hospital, where I performed a Cesarean section and delivered her of a nine-pound child. She was sent home on the tenth day. Every one of her organs performed their normal functions, even the proportionate enormous size of the child caused no distress whatsoever, although there was a pressure upon the head and I was

delayed a little longer than the average Cesarian section; the maximum temperature following the operation was $99\frac{1}{2}$. This was done five months ago and she is now in perfect health, attending to her household duties.

CASE II. HYPEREMESIS GRAVIDARUM.

Freund, a few years ago, gave the results of his experiments, showing conclusively, in my opinion, that every disturbance of pregnancy was due to a toxemia, and that such conditions as hyperemesis gravidarum are manifestations of such an existing toxemia, and that it yielded readily to the injection of serum taken from a case further advanced in pregnancy. I, therefore, thought that possibly the albuminuria, found in the latter months of pregnancy and usually considered a forerunner of eclampsia, might be due to just such a toxemia, manifesting itself in a different manner. Consequently, when this case presented itself, I followed the line of treatment he suggested for hyperemesis gravidarum.

This patient (1) Para, 28 years of age, was examined by me six weeks ago. I found eight per cent. albumin. Rest and strict diet reduced this amount to one per cent. Unfortunately, the patient left the city without my consent and did not return until yesterday morning, already in labor for several hours. The examination of the urine showed eleven per cent. albumin. She was immediately given five grains of calomel. The delivery occurred within two hours after admission to the hospital; was normal in every respect. Examination of the urine two hours after the delivery, showed thirteen per cent albumin. She was given intra-venously 20 cc.'s of blood serum, obtained from a patient delivered the night before. The urine eight hours after delivery showed seventeen per cent. albumin. Another 20 cc.'s of the same serum was injected.

Urine 14 hours after delivery, showed 12%.

Urine 20 hours after delivery, showed 10%.

Urine 24 hours after delivery, showed 8%.

Urine 30 hours after delivery, showed 4%.

Urine 36 hours after delivery, showed 2%.

This, to me, shows that the serum injection was of great benefit and that the diminishing of albumin in the urine was not due to emptying of the uterus, as the amount of albumin continued to rise for eight hours after delivery.

I am now conducting further experiments along these lines and hope some time in the near future to report more fully.

NO. 1.

~~THE~~

VOL. I.

NEW-ORLEANS MEDICAL JOURNAL,
DEVOTED TO
THE CULTIVATION OF MEDICINE,
AND THE
ASSOCIATE SCIENCES.
(BI-MONTHLY.)

ARRANGEMENT.

- 1.—Original Communications, Cases, and Surgical Operations occurring in Private Practice.
- 2.—Health of the City, with Reports from the New-Orleans Hospitals.
- 3.—Periscope of Practical Medicine — or Spirit of the Medical Journals, Foreign & Domestic.
- 4.—Brief Notices of Recent Medical Literature.

EDITED BY

ERASMUS D. FENNER, M. D.

AND

A. HESTER, M. D.,

One of the Physicians to the New-Orleans Charity Hospital.

"Summum bonum Medicinæ Sanitas."
(GL.)

MAY 1844.

NEW ORLEANS,
PRINTED BY J. DOR.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYEZ, M. D.

INTRODUCTORY ADDRESS.*

"In offering to the world a new Periodical, to be devoted to the cultivation of Medicine and the Associate Sciences, we embrace the opportunities, in compliance with customary usage, to offer a few introductory remarks to our readers. The occasion and the undertaking are fraught with peculiar interest; and we trust we shall be excused for candidly avowing (at the very threshold) our deep sense of the responsibility we have assumed, and a reasonable diffidence in our powers to do justice to the work.

But for our conviction of the necessity of such a work to the improvement of the Medical Profession in the South; and the frequent expressions to the same purport which have fallen from every Physician with whom we have conversed for the last few years— but for the improbability which seemed to prevail, that it would be undertaken by abler and more proper hands; and for the kindness and encouragement with which our proposal has been received by the entire Medical Corps of New-Orleans, and the Physicians of other places with whom we have had an opportunity to communicate— we should not have ventured to appear before you at this time.

To collect together the Archives of Medical science from their various sources— to admonish or instruct the members of a learned Profession— to arouse from lethargy the genius and talents which it claims— and to furnish a proper medium of communication by which the labours of its various members scattered throughout the world may be interchanged and compared; is an office that should devolve upon wise, discreet, and experienced hands.

But if these are not to be found, willing to embark in the noble enterprise, should it be abandoned or forsaken? Or would less

*The Inaugural Editorial of Drs. E. D. Fenner and A. Hester, the founders of the Journal.—N. O. M. J., May, 1844.

We reproduce on the preceding page the title page of the first number of this Journal in 1844.

competent abilities be excusable for venturing on the task; if prompted by an ardent desire for the elevation of their Profession, and the firm determination to grapple manfully with all obstacles that may arise; and overcome them if possible.

Such has been our conclusion, and for our temerity we now throw ourselves upon the indulgence of our Medical Brethren.

It is universally admitted that a Medical Journal is greatly wanted in this region; we have volunteered our services to supply the desideratum, and it remains to be seen whether the Profession will sustain us in our arduous undertaking.

The field is rich; the harvest is varied and abundant; let us see how many laborers are to be found willing to contribute to the general fund— that fund of useful knowledge and experience which is to be preserved and perpetuated, and will enrol the names of the contributors on the list of Fame; whilst the isolated observations of individual experience will perish with their discoverers, and sink together in to the tomb of Oblivion.

Without your aid our work cannot be expected to succeed. With your generous assistance, we shall enter upon our duties with alacrity, and do not hesitate to believe we shall be able to produce a Practical Journal unsurpassed in varied interest and usefulness by any in the world, and an honor to the place whence it emanates.

If we look around us and survey the immense region which we claim as our *own* Literary and Professional Domain— the vast Valley of the Mississippi with its numerous States and varied Institutions, its peculiar climate, productions and diseases— the Southern Atlantic States enclosed between the Alleghanies and the Ocean— the rich West Indies with their tropical climate— the Mexican Gulph Cities, and the interior of Mexico— the flourishing new Republic which has recently shot forth its *Lone Star* in to the Political Firmanent— and especially our own growing city, containing already upwards of one hundred thousand inhabitants, with its extensive commercial intercourse and large amount of shipping, its four Hospitals and great variety of human species and diseases, its Medical College and Medico-Chirurgical Society; who can deny the extraordinary advantages our position commands for the concentration and cultivation of Medical Science?

Who can fail to be astonished that such an enterprise has not long since been projected in this admirable field?

We have been raised in the South-West; our Professional career

has been chiefly in the South, and we can assert an experience of fifteen years in its peculiar maladies. We therefore have a right to declare that the diseases of the South can only be studied and learned in the South. The Elements of the profession; Anatomy, Physiology, Pathology, General Therapeutics and Chemistry, may be studied to perfection in the Capitals of Europe and the United States; but what Southern Practitioner will deny, that when he obtained his diploma and came to grapple with the Congestive and Yellow Fevers, Bilious Pneumonia and Chronic Diarrhea of the South, and the Milk-Sickness and other curious affections of the West, he had to commence his observation *de novo*, and to establish for himself a code of principles and Practice.— On this point we feel confident we are expressing an opinion almost universally entertained in the South; for often have we heard it deliberately remarked by intelligent Physicians, that a patient attacked by Congestive Fever in the severe form often witnessed on the banks of the Yazoo or Red River, would be much more safe under the management of some intelligent Planter or Overseer who had long resided in this region, and who was perfectly familiar with the disease, than he would be in the hands of the ablest Physician of London or Paris, who had never practised beyond their precincts, and who would be guided in his treatment solely by the general principles of Medicine. So important is it for the practitioner to be intimately acquainted not only with the prominent symptoms of this formidable disease, but with the order in which they occur, and the effect of remedies in the peculiar state in which it places the system.

Most of the Diseases above mentioned have rarely been seen by the Teachers of the North, and the Medical *Savans* of Europe. Perhaps a few of them when young, prompted by the thirst for knowledge and the desire for gold, have boldly ventured to visit the climes where they prevail— and Yellow Fever does sometimes extend its ravages as far North as New-York and Boston; but for the most part these learned Teachers have to glean their knowledge of Southern Diseases from the occasional writings which emanate from Southern Practitioners; and God knows they are “like Angel’s visits, *few and far between.*”

We repeat; it is in the *South* we must study *Southern Diseases*— We earnestly hope that the Journal which we are now projecting, will give a fresh impulse to Medical Study and investigation—

that it will be the means of combining the isolated and disjointed labours and observations of the numerous talented Physicians in the Southern States into a form possessing strength, symmetry, and usefulness— and that it may awaken the Southern Physician to a just appreciation of the profession he has chosen. In fine, that it may elevate the Medical profession from the State of a *mere money making trade*; to its proper position, the *noblest pursuit that ever engaged the attention of man!!!*

We call upon our *confrères* throughout the land to arouse themselves from their lethargy, and come forward to the mighty work. The Physicians of our larger cities are highly respected for their talents and acquirements, and justly occupy a lofty position in Society— and we honestly believe there is scarcely a town, village, or neighborhood throughout the many States which lie around us, that does not claim some member of the profession who has talents enough, if he would apply himself in the manner which the young Physician is compelled to practise if he ever hopes for success in a large City; to do honour to his calling, and shed a lustre on his name.

Yet what is the humiliating declaration we are bound to make! Few— but very few Physicians in the South have ever offered contributions to medical literature; and there is not a Medical Journal to be found in the United States, south of Louisville. Will it be believed abroad when we add, that in this vast and interesting region, there exist no less than four Medical Colleges, whose halls are annually attended by students, and which are granting Diplomas from year to year? To these Colleges, we would now appeal; and entreat them to come forward and let the world see the extent of their pretensions. Have they too assumed the awful responsibility of becoming teachers in medicine for the sole and degrading object of *making money*? Would they sacrifice the noble attributes of science upon the *altar of Mammon!*

We would fain hope that the Professors in these schools, as yet young, will prove themselves worthy the high vocation wherewith they are called— that their lectures may be replete with useful instruction, and high and noble sentiments— and that from them will annually go forth a body of young and ardent devotees to science, well prepared to examine into and unravel the mysteries of nature; and to minister skillfully to the relief of suffering humanity.

Our central position in regard to the Medical Colleges in the West and South, will render our Journal an admirable medium for comparing the merits and abilities of their Professors. Whatever they may publish in our work will probably be most generally read in the region whence they obtain nearly all their students. We expect also to furnish a more extensive circulation to their productions, than could be afforded by any Journal published in a smaller or more retired place.— We even indulge the hope that in a short time we shall see New Orleans, the Emporium of a vast and varied Commerce as it is, become also a *focus* to which shall be concentrated the rays of Medical light from all parts of the world, again to be disseminated for the most useful purposes. Above all, we would desire to render our Journal conducive to the cultivation and promotion of the best feelings of friendship, and of laudable emulation in the Profession. We are united gentlemen in the pursuit of a noble vocation— our legitimate objects are grand and sublime, and our occupation demands the exercise of the highest faculties of the human mind. It is our duty and interest to keep a vigilant eye to the general character and standing of the Profession. Every member should feel, that to his keeping is entrusted a certain share of the professional reputation; and that like *his honour, and his good name*, he is required to preserve it bright and untarnished. Nor can we be indifferent to the conduct and standing of our confrères. We are linked together like the family circle, by an *indissoluble bond*. He who immortalizes himself, sheds a lustre upon his Profession; and likewise he who sinks into disgrace, in some degree brings a reproach upon his calling.

Then let us cease all bickerings, ignoble jealousies and rivalries— let us be ever ready to extend a helping hand to our brother who occupies a lower round on the *enchanted Ladder of Fame*; and congratulate, instead of envying him whose brow is justly crowned with the never-fading laurel. As is often the case, our worst enemies are in our own ranks—at least they are *piratically* sailing and fighting under *our colours*. Let them be unmasked; and let us show to a liberal, though *most gullible public*, our superior claims to their confidence and respect. This can only be done by correct deportment, constant study, and a display of superior acquirements. True merit, though often long obscured and depressed, seldom fails ultimately to obtain its just deserts; and if we do not possess it, we have no right to demand consideration and respect.

Who does not perceive that the Medical Profession has been for some time gradually losing caste and respectability in the South—that unworthy and incompetent members are constantly gaining admission into its ranks—and that the Charlatan and Empyric annually find it less difficult to maintain a successful competition with the licensed Practitioner? It behooves us carefully to investigate the cause of this state of things, and to make a firm and united effort to remedy it: otherwise we ourselves, after the long years of labour, and the expense which we have devoted to the Profession, will be driven to the necessity of seeking some other method whereby to gain a livelihood; or to condescend to those miserable devices peculiar to the *low station* which the Public seems disposed to assign us. Genius and Talent will abandon Medicine to the *Gothic invasion* of Quacks and Imposters, and seek employment in higher walks and better company.

This is the destiny that awaits us, and the crisis is at hand. We now throw ourselves into the breach, and will make at least one bold, determined effort to rescue our Profession from its impending fate. We call upon you to sustain us, and we do it confidently. Would to God, that with our *willing hearts* we could offer you the service of *abler heads*; but as the Apostles said to those who asked of them alms,—“Such as we have, we give unto you.”

Before closing this Introduction, we must offer an apology for the size of our first number. Owing to the advice and reasons given us by many kind and experienced friends whom we have consulted in regard to the Journal, we have been induced to alter the original plan of the work from a Quarterly to a Bi-monthly. The amount of reading matter will be about the same, and we are induced to hope in a more acceptable form. Being smaller, the Journal will reach you more frequently, contain more recent intelligence, and perhaps be more thoroughly read.

We have said in our Prospectus that our Journal shall be *liberal, independent, and impartial*; and such it shall be our earnest endeavor to make it. Whatever credit or folly may be attached to the undertaking, will belong to the Editors alone. It is subservient to no *personal, no party interest*. We pursue a *higher and a nobler aim*—the cultivation of Medical Science, and the improvement of its followers.

We look to the accomplishment of these objects for our reward;

and if we fail, we shall, at least have the satisfaction of having *attempted something useful*.

To the Medical Corps of New Orleans of every nation and tongue, our pages are freely offered, and their contributions are respectfully invited.—Of course they can only be published in the English Language, but there is no difficulty in procuring good translations.

We now commit the enterprise to the kindness, liberality, and discernment of the Medical Public, and sincerely hope that many a worthy Disciple of Esculapius will join us in the fervent ejaculation—"GOD SPEED THE UNDERTAKING!!!"

THE FOUNDERS OF THE NEW ORLEANS MEDICAL JOURNAL.

Erasmus D. Fenner. Born, 1807; Died, May 4, 1866.

In the November, 1866, number of the *Southern Journal of the Medical Sciences* appears a lengthy tribute from the pen of Dr. D. Warren Brickell, fellow editor and friend of the subject of this sketch. The material has been furnished us by the grandson, Dr. E. D. Fenner, who expresses the belief that a contemporary can better present the biography than himself.

Dr. Fenner was ninth of eleven children, son of Dr. Richard Fenner, who, at the time of the birth of his children, lived in West Virginia, later moving to Tennessee.

The early life of Dr. E. D. Fenner was spent in Raleigh, North Carolina, at school, later under a tutor at home. He began the study of medicine under an elder brother at Jackson, Tennessee, and was graduated in 1830 from the University of Transylvania, Kentucky. He began practice at at Jackson, Tennessee, and was married in 1832 to Miss Ann Callier. The young couple moved in 1833 to Clinton, Mississippi, at which place was born their only child, the late Judge E. C. Fenner, a distinguished lawyer of New Orleans.

The death of his wife and other trouble of a business nature led the doctor to move, and in the spring of 1840 he came to New Orleans, the future site of his career.

The first five years were hard, meeting with little success. His closest companion during these years was Dr. Hester, later associated in the founding of the *New Orleans Medical Journal*, which was accomplished in May, 1844.

Dr. Fenner withdrew his connection with the *JOURNAL* in 1848, but his literary activities found other avenues, as his surgical reports, his editorship of the *Southern Journal of the Medical Sciences* and his varied publications in the *New Orleans Medical News and Hospital Gazette*.

His medical interests were many. Among these should be noted his organization of the New Orleans School of Medicine (in 1856), of which he was the first dean. The faculty comprised other men now remembered for medical activity, among whom may be named Drs. Samuel Choppin, C. Beard, I. L. Crawcour and Warren Brickell. The school for a number of years occupied the site now used for the ambulance service of the Charity Hospital. This school numbered 200 students the year before the Civil War began. As a teacher, Dr. Fenner was more explicit than rhetorical, and he believed in presenting facts rather than theories. He is credited by his biographer with having consistently expounded the idea of geographic study of disease and of the importance of the orientation of the student in the section in which he expected to make his home and to do his practice.

"Throughout the community," says his biographer, "he was accepted as the model of a simple, dignified and polite gentleman. * * * In a material view he was careful and economical. * * * His perceptive powers were not quick, but he was honestly observant, was extremely cautious, and frankly communed with his fellow practitioners. His opinions were always deliberately formed and it required close argument to change them; but he always seemed to eschew that empty tenacity which characterizes the bigot."

Dr. Fenner was an antisecessionist, but when the die was cast he went to the front in the cause of the calling. He originated the Louisiana Hospital at Richmond and served in many ways until New Orleans was taken. He became an emigre with other loyal Louisianians and in 1863 he removed, until the close of the war, to Mobile.

His final illness was a short one, following stress of work, and his death came soon.

In concluding a comprehensive outline of his life, Dr. Fenner's biographer says: "He was a zealous laborer in medicine * * * the first to establish in this country the system of real clinical teaching. * * * The fount of his heart was almost illimitable, and the

great stream flowed silently, deeply, on through life to that ocean of eternal happiness not seen by human eyes, but which is at best the reward for labors well performed."

Abner Hester. Born, 1813 (?); Died, December 1, 1853.

Dr. Hester was born in Mecklenburg County, Virginia; spent his early life in Montgomery County, Tennessee, near the Kentucky line. At about sixteen years of age he was sent to Cumberland College, at Princeton, Kentucky, where his record established him as a good student and generally esteemed.

On graduation he began reading medicine in the office of Dr. Walter H. Duane, of Clarksville, Tennessee, finally going to the University of Pennsylvania, where he was graduated in the spring of 1837. His first field location was at Holly Springs, Mississippi, where he remained until the fall of 1839, then coming to New Orleans. His success was delayed for a number of years; as late as 1843, his biographer states, he planned emigrating to Central America, and would have done so but for the fact that the captain of the vessel failed to appear.

In January, 1844, Dr. Hester associated with Dr. E. D. Fenner in the enterprise of the *New Orleans Medical Journal*, which made its initial appearance in May, and at intervals was continued until it became a regular monthly publication. In 1846 Dr. Hester was appointed surgeon to one of General Taylor's regiments of volunteers for Mexican war service. Although only in service for three months, Dr. Hester in this time demonstrated his ability and the personal influence so established made his practise a certainty when his regiment was mustered out. Soon after his return from Mexico, he was elected secretary of the Board of Health. In 1847, Dr. Hester had a large experience in the yellow fever epidemic.

In 1848 Dr. Hester was appointed by Governor Johnson a member of the Board of Medical Examiners for the Eastern District of Louisiana, in which office he served until the board was abolished, in 1852.

Aside from this position, as visiting physician and surgeon to the Charity Hospital, as port physician, Dr. Hester was prominent in other activities. He was one of the founders of the Medico-Chirurgical Society, member of the Physio-Medical Society, an officer of the Louisiana State Medical Society.

On the day preceding his death Dr. Hester was engaged actively

in practise, was taken ill suddenly and died of epidemic cholera before 3 A. M. on the morning of December 1, 1853.

His biographer (Dr. E. D. Fenner) touches the fine lines of his character in an obituary sketch in the *Journal* of January, 1854, as follows:

“It will be conceded by all who knew him that he was a physician of rare skill and judgment, of ample resources, bold and prompt in action, and untiring in his attention to the sick. * * * He was ever willing to consult with his honorable brethren when desired, but most of his patients were content to trust their lives to his skill and judgment. He was remarkable for his fine personal appearance and the urbanity of his manners. * * * We see in his life an illustration of the triumph of talent and perseverance over great obstacles! He came here a stranger oppressed with poverty; he died possessed of a very handsome competence, beloved and regretted by a large circle of admiring friends.”

Dr. Hester left a widow, who had been a bride only a few months before.

His activities in the editorial management of the *JOURNAL* for nearly ten years have been the fruit which the perpetuation of the *Journal* has fully confirmed.

SOME HISTORY.

Messrs. Editors: The May number of the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* will make the seventieth anniversary of its long and eventful existence, and, as one who has always regarded the *JOURNAL* as one of the characteristic medical institutions of this State, and who has followed its progress with keen interest and increasing satisfaction, I cheerfully comply with your courteous request to contribute a sketch of the brief period during which I was associated with its editorial management.

This period embraces the two years from April, 1883, to April, 1885, and I cannot go back the three crowded decades that have elapsed since my incumbency without readjusting the memories and associations of my early professional life. Fortunately, the purpose of this communication is not biographical, but historical, and in this sense my task does not involve much space nor labor, as the continuity of the *JOURNAL* has been preserved and the essential facts are available in its own pages.

As you are aware, the *JOURNAL* was just emerging from one of the darkest and most depressing periods in the history of Louisiana and of the South when Dr. Samuel Meredith Bemiss, professor of the principles and practice of medicine in the University of Louisiana, took hold of the editorial helm, in 1873, and, with the assistance of his associates, Drs. S. S. Herrick and W. H. Watkins, and a corps of faithful collaborators, succeeded in piloting it in safety during the ten years that ended December, 1882. Thus another decade of trials and tribulations, made gloomy by epidemics, including the great epidemic of 1878, and by the great overflow of 1882, which crippled commerce and laid low all agricultural industries, had combined to impoverish the people of Louisiana, who were just beginning to recover from the tyranny and ruin of carpetbaggism and reconstruction. When a better day dawned, in January, 1883, Dr. Bemiss, who had kept up the publication in the face of immense difficulties and personal sacrifices, that would have daunted and discouraged a less devoted man, was glad to be relieved of his editorial cares through the purchase, in December, 1882, of his interests in the *JOURNAL* by a new company, organized largely through the instrumentality of his former associate, Dr. W. H. Watkins.

Dr. Bemiss's successors were Drs. D. C. Holliday, W. H. Watkins, Frederick Loeber, L. F. Salomon and John Godfrey, past assistant surgeon of the United States Marine Hospital; with the last named as editor-in-chief and Dr. Salomon as secretary and treasurer. Dr. Godfrey's tenure of the editorial office continued for the brief period of three months, beginning in January and ending in April, 1883. By the resignation of Dr. Godfrey, I became a member of the company, and was given charge of the editorial department. I had barely served in this capacity two months when unexpected and imperative business called me to the far West, where I was detained until the fall of 1883. During my absence Dr. Salomon continued practically alone at the editor's desk with such collaboration as I could give him at a distance and with the meager resources at my command. On my return I resumed my editorial duties and continued in charge, with Dr. Salomon as my most active associate, until July, 1884 (fifteen months), when the *JOURNAL* passed into the hands of the New Orleans Medical Publishing Company.

The members of the new organization were Drs. A. B. Miles,

George B. Lawrason, H. D. Bruns, P. E. Archinard, John H. Bemiss, and his brother, Lockert Bemiss, Esq., attorney at law; Drs. F. W. Parham, A. McShane, and your correspondent. I continued in charge of the editorial department in the new administration, with Mr. Bemiss as business manager, until April, 1885, when I was appointed demonstrator of anatomy at the university, and resigned from the editorial staff. While connected with the New Orleans Publishing Company my editorial responsibilities were made much lighter by the zealous co-operation of all the members of the editorial staff, who entered into their new duties with great personal interest and zeal. Many of the strongest and best editorials were contributed by Dr. Bruns, and his characteristically forceful and fearless pen proved one of the most valuable assets of the company during the entire period of its existence, which lasted until July, 1891, eight years, when the organization dissolved and Dr. Augustus McShane became the sole editor and proprietor. He continued to edit and own the *JOURNAL* during the five following years ending March, 1896, when the rights and interests were transferred to the present editors, Drs. Chassaignac and Dyer, who have continued so successfully to preside over its destinies up to the present time.

It would be no doubt interesting, and perhaps entertaining, at least to the future historian of the medical institutions of Louisiana, to revert to the men who at various times contributed so much of their energies and their substance to the cause of medical journalism as exhibited in the editorial history of the *JOURNAL*, especially during the difficult period of transition which immediately followed the post-bellum period and preceded the last decade—a decade which future historians may characterize as the period of medical (including sanitary and civic) renaissance in Louisiana. It is quite evident, however, that the time is not ripe for such an undertaking. It is too much like contemporary history. Too many of the actors who participated in the upbuilding of our medical institutions after the dark and gloomy sixties, seventies and eighties, are still too close to us; still active on the stage, and too near the present generation to permit of a judicial and discriminating appreciation of their influence in shaping the progress of medical events. Suffice it to state that, so far as medical journalism in Louisiana is concerned, the history of the various personalities and corporations that have contributed to it is a fair reflex of the forces

and influences as well as the conditions that have prevailed in the evolution of medical history in Louisiana.

Apart from the purely chronological record of the successive changes of administration which have occurred in the later course of the *JOURNAL* as an exponent of medical thought and opinion in Louisiana, it would perhaps be not out of place to briefly refer to the conditions that prevailed during the period of my connection with the *JOURNAL*, i. e., during the two years, April, 1883, to April, 1885. At that time the great topics that engrossed the attention of the profession were chiefly of a sanitary, hygienic and epidemiological character. They were almost summed up in the words, "yellow fever." Hence, as became a local and regional publication, the *JOURNAL* gave this burning and ever-present topic of discussion the greatest share of its thought and attention. The great pall and havoc of the deadly epidemic of 1878 was still hanging over the people and the necessity of preventing the repetition of a similar calamity consumed all the energies of the most thoughtful men. It is not strange that the pages of the *JOURNAL* were loaded with contributions on the conduct of maritime and interstate quarantine and sanitation, and it was then that the ingenious and rational method of ship disinfection, which immortalized the name of Dr. Joseph Holt, caused a profound impression as the most intelligent and notable advance that had been made in the history of maritime sanitation. The controversies which were then raging between the conflicting authorities of the State and the National Board of Health, already struggling to maintain its waning influence and authority against the combined assaults of politicians and sanitarians, who rebelled against any encroachments upon their privileges as based upon the supposed rights of States. Then the policy of publicity or concealment in presence of yellow fever cases was a worrisome question, which led to acrimonious discussions, but was also clearly settled at a later date by the decisive and fearless action of Dr. Joseph Holt, who was president of the Board of Health, and stamped for all time this policy of concealment as a nefarious and shameful practice. Then the nature and mode of transmission of yellow fever, forever in a chaotic condition because, in spite of Carlos Finlay's demonstration of the mosquito as the agent of transmission, in 1879, no one gave his doctrine and teachings any serious attention. The glaring deficiencies in our municipal system of sanitation and in our sanitary organization were apparent enough

and provoked many caustic and bitter comments, but the cistern and open gutter prevailed, and all were appalled by the seeming magnitude of the undertaking to then insist on the imperative necessity of a pure water supply and a modern system of sewerage and drainage, which we were forced to adopt after the epidemic of 1905. School hygiene was unknown, and it was only after the disastrous and successive outbreaks of smallpox in the early eighties that vaccination became compulsory in the public schools. Then the influence of overflows upon the public health, made apparent by the disastrous inundations of the Mississippi in 1882, which paralyzed and ruined our chief agricultural industries, compelled a large share of professional and public attention. Again, the deplorable state of medical organization in Louisiana, the failure of the State Medical Society to maintain an effective organization, the failure or the lack of medical laws to protect the people against the depredations of the irregulars and quacks who overran the city and State; the regulation of medical practice in general, the beginning appreciation of the need of trained nurses, especially in our leading hospitals, the Charity Hospital in particular; the need of post-graduate instruction in medicine—these and other cognate questions of the greatest significance and import to the profession were the subjects of editorial agitation at that time.

The horrors of diphtheria furnished material for abundant comment, as we knew nothing of antitoxin until Behring's discovery in 1890. In 1883 and 1885 we were still in doubt about malarial etiology, in spite of the fact that Laveran had announced his discovery of the plasmodium in 1880. Much less did we dream of the importance of the anopheles in its transmission, as Ross did not demonstrate his discovery until 1897, and it was not until 1899 that Bignami and Grassi showed that the parasites only developed in the anopheles. In fact, it is only now that we are beginning to realize the tremendous importance of this fact in making our State salubrious by reclaiming its vast swamps and marshes, thereby making them habitable and attractive to the immigrant as well as to the native population. In 1883-85 we were still questioning the validity of Koch's discovery of the *Bacillus tuberculosis*, announced by him in 1882, and the problem of the rational prophylaxis of this disease was still in a chaotic state. Klebs only described the diphtheria bacillus in 1883; Koch, the cholera bacillus in 1884, and Nicolaier the drumstick bacillus of tetanus in the same year. It

is easy to understand that we were attaching only academic interest to these fundamental and revolutionary discourses.

In 1883-85 surgeons were only beginning to recognize the importance of Listerism and antiseptics in surgery, and while Listerian doctrines had had an enthusiastic advocate in 1879 at the Charité Hospital in Moritz Schuppert, we were still listening to the impassioned invective and violent blows that Lawson Tait and his followers were dealing against Listerism. It was not until Bergmann and Schimmelbusch, in 1886, demonstrated the secret of asepsis by heat sterilization that the fundamental truths of the Listerian doctrine as applied in antiseptics and asepsis were universally admitted. In general anesthesia we were still all chloroformists, and it was only fifteen years after that we began to change to ether. Of local anesthesia, as we practice it so generally today, we knew nothing. Karl Koller only announced his discovery of the anesthetic properties of cocaine in 1884, and it was not until 1894 that the fundamental principles of infiltration anesthesia were laid down by Schleich.

But all this, and infinitely more, that could be quoted in a similar vein, in its relations to every department of medicine, would be irrelevant to my present purpose were it not that, notwithstanding our admitted deficiencies and shortcomings, the JOURNAL in 1883-1885 "kept pace with the procession" and succeeded, in spite of great difficulties in fulfilling its mission, which was to reflect the spirit and conditions of the medical profession of Louisiana in particular and to continue the record of medical thought and achievement in general.

With hearty congratulation on the attainment of the eighteenth birthday of your deservedly successful administration, and on the seventieth of the JOURNAL's era, and with the wish that you may continue "to live long and prosper," I remain, yours very truly,

RUDOLPH MATAS.

REMINISCENCE.

On the seventieth anniversary of the JOURNAL it is a great pleasure for me as one of its former editors to extend most heartfelt congratulation upon its continued success and improvement.

The progress in medicine and surgery, physiology and pathology has enlarged its scope and enhanced its field of endeavor, and it is

a matter of pride to know that its present editors have kept the JOURNAL up to the standard in its editorial department and in the selection of its reading matter.

This occasion recalls the struggle of my associates and myself to keep it alive in the face of meager subscriptions and consequent small financial returns from advertisements. But we managed to weather the vicissitudes and were able to turn it over to our successors without financial loss, giving our time and labor to maintaining a New Orleans journal without hope of other reward than a duty done to the medical profession of our locality.

After the number of years that have elapsed since my connection with the JOURNAL it is pleasant to recall the names of some of those associated with us in its ownership and management.

There was D. C. Holliday, the incomparable, a man of profound knowledge and great diagnostic ability; a successful physician in every way; the true *family* physician, whose type, alas! in these days has almost disappeared.

And there was Fred Loeber, the polished gentleman and scholar, who, besides his erudition, which was of material help in the conduct of the JOURNAL, stood as a leader in surgery and did much towards its advance in introducing the latest methods to the profession in New Orleans.

Also the lamented A. B. Miles, cut off in the prime of life at a time when his genius and his skill were just beginning to make themselves felt, who, had he lived but a few years longer, would have stood at the head of the surgeons of the South. It is sad to contemplate the passing of such men and to feel that after these many years there are left of the JOURNAL corps of that day but two—Matas and myself.

Did space allow I might, on the other hand, become reminiscent and tell something of the amusing side of editing a medical journal; of how almost every mail brought us letters of advice as to how the JOURNAL should be conducted; of the bricks and bouquets which were thrown, all of which added zest to our work.

I remember on one occasion I wrote a review, not at all favorable, of a book, upon which the author demanded a retraction with the alternative of his coming from his far-away village home to "shoot us up." We did not apologize or retract, and he failed to end our existence.

These and many other like incidents did much to amuse us and

lighten the grind of our laborious efforts to keep the JOURNAL going. Only those who have engaged in the work, however, can know the task of editing a medical journal; of the care needed in selecting suitable articles for publication, and in keeping it up to the times in its exposition of medical lore. As a one-time editor, I wish to say to the present editors, "Well done."

May you continue for years in your present sphere of usefulness, and may the JOURNAL, under your guidance, continue to improve and maintain its high standard. LUCIEN F. SALOMON.

ET NOS MUTAMUR IN ILLIS.

Seventy years, three score and ten, the lifetime of an old man! There are none now left to tell of the beginnings, but even to one who can date his medical days from 1878, the time of the last great yellow fever epidemic New Orleans will ever see, what astonishing changes, what a host of faces come and gone those days include! No antiseptics or asepsis, no cocaine or local anesthesia, no absorbent cotton even then—only *charpie*, old linen raveled out by convalescents, bleary old men and women with unwashed hands, clapped upon open wounds, which, if doing well, yielded their plentiful streams of "laudable" pus, or, if badly, broke into strange forms of inflammation or the dreaded erysipelas, or, rarely, worse yet hospital gangrene. Even then, though, the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL was hammering away at the task, doing its best to throw light into our dark places; now with an original article from the pen of some one of the masters we then looked up to, now with a case report from the Charity or the Hotel Dieu, our only hospitals, or perhaps with a translation from some foreigner of light shading, or an editorial of encouragement, of warning, or criticism. Yet, when one looks back it seems only yesterday he could go into the JOURNAL office—his private office—and see Dr. Samuel M. Bemiss sitting in his arm chair by the editorial table—his office desk. Big, stout, his iron-grey beard "square as any spade," his kindly, humorous eyes looking inquiry as one entered, and his deep, friendly voice asking the purpose of the visit. It was he, it seems, who put upon the JOURNAL's cover the apt quotation that still adorns it: "*A buried virtue differs little from a hidden fault.*"

After him, with him for a while, came to the editorial helm his

son John—so unlike him physically—small, spare, stooping; his thin face long, sharp nose bespectacled; the narrow, mild, blue eyes giving a perpetually questioning air to an attractive countenance. How merry those eyes could look upon occasion, how kind! But no eyes could look as tender, as charitable as the heart behind his. What night so bad, what weariness so extreme of the frail body that he would not leave his bed to visit the poorest of the poor, the humblest of the humble. Nor did he “forget the pence to help him on,” or to buy the medicine or little comforts his freely given skill had just prescribed. His store was none too large; perhaps he “flung it to the winds like rain,” but who of us now doubts that “Harry” Bemiss went to his early grave many times richer than those “prudent, cautious” souls whose “self-control” lays upon their tombs the wreath which the world calls success.

Then came a time when a coterie of the (then) younger medical men undertook the *JOURNAL*. They were moved, undoubtedly, partly by ambition, partly by the feeling that old New Orleans, so long a metropolis, a medical center, always the home of medical men of distinction, should not be without a professional organ. Most of the new editors were the same men who founded the “Poly-clinic” (now the Tulane post-graduate medical department), and established the Sanitarium for the purpose of introducing trained (educated) nursing in this city. Happily, but few have gone before—Albert Miles, long time the assistant surgeon and surgeon of the Charity Hospital, whose features are preserved in the excellent crayon now in the home of our Parish Medical Society. Tall, slender, with keen blue eyes, stooping forward, and, like Tennyson’s chancellor, forever “dallying with his golden chain.” How familiar was his figure upon the portico or in the wards of the old Charity to many a class of medical students. Quiet, self-contained, taciturn, his ample experience filed and catalogued in a cool, clear brain made him a rare diagnostician. Long service in the dissecting rooms gave to his knife in the surgical amphitheater a certainty, a swiftness and precision that seemed to come from a vision which looked deep beneath the skin. Always the same, always well and ready for the day’s work, it seems to us often unbelievable that fate should have cut him off in the beginning of his career.

Of P. E. Archinard, the other of the one-time editors who has arrived "whence no traveler returns," the writer cannot trust himself to speak. We all knew the invincible spirit that long looked on slow-coming death himself without so much as the quiver of an eyelid; the brain that, with a swift, sure stroke, sifted the trivial from the essential; the heart that, setting small store on worldly things, poured out its bounty on the weak and the afflicted, and, with a perfect courage, staked itself without reservation upon the cause of a friend or the crucifixion of a sham or a pretender.

Strange it seems to those of us who can thus look back that among all these shifting sands of change, of loss, of progress, any can keep his footing, can still press forward on the way.

HENRY DICKSON BRUNS.

OUR SEVENTIETH BIRTHDAY.

We hope we will be pardoned for saying "*Our* Seventieth Birthday," for, although we vacated the editorial chair eighteen years ago, we still feel a warm family interest in all that concerns the JOURNAL. The JOURNAL is a continuous organism, served by many different men, but living through and by them, and infusing a common spirit of professional pride in all those to whose hands its welfare was successively confided. Editors may come and editors may go, but the JOURNAL goes on forever. Why? Because it is the voice of the profession of Louisiana; it is the common standing ground of all the reputable physicians of the State; it is the home and scientific fireside of every medical man who has labored in Louisiana since the JOURNAL first came into being. The JOURNAL has ever been a reflex of contemporaneous medical thought; but other periodicals have been just as faithful in that respect, and yet have fallen by the wayside and are now forgotten. Our JOURNAL, however, in spite of many and grievous difficulties, still bears aloft the torch of science, and still acts as the meeting place and clearing-house of the profession of Louisiana. As long, then, as our State shall have an organized and progressive body of medical men, just so long may we confidently look forward to a continued and useful existence for our local journal, which is inextricably bound up with the life of the profession, and we fully expect the JOURNAL ever to show forth, in constantly increasing measure, the high character and progressive spirit of the body medical of Louisiana.

When first we were permitted to join the august body of men (all young) who labored for the *JOURNAL*, we felt duly exalted at the great honor that a kind Fate had indulgently steered our way. The labor was always a labor of love, for no filthy lucre ever accumulated in the strong-box of the *JOURNAL*. The work, however, gathered together a group of men who have never failed to do their share of the work of the profession, and were foremost in all new movements affecting the welfare of the profession. We had to carry on worthily the work and traditions of such men as S. M. Bemiss, Stanford E. Chaillé, E. D. Fenner, Warren Stone, and other big figures of a bygone day. Ambition was ours; the measure of our achievement every reader of the *JOURNAL* must judge for himself.

Among our more immediate predecessors we were specially fortunate in knowing well were S. M. Bemiss, W. H. Watkins, D. C. Holliday, I. L. Crawcour, and S. E. Chaillé. These valiant antagonists of death and disease have all passed to their reward. They gave of their best in the service of their fellow-man, and never failed to proclaim, by voice or pen, whatever seemed to them to be for the public good. Drs. Bemiss and Chaillé were among our teachers. Dr. Bemiss has rarely been equalled as a diagnostician; and his clinics at the Charity Hospital remain indelibly stamped on our memory for their clearness, fullness and sound therapeutic senses. Dr. Bemiss was famous as the man who "was never afraid to follow his diagnoses to the deadhouse." His diagnostic skill was almost uncanny; and that, too, before many of our present-day laboratory methods had been devised. Dr. Chaillé, as professor of physiology, contributed to the medical education of thousands of our young men. As a sanitarian, his work had a powerful influence on contemporaneous methods; and as a medical journalist his work has become a part of the medical history of our State. Dr. Will Watkins was an indefatigable worker in the cause of public health. Together with Dr. John Godfrey, M. H. S., and the other gentlemen mentioned, he contributed his share towards keeping alive and passing along the light of medical science as represented by the *JOURNAL*.

These older men were giants in their day. Many of them had received their medical training abroad, under such men as Trousseau and others of his school; and they were not merely carefully trained observers, but they also cultivated the art of good speaking.

It was a treat for the younger members of the profession to attend the meetings of our medical society, for these older men not only dispensed wisdom with a lavish hand, but, by their gift of oratory, they transformed an ordinarily dry discourse into a flowing bit of rhetoric that fascinated while it instructed. A vast amount of valuable information of a practical character was thus purveyed; but, alas! nearly all of it perished with the speakers for lack of a suitable means of preserving it. This consideration caused the writer to cast about for some means of preserving this information; and he conceived the plan, while he was sole editor of the *JOURNAL*, of publishing regularly, instead of sporadically, the papers and discussions of the society. The plan was adopted in 1893, and has been kept up ever since. The effect was immediately felt, for the members took more interest in their work when they knew that the fruits of their labors would be preserved, and not vanish into thin air.

The band of ardent young men above referred to took hold of the *JOURNAL* in 1884. Death and other causes thinned the ranks of the faithful, and in 1891 the writer became sole editor and publisher, which he continued to be for five years. In 1896 the *JOURNAL* passed into the hands of the present management. The eighteen years since elapsed mark the longest period during which the *JOURNAL* has remained under a single management; and the success achieved is a good augury for many more years of useful existence.

The *JOURNAL*, through its personnel, has taken part in a number of public activities. The New Orleans Polyclinic was created by the men who took over the *JOURNAL* in 1884. That institution has since been incorporated with Tulane University. The writer, when editor, called attention in the *JOURNAL* to the increase of leprosy in our midst, and started a campaign for the segregation of lepers. The movement died early, but was revived by Dr. Hy. Wm. Blanc, one of the coeditors and the first dermatologist in New Orleans. Dr. Blanc was gathered unto his fathers years ago, but he deserves a niche in our temple of fame for the vigorous campaign he carried on through the *JOURNAL* and the press for the cause of leprosy legislation, resulting in the creation of the Lepers' Home through the subsequent efforts of one of the present editors of the *JOURNAL*.

It is a pleasure to contribute even a little to the history of

one's times. The JOURNAL has always done its share in this regard, and we have no misgivings as to the future.

AUGUSTUS McSHANE.

IN RETROSPECT.

With this issue the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL will have reached its seventieth anniversary, and as this is the allotted span of man the JOURNAL has a word or so to its friends who have journeyed with it for many years of the years of its existence and of its travail.

The first issue of the *New Orleans Medical Journal*, as it was then known, appeared in the month of May, 1844, edited by Dr. Erasmus D. Fenner and Dr. A. Hester. The beginnings were not particularly promising, but the undertaking was bold enough, as the following narrative from the pen of Dr. Fenner himself will show:

“Happening to be thrown together in the City of New Orleans, and finding our fortunes alike desperate, a fellow feeling gave rise to an intimacy between us which, it is hoped, will endure through life. Without money, with but few acquaintances, and dependent on a precarious practice, which barely afforded the most economical support, we determined to project the hazardous adventure of a Southern Medical Journal, and trust to the liberality of the medical profession for its support.

“The field was ample, rich and entirely unoccupied; but it was difficult to see how the experiment could succeed without having one cent of capital to start with. We actually had the prospectus printed on credit, one of our booksellers being willing to go that far at all hazards, and we paid the bill—**three dollars**—out of the first spare money we had. The prospectus being out and distributed throughout the country, we were fairly committed to bring out the work; but, as yet, could find no person willing to undertake the publication. All we had to give was our own labor, which was cheerfully offered, but something more substantial was required. We appealed to the booksellers, to the proprietors of the city newspapers, and, finally, to the Medical College, and leading physicians of the city for a guaranty of five hundred dollars, but all to no purpose.

“The enterprize was conceived in poverty and finally poverty brought it forth!

“At this stage of our gestation we had the good luck to meet with a poor **French printer**, who had a **handful of type and nothing to do**. Him we persuaded, by means of **flattering promises**, to bring out the first number; and thus the New Orleans Medical Journal saw the light!

“Each number made out to pay its own way, but left no surplus on hand. In this manner we struggled through the first volume, and were entering on the second with prospects somewhat improved, when an unexpected rival appeared in the field.

“The Professors of the Louisiana Medical College issued a prospectus announcing the early appearance of a new medical journal from their school. A union was effected between the two, and the late Pro-

fessors Harrison and Carpenter joined us in the publication of the *New Orleans Medical and Surgical Journal*. In 1848 we voluntarily withdrew from the *Journal*, and in less than two years Drs. Carpenter and Harrison were removed by the hand of death, leaving the present worthy editor (Dr. Hester) alone in his glory."

Since that beginning many changing views of medicine, its administration and practices have come out. One and another has taken the helm in expounding the current doctrine of his time, reaching out after new fields and recording the chronicle of events in medical history. The editors of the *JOURNAL* in these years have occupied distinguished places in their days. The chronology of these is of interest in our review of the days gone by.

Editorial staff of the *JOURNAL* since 1844:

- Vol. 1. *New Orleans Medical Journal*, 1844.
Editors: Drs. Erasmus Fenner and Abner Hester.
First Publisher: A. Dor (No. 1). (See *So. J. M. Sc.*, 1866, 1, p. 401.)
- Vol. 2. *New Orleans Medical & Surgical Journal*, 1845-6.
Editors: Drs. W. M. Carpenter, E. D. Fenner, J. Harrison, A. Hester.
- Vol. 3. (1846-7). Same editors.
- Vol. 4. (1847-8) Dr. Fenner seems to have withdrawn before completion of this volume, see vol. 4, p. 681 (date of withdrawal, March, 1848). Dr. Carpenter died in 1848; Dr. Harrison died in 1849.
- Vol. 5. (1848-9) to Vol. 9 (1852-3). Dr. Hester became sole editor until his death in 1853.
(Mr. H. McCulloch purchased the assets of the journal from Dr. Hester's succession, transferring his claim to D. C. Jenkins of the *Daily Delta*, July, 1856.)
- Vol. 10. (1853-4) to Vol. 14 (1857). Dr. Bennet Dowler, editor. (In September, 1857, the journal became the property of Drs. Chaillé, Stone and Jas. Jones.)
- Vol. 15. (1858-9) Dr. Bennet Dowler, editor; co-editors and proprietors, Drs. Warren Stone, James Jones, Stanford Chaille.
- Vol. 16. (1859) Dr. B. Dowler, managing editor; co-editors, Drs. Warren Stone, James Jones, S. E. Chaillé, W. C. Nichols. (In 1859 Drs. Chaillé and W. C. Nichols assumed proprietary control. See Vol. 19, p. 132.)
- Vol. 17. (1860). Vol. 18. (1861). Same editors.
(1862-65). No publication during the Civil War.
- Vol. 19. (1866). Editors, Drs. Chaillé, Nichols and S. S. Herrick. (Vol. 19, p. 287, refers to Dr. Herrick's association.)
- Vol. 20. (1867). Vol. 21. (1868). Editorial corps: Prof. Warren Stone, Jas. Jones, S. E. Chaillé, W. C. Nichols, aided by Drs. T. G. Richardson, J. W. Mallett, J. C. Nott, S. M. Bemiss.
- Vol. 22. (1869). Editors: Drs. S. M. Bemiss, W. S. Mitchell, S. S. Herrick, Samuel Logan.
- Vol. 23. (1870). (Apparently same editors with perhaps addition of Dr. Joseph Holt as co-editor.)
- NEW SERIES.**
- Vol. 1. (1873-4) to Vol. 6. Editor: Dr. S. M. Bemiss.
- Vol. 7. (1879-80) to Vol. 9 (1881-2). Editor: Dr. S. M. Bemiss; co-editors, W. H. Watkins, S. S. Herrick.

- Vol. 10. (1882-3); Vol. 11 (1883-4). Editor: Dr. Rudolph Matas; co-editors, W. H. Watkins, John Godfrey, D. C. Holliday, F. Loeber, L. F. Solomon. (Dr. Godfrey was editor to March, 1883, and was succeeded then by Dr. Matas.)
- Vol. 12. (1884-5) to Vol. 18 (1889-90). New Orleans Medical Publishing Association: Drs. A. B. Miles, G. B. Lawrason, Rudolph Matas, H. D. Bruns, F. W. Parham, P. E. Archinard, A. McShane, J. H. Bemiss and Mr. E. L. Bemiss.
- Vol. 19. (1890-1) to Vol. 21 (1892-3). January 1 publishes Augustus McShane as editor, with collaborators in Drs. F. W. Parham, H. W. Blanc, A. W. de Roaldes, R. Matas and John Dell'Orto.
- Vol. 22. (1894-5). Same as above, with exception of Dr. Dell'Orto. The name of Dr. W. H. Woods being substituted.
- Vol. 23. (1895-6). Editor: Aug. McShane; collaborators, Drs. Parham, Blanc, Matas, de Roaldes, W. H. Woods.
- Vol. 24. (1896-7) to Vol. 66 (Date, 1914). Editors: Drs. Charles Chas-saignac and Isadore Dyer.

In this list appear the names of many who have gone to their reward, and of all only a few still survive. The array is notable, as most of the men have had professional careers, established in the history of medicine. We have at some length in another place presented the biographies of the founders of the JOURNAL. On this occasion we may recall the activities of some of those who have gone before.

Wm. M. Carpenter was an active scientist (see Tulane Graduates' Magazine for January, 1914) and held a chair in Louisiana Medical College (now Tulane) and for a short time was its Dean.

Warren Stone was a teacher and a surgeon of national reputation, whose traditions still prevail (Trans. Am. Surgical Assn., 1894. Vol. 7, p. 696).

James Jones was a professor in the University of Louisiana and a generation ago was lovingly quoted by every student who sat under him.

Samuel Bemiss taught medicine to men living to-day in New Orleans and in the South and his writings were illuminating.

Josiah Nott has left the identification of insectborne diseases as the fact upon which he is best known; but his contributions to all fields of science were notable.

Samuel Logan was a surgeon and a teacher well remembered.

Stanford E. Chaillé has too recently departed this life and his many attributes are too fresh in our memory to need more notice now.

John W. Mallett, a chemist among chemists of his time, a teacher in the Universities of Louisiana and Virginia. "John W." will be still and long remembered by men of the present generation.

T. G. Richardson. A notable figure in American Medicine and Surgery, dean of Tulane Medical College, professor of surgery, scientist and philanthropist.

And Blanc, Herrick, Holliday, Watkins, Loeber, Dell'Orto and those others who, as collaborators, filled the pages of the *JOURNAL*, of them, too, words of praise may be said, for each satisfied in his own way the purpose of advancing medicine in New Orleans, in Louisiana, and of the South.

With the various policies of administration the *JOURNAL* throughout has stood for two essentials: First, for the expression of Southern medical thought, and, second, for Southern medical interests. Other medical publications have come and gone—but this, the first of the medical journals of New Orleans and of the far South, has survived.

The development of medical education, of many institutions for medical charity, of state medicine as related to the public and as related to the physician, has at all times found a support in these pages, and as we move on to the last quarter of our century of existence the *JOURNAL* declares its faith in the profession it has served.

What the future may bring in service and in usefulness we may not prophesy, but when there is any righteousness in comity, purpose, achievement, or in organization for the good of all, the *JOURNAL* is ready to do what its editors of the past have laid on it to do—modestly to present a readable periodical to its constituents; utter timely encomiums, opinions and criticisms of current topics; respect the profession we serve and at all times stand for the best there is in medicine, as for the highest service to humanity and to the cause we serve.

The Editors.

THE COLLEGE OF MEDICINE OF TULANE UNIVERSITY—A REVIEW.

New Orleans has always been a medical center, because of its metropolitan relation to contiguous territory and because of its provisions for the hospital care of a large population moving from many contributing states.

The early economic demand for physicians in the United States compelled centers of supply, and New Orleans, among the other large cities in the United States, afforded the hospital facilities

for instruction without which physicians could not be adequately trained.

So, as the New Orleans Charity Hospital began operating in 1832, in 1834 the College of Medicine started, and the two have continued ever since, each contributing in its own field to the health of the State of Louisiana and to those states contiguous. It was not until 1847 that the State of Louisiana recognized the institution of a medical college, although similar schools had been in operation for many years in more northern states. In becoming the University of Louisiana, together with an embryo law school and a projected college of arts and sciences, in 1847, the medical college really began a fixed career, which has always kept in advance of the rank and file of similar schools in America. Wherever new ideas in medical progress have appeared the medical college in New Orleans has either reflected that progress promptly, or has taken the lead in its elucidation. The whole modern idea of insect-borne disease came from this locality, and more modernly the last word in hookworm, malaria, beri-beri, leprosy and pellagra have come from the scientific research of the various members of the faculty of the College of Medicine of the University of Louisiana, now called Tulane. Every scientific medical body of any importance is locally represented by members of the teaching staff in Tulane, and of many of such bodies the local men have served repeatedly as executive heads.

Within the past ten years ideas in medical education have been revolutionized, and today a more rigid requirement is made of the intending doctor—from the beginning of his high school work until he is licensed to practice medicine. Not only has Tulane met these requirements, but so well that the School of Medicine is one of those in the highest class (A. plus) as listed by the national body determining college standing. More than this, the equipment in teaching, facilities and in accomplishment appertaining to the degree in medicine from Tulane University have altogether obtained the hallmark of the Royal College of Physicians and Surgeons in Great Britain, making Tulane one among the ten American colleges recognized as eligible for the degrees of the royal colleges.

With the growth of the College of Medicine, the School of Pharmacy at Tulane has been a continuous associate, filling a place among Southern universities in which a scientific education is

offered together with a practical training in a responsible calling.

Since 1888 post-graduate teaching has been carried on in New Orleans by the New Orleans Polyclinic, which, since 1906, has been an integral part of the university and what is now one of the schools in the College of Medicine. Tulane was the first university in this country to recognize the importance of associating a clinical school for physicians with college work. Today the practitioner of medicine can get any part of post-graduate work at Tulane—clinical, operative, review, or research in the laboratories, and all under university direction.

The School of Dentistry in the College of Medicine enjoys the advantages of thorough university application, through which, for the first two years, classes are taught in the laboratories with students of medicine, and are thoroughly drilled in the sciences. Additional technical laboratories are provided and an excellent clinic with large attendance.

In 1911, for the first time on the American continent, a School of Tropical Medicine was inaugurated as a department of the College of Medicine, later—in 1913—becoming a separate integral part of the College of Medicine and expanding in the School of Hygiene and Tropical Medicine, including preventive medicine. Not only were special laboratories created for the school, but all the courses in the university relating to hygiene were co-ordinated, making a great organization for public service, in which not only the physician would be chiefly concerned, but the school teacher, the student body of the university, the sanitarian, the engineer, the trained nurse and the citizen. Now the health official of the South may be properly trained, the physicians in the tropics may come for laboratory equipment and technic, and the student in regular courses is given thorough instruction in the newer fields of medicine.

The laboratories meantime have engaged in the investigation of problems of economic importance, and as the years go by the new field of preventive medicine will be more and more engaged in—the altruistic work of a body of scientists aiming at the reduction of the death rate and the healthfulness of the community.

The College of Medicine is not sufficiently endowed to do the work laid out for it. It must compete with institutions either supported by the State or a liberal philanthropy. Meanwhile the

standards of education are as high as any in the United States, and the faculties mean to keep the standards high.

Degrees are offered in medicine, dentistry, pharmacy, public health, tropical medicine, and certificates and diplomas are awarded for satisfactory attendance. Nearly 5,000 men and women have been graduated from the several schools in the College of Medicine, and around the original undertaking in 1834 have gradually congregated the various other colleges which now make up the great Tulane University of Louisiana.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

LIBERATION AND PRESERVATION OF GREAT OMENTUM IN COLECTOMY.—Lardenois and Okinczyc (*Bull. et mem. de la Soc. Anat. de Paris*, October, 1913) show the importance of setting free the posterior layer of the great omentum so as to have it when the transverse colon is removed, partially or otherwise. They point out how the anterior two folds of the omentum pass from the lower border of the stomach, bearing the branches of the gastro-epiploic vessels which nourish them. The folds turn up till they reach the transverse colon and then pass over the transverse mesocolon to the posterior parietes. This is the portion of the omentum Lardenois and Okinczyc lay stress upon. It adheres to the upper layer of the mesocolon, but its vascular supply is from the gastro-epiploic vessels, whilst the mesocolon is supplied by the colica media artery, and the few vessels in the connective tissue uniting these folds hardly require ligature. Hence, when stripped off the mesocolon, the posterior portion of the omentum is not deprived of its vascular supply. It is a mistake to suppose that even in the adult this portion is blended intimately with the mesocolon in the way that all the omentum folds are blended in the pendulous portion of the omentum below the transverse colon. On the contrary, it is not very difficult to strip it off the mesocolon if the operator begins at the hepatic and splenic flexures and then

separates the middle portion of the adherent folds. The most likely accident, especially when the operator begins in the middle, is the laceration of the omental folds so that the omental cavity behind the stomach is opened up, but there is little fear of the transverse mesocolon being torn. The authors declare that even where local inflammatory changes existed they have succeeded in isolating the great omentum with its epiploic vessels intact and saving it entire. After the separation the transverse mesocolon can be clearly inspected and its vessels stand out in relief and can be ligatured separately. The advantages of saving the omentum, where malignant or tuberculous disease is absent, are evident.—*British Med. Jour.* MILLER.

NEW ECBOLIC PREPARATIONS.—G. Barger and H. H. Dale isolated a highly active basic substance from ergot of rye, which they identified as imidazolaethylamine. The physiological action of this substance has been shown by Popielski to consist in depressing blood pressure and in causing a powerful contraction of the uterine muscle, both in a pregnant and in a non-pregnant state. Dale further recorded the discovery of another amine—namely, p-hydroxyphenylaethylamine—which he and Barger had isolated from ergot. This substance bears considerable resemblance to adrenalin. Ackermann showed that it could be prepared from tyrosin by splitting off a carbonic acid group. Barger and Dale further described a weakly alkaline alkaloid, ergotoxin, which was extracted from ergot. Ergotoxin acts generally on unstriped muscle, producing a marked constriction of vessels, and the appearance of ergot gangrene is ascribed to it. Ergot, further, contains a substance called cholin, which depresses blood pressure, but which has no ascertainable action on the uterine muscle. Of these substances, B.-imidazoly-laethylamine and p-oxyphenylaethylamine are the most important ecbolics. Bayer & Co. have combined these two substances in proportions of 0.0005 gram of the former and 0.02 gram of the latter in 1 c.cm. of water, and speak of the combination as tenosin. Since the poisonous element of ergot is excluded, it was to be expected that this combination would yield the powerful ecbolie action of ergot without its disadvantages. R. Zimmermann reports on its clinical uses (*Muench. med. Woch.*, December 2, 1913). After intramuscular injection powerful contractions of the uterus take place, usually in from two to five minutes. In some cases, how-

ever, the action only lasts for from twenty to forty minutes, and a second injection is rendered necessary. In two cases he observed a complete failure of the preparation to effect the contractions. The dose injected was 1 c.cm. No local signs of irritation or general toxicity occurred. At times the drug was given by mouth in doses of from 15 to 30 drops three times a day. The author does not consider that the action is either more powerful or more rapid than that of ordinary extract of ergot. The advantages of this preparation, however, lies in the fact that its constitution is constant, and that it is therefore possible to control the dosage with exactness. On the other hand, it is dearer than the extract. W. Rubsamén (*Muench. med. Woch.*, December 9, 1913) states that when tested by graphic method neither tenosin nor uteramin produce any effect on the uterine muscle. He further points out that B-imidazolylaethylamine has led to dangerously toxic effects in the hands of some observers. From a practical point of view, the combination of pituitrin, which acts promptly but very transiently, and secacornin, which acts slowly but for a long period, does not appear to satisfy all the requirements of a good eolic. Hoffman La Roche has made various combinations for him of B-imidazolylaethylamine (or histamin), p-oxyphenylaethylamine (or tyramin), phenlaethylamine and isomyamine. He has experimented with these various combinations and records that one of them, which he prefers to call E VII for the present, without giving its composition, has proved itself suitable for clinic employment. From his curves of the uterine contractions, he deduces that during the third stage of labor 1 c.cm. of the solution given by intramuscular injection produces a tetanic contraction of the uterine muscle within one or two minutes, which gradually gives place to regular-periodic contractions with good tone of the muscle. The effect lasts for about half an hour. Repetition of the injection produces renewed action. In this respect E VII is very similar in its action to pituitrin. During the actual labor E VII acts more promptly and more effectively on the uterus than pituitrin. Having satisfied himself that the action of this combination of the four substances named above was satisfactory in his experiments, he applied it in suitable cases and was especially pleased with the result during labor. More recently he has added to the combination 1 c.cm. of a secacornin preparation, with excellent results. W. Lindemann and B. Aschner (*Muench.*

med. Woch., December 16, 1913) have applied a special method of determining the action on unstriped muscle and publish the curves obtained thereby with a number of substances. They found that histamin produced the most powerful vaso-contracting action, but demonstrated that a secondary insusceptibility to the drug takes place. Pituglandol proved itself the most powerful drug in producing contractions of unstriped muscle generally, but this also proved a secondary insusceptibility. Of enteroglandol, pancreoglandol, thyroglandol, epiglandol (pineal body extract) etc., thyreoglandol and pancreoglandol appeared to be the most active. Enteroglandol was tested clinically and proved to possess a marked ecboic action when given during the expulsion period. The effect, however, in some cases was unsatisfactory, and in summing up the results of their observations they conclude that pituglandol is the most reliable ecboic preparation of the series. They discuss the possibility of the action of these organ extracts being due to the presence of some proteinogenic amines, such as histamin.—*Ibid.*

MILLER.

ATROPIN IN DYSMENORRHEA.—While investigating the causes of bradycardia and arhythmia in the puerperium, J. Novak (*Wien. klin. Woch.*, December 11, 1913) found that the subjects of this condition, which he traced to increased excitability of the vagus, were frequently also the subjects of dysmenorrhea. It was therefore natural to suppose that this was due to excessive irritability of the involuntary nervous system, and that atropin would, accordingly, be beneficial. It has lately been shown that this drug in small doses stimulates and, in large doses, paralyzes the movements of the uterus. This application of atropin is not altogether new, and Drenkhahn has lately injected a watery solution of atropin into the cervix, or has inserted tampons soaked in a solution of atropin into the posterior vaginal fornix. The results were most encouraging. The author prefers to give atropin by the mouth or rectum, for, though the direct application of atropin to the uterus ensures a more intensive action with a relatively small dose, yet the disadvantages of this method, particularly in unmarried women, are obvious. Out of 38 cases of dysmenorrhea the pain was continuous during menstruation in 2 cases, and in 1 case the character of pain was not defined by the patient. In the remaining 35 cases the pain was spasmodic, suggesting colic or labor pains.

In 30 cases the atropin reduced the pain to a negligible quantity or cured it completely. Backache and a sense of tension in the lower abdomen were scarcely affected by the drug. In 7 cases it was ineffective. Among these were the two cases in which the pain was continuous, not intermittent. Possibly some of the failures may have been due to unsuitable dosage, for in small doses atropin has a stimulating effect on the involuntary nervous system. It is not surprising that the drug should fail in a certain percentage of cases of dysmenorrhea, for this name probably covers various conditions due to many different causes, such as neurasthenia, infantilism, mechanical stenosis, and other anatomical changes in the uterus, hyperæmia, spastic contraction and inflammatory changes of the uterus. It is not clear how atropin relieves the pain of menstruation. It may reduce the spasmodic contractions of the uterus, and it may also check spasm of the uterine vessels, to which some authorities attribute the pain in certain forms of dysmenorrhea. A useful supplement to the atropin is uzara, which has been experimentally shown to stimulate the inhibitory fibers of the splanchnic system. As atropin paralyzes the excitor fibers the successful combination of these drugs is rational.—*Ibid.* MILLER.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

RIGIDITY OF CALCIFIED ARTERIES.—It is held by MacCordick that during life the calcareous matter in the arterial wall is not present in the form of rigid plates. It is there, but in the state that may be compared with unset mortar. It is generally accepted by chemists that the process of setting of mortar is one of conversion of calcium hydroxid into calcium carbonate by the absorption of carbon dioxid from the air. Kept under an alkaline solution, or kept in bulk away from the air that contains carbon dioxid, mortar remains unset. A mixture of calcium carbonate and calcium phosphate remains soft so long as it is in an alkaline medium; placed in an acid solution it sets. Also the more strongly acid the medium the faster it sets. The reaction of the tissues and body fluids during life is alkaline, but becomes acid shortly after death.

It is deserving of note particularly, in the second place, in connection with arterial calcification, that the gas which after death replaces the blood within the arteries is largely composed of carbon dioxid. Without doubt, when there are large areas of necrosis appearing in the tissues, there the production of acid is the cause of the setting of calcareous matter. For instance, it is the experience of the gynecologist that a calcified fibroid of the uterus may be found of stony hardness even while in the body; so also MacCordick's experience is that in a case of senile gangrene the arteries of the necrosed or gangrenous area are of stony hardness, whereas, the same arteries higher in their course, where the circulation is still maintained, are soft and pliable and can be ligatured with ease. In short, he says, in arteries provided with an adequate circulation the calcareous matter, whether it be in the intima or the media, remains upset. It is easy, then, to understand why, after handling pipe-stem radials, there is no thrombosis and gangrene, easy to understand why rigid and tortuous splenic and other mesenteric arteries in the aged arteriosclerotic do not undergo traumatic rupture. During life they are not rigid. It is easy also to understand the occurrence of extensive so-called atheromatous ulceration of the aorta without thrombosis, commonly occurring during life. Those ulcers, in short, and the saucer-like plaques with surrounding rupture of the endothelium are post-mortem productions. The calcified areas become in the intima set and rigid before the muscular contraction of the aorta gives way and the tube undergoes dilation. The result is that a tension on the endothelium at the edges of the plaque induces rupture of the lining.—*British Medical Journal*.

J. A. S.

RADIUM IN TREATMENT OF INTERNAL DISEASES.—Kraus reports the results in forty-one cases of gout, sciatica, neuralgia, angina pectoris, joint troubles, tabes, etc., in which radium exposures were given a thorough trial. Eighteen of the patients were essentially improved, thirteen improved and only seven failed to show any influence for the better. The best results were obtained in the ten cases of sciatica; next to this in turn in subacute and chronic articular rheumatism, gout, intermittent claudication and some of the consequences of cerebral hemorrhage. The combination of radium and deep Röntgen-ray exposures proved very effectual in some cases.—*Deutsche Medizinische Wochenschrift* (Berlin). J. A. S.

SELENIUM IN THE TREATMENT OF CANCER.—Perhaps the profession has built more largely than they realized upon the hope that Ehrlich might crown his astonishing work in syphilis with the discovery of a remedy equally potent against cancer; this hope being founded upon the short paragraphs and notes which have from time to time appeared regarding Wassermann, Neuberg and Caspari's work with selenium. By it they have been able to procure resolution of at least mouse cancer. The first clinical communication of note bearing upon this subject comes from Bougeant of the Rothschild Heidelberg Polyclinic, who reports upon the use of red electroselenium, this preparation having been chosen because of lesser toxicity in the treatment of sixteen inoperable cancers. The preparation was injected intravenously in doses of from 5 to 10 cc., repeated every second day. In some instances the dose was raised as high as 30 cc. No pain was caused. Aside from chills and fever, most marked in the beginning of the treatment, there was no apparent ill-result caused. It is to be noted, however, that there were no cures, and that the most Bougeant, presumably an enthusiast and most anxious to see the best, claims as the result of his treatment is that it lessened pain and in some cases caused a diminution of the tumor and a prolongation of life beyond that which normally would have been expected without the treatment. Galliot confirms these findings, most disappointing to a world convinced that a cure for this malady will be found and waiting patiently for its announcement. It is to be noted that the result of this clinical trial is in no way better than those announced time and time again as following methods of treatment for a brief period popular because of the autohypnotism of their advocates, and properly abandoned and now forgotten because of their futility. Ehrlich, when asked a year ago concerning selenium, had nothing to say. When he speaks the world will stop to listen.—*The Therapeutic Gazette.*

J. A. S.

SYPHILITIC FAMILIES.—Wolf here reports a second series of nine women with syphilis, in the Heidelberg clinic for mental disease, mostly with progressive paralysis. They were all married and some of their husbands remarried, so that the series includes twenty persons; only two were free from probable or certain syphilis. The series is a continuation of similar research on a group of forty-five persons.

Of the sixty-six pregnancies, only thirty-three visible children were born, and fourteen died in childhood; three committed suicide at 12, 20 and 28; two were epileptics and one died after an abdominal operation; thirteen are still living, but only two are normal. The others are all feeble-minded, epileptic, hysteric or with other nervous affections. This research was not undertaken to show the frequency of syphilitic nervous diseases, but it demonstrates the great share which syphilis has in the development of nervous affections. The data presented show further that the assumption of a nervous predisposition is untenable, for the same parents in later years, after recovery from the syphilis, were able to generate healthy children. The first series showed that "occult syphilis" generally runs a comparatively mild course to the end. On the other hand, the second series shows that the nervous form may prove an exceptionally serious taint for the family.—*Zeitschrift für Klinische Medizin* (Berlin).
J. A. S.

HEMOPHILIA.—Gressot reports extremely minute clinical research for months in a case of hemophilia with necropsy two hours after death. The findings show that a general lack of thrombokinase cannot be the cause of hemophilia, but it is certainly lacking in the blood. It can be supplied from without in local application to the bleeding points in the form of fresh blood, serum or tissue juice. By this means the flowing blood can be rapidly coagulated and, provided that the thrombokinase can get deep enough into the wound, the hemorrhage may be arrested by it. This local application can be applied only to hemorrhage from the skin or mucosa of the mouth. No other means proved effectual in controlling the hemorrhage in the case described, although all the measures in vogue were given most thorough trial. There was no history of hemophilia in preceding generations, but the patient was the last of five brothers who had succumbed to bleeding from the gums or head after comparatively slight injury. The patient has five sisters, three of whom are married, and are normal and their daughters are also normal, but each has lost one or two sons from hemophilia.—*Ibid.*

J. A. S.

APPENDICITIS IN CHILDREN.—G. C. E. Simpson (*Brit. Jour. Child. Dis.*, 1913, x, 400,) reports his conclusions on thirty-four cases of appendicitis in children. The general impression is that

these cases are increasing of late years, both in number and severity, and hospital records apparently bear this out. In thirty cases of Simpson's, fecal concretions were found in eighteen. The concretions appeared to determine the site of ulceration and gangrene. The cases in general showed a tendency to early perforation and gangrene; among the thirty cases only three showed the mischief still confined to the appendix at time of operation. General peritonitis was present in thirteen cases, and in nine others there was spreading peritonitis. Of twelve cases under eight years, all had perforated. Out of the thirty cases, only six admitted of primary closure. Five cases died. Earlier recognition of the symptoms and earlier operation will prevent many of the deaths. In this series severe abdominal pain was an early symptom in all save one. Vomiting occurred in twenty-five cases, constipation was a prominent feature in ten cases; pyrexia was absent on admission in only two cases. Marked tenderness and rigidity over the right iliac fossa were present in twenty-eight cases. Diminished mobility of some part of the abdomen on respiration was marked in twenty cases. Attacks of vomiting and abdominal pain with elevation of temperature in children should demand a thorough examination by a physician, and the presence of any tenderness or rigidity in the right iliac fossa should at once demand the opinion of a surgeon. In all stages of acute appendicitis in children operation should follow immediately on diagnosis. The signs and symptoms may be slight, yet with very serious conditions in the abdomen. J. A. S.

Miscellaneous.

THYROID PREPARATIONS IN STERILITY.—(Dr. Ludwig Weil, *Münchener Med. Wochs.*)—Three young women, who had been childless for several years, became pregnant after taking thyroid tablets for goiter. In the first case, who consulted Weil on account of a goiter, had never conceived. She took the thyroid tablets for two or three months, when she noticed that menstruation stopped and this was followed by a normal pregnancy. This same patient afterward became pregnant again while she was taking iodothyryn for her goiter, and again became pregnant. Afterward she ceased all thyroid treatment and she never became pregnant again.

In the next case, the patient had never conceived once during the seven years of her married life. She had a small goiter. She was put on iodothylin treatment, and in three months she became pregnant. Unfortunately, she aborted at the fourth month. She did not resume the thyroid medication and she never became pregnant again.

The young wife of a merchant consulted Weil because she had never conceived once in the three years of her married life. There was slight enlargement of the thyroid body, otherwise everything was normal. She took iodothylin for two months without success. The treatment was suspended for three months and then resumed, four tablets every day. In eight weeks she became pregnant.

In as much as the thyroid body is a secreting organ which secretes an iodine-compound in the form of an albuminate and throws it into the blood-stream, thus acting as a hormone and influencing distant organs, it is not unlikely that, in sterile women, a disturbance of this hormone-action of the thyroid on the ovary is at the bottom of the sterility, and that thyroid medication can correct this abnormal activity. Weil does not employ the method when the sterility is clearly due to some mechanical trouble, which is amenable to surgical treatment.—*Deutsche Med. Zeitung.* McSHANE.

THE WAY TO VACCINATE.—The theories attaching to vaccination have never been entirely reduced to any single belief and the bacteriologists yet work for the element in the viruses of the various diseases which is responsible for the contagium and for the processes of the variety of symptoms complex found in the different modifications of what is believed to have been an original source.

The principal deduction rests in the acceptance of a demonstrated fact that the inoculation of a subject with vaccinia modifies or prevents smallpox in so large a proportion of instances as to make vaccination an almost certain preventive of smallpox.

Jenner began, in 1768, to establish the protective advantages of vaccinia inoculation, and succeeded so well that until the present time his views have carried in all parts of the world, the only progress in vaccination having been along the lines of the material used to effect the procedure.

The correlation of smallpox and vaccinia is complete, for not only does vaccination protect against smallpox, but subjects recovered from smallpox do not accept vaccinia.

Vaccinia, then, prevents or modifies smallpox, and is a desirable procedure in protective medicine. Its usefulness has reached a point beyond mere desirability, and in some countries the practice of vaccination has become a hygienic measure enforced by law. In Germany, for example, vaccination has become so well established that smallpox is almost excluded among the infectious diseases.

Where the police power of health authorities is less than in Germany, opposition to vaccination has prevented its universal practice, and the result has been that smallpox still prevails, in certain countries, as a frequent local epidemic.

The general education of the public is gradually overcoming prejudice, however, and in time all children will be vaccinated early, rather than under health regulations at the school age, as at present.

More than mere prejudice has occasioned the objection to vaccination. The procedure has been surrounded with certain practices which have carried unnecessary dangers.

Formerly vaccination was conducted with scabs and virus taken from human subjects, often without any care as to the source of the vaccin. All kinds of infection resulted, even syphilis and leprosy being in the list. Even when bovine vaccin was used, its derivation was uncertain and the foulest sort of sources afforded material for the procedure, with the result that a long list of sequels made vaccination a dreaded experience.

Even recently the expectation of disagreeable symptoms from vaccination was presented to the subject and in the symptomatology of vaccination are related certain phenomena that are undoubtedly rather the result of the vaccination than of the vaccinia.

At best, the vaccin material is open to criticism for its impurities, and even under present regulations the preparation of commercial vaccin does not preclude the possibility of bacterial infection outside of vaccinia inoculation. The vaccin is now derived from cattle, usually heifers, kept as clean as possible, and the lymph is taken from clear vesicles, before clouding takes place. Such lymph is either collected on bone points, dried and placed in sterile tubes, or the lymph is held suspended in glycerin and placed in aseptic receptacles. The glycerin is employed for the purpose of preventing bacterial growth in the vaccinia solution, while it is the accepted vehicle for carrying the vaccin, as it is not antiseptic enough to destroy the virus of the vaccin.

The common practice in vaccinating is to excoriate a small area of the skin until the lymph flows, then to rub in the virus, allow it to dry, and protect the wound with some dressing, usually a shield of transparent celluloid, with perforations for air space. The operation itself is commonly performed with a lancet, bone point, scarifier, or drill (like that of Von Pirquet).

Some operators are aseptic in their technic, cleaning the area to be vaccinated by washing, sponging with alcohol, and the instruments are sterile.

Most operators, however, once the operation is performed, leave the rest to the individual who has been vaccinated. The accepted process of vaccination allows a certain period for the virus to "take," varying from three to ten days. The vesicle forms within five or six days as a rule, and then the disagreeable symptoms set in, intense itching (often satisfied by scratching), rigors, elevation of temperature, malaise, with a very marked local reaction. This is evidenced by a red areola about the vesicle, or vesicles; swelling, which may be extensive; pain of circumscribed type. The vesicle clouds, and in two or three days turns yellow, or may become hemorrhagic, and in about ten to fourteen days crusts. Usually the crust forms on a pustular area, somewhat larger than the original vesicle. When the crust falls the first time, there is usually an angry, pouting, superficial ulcer, which gradually heals with a pit, or pock mark, deemed the evidence of a successful vaccination.

Now, the writer desires to submit that this whole process is wrong in principle; that a procedure aimed at a hygienic precaution should carry with it as little hardship and discomfort as possible; that if the clinical history of the variolous group is studied, there is no need for a series of disturbances in vaccination which can easily be prevented if a method is followed which will discount the evils of vaccination. When the papular eruption of smallpox appears, there is no hesitancy in pronouncing the disease. It is *smallpox*. As soon as the papule is transformed into a vesicle, the attending physician does everything in his power to prevent pustulation and the consequent pitting. The skill in the treatment of smallpox is largely measured by the ability to prevent pitting, and pitting can hardly be prevented unless the local infection with pus organisms is forestalled.

In chickenpox, *the usual eruption stops at a vesicle*, which by

intelligent practitioners is freely opened and the *site of the vesicle dressed with antiseptics to prevent pustulation.*

Why, then, should the vaccinia lesion be allowed to go further than the vesicle? Why should a pustule be necessary for vaccination, if it is not necessary for smallpox or for varicella?

Vaccinia is a disease of rather certain incubation period. When the vesicle forms at the site of the inoculation the person inoculated with the virus has vaccinia, just as much as the individual with a chancre has syphilis.

The vaccination ought to stop at the vesicle.

If this is not true, then, why is it that extraordinary precautions are used in securing bovine vaccinia lymph, to make sure that the vesicles are broken and the lymph removed *before the content of the vesicle becomes cloudy.* If vaccinia in the heifer is complete enough to be reinoculable from the lymph in a clear vesicle, is it not logical to conclude that vaccinia is complete in the human subject at the same stage?

We propose that the vaccination process should stop at the vesicle and in order to make sure of this, the physician should see to it that the eruption stops with the vesicle, by purposefully breaking the vesicle and treating the site antiseptically.

This practice the writer has followed for nearly twenty years, with a happy satisfaction in the knowledge that the proverbial "sore arm" is prevented and that the scar of vaccinia is either avoided, or is reduced to a minimum.

The way to vaccinate, then, should be based upon the following technic:

1. Clean the area thoroughly with soap and water; follow with alcohol sponging. Be sure the alcohol dries off well, so as to leave the area aseptic but not antiseptic.

2. Vaccinate by any aseptic method; the writer usually employs the point coming with the glycerinized vaccin and the area is scarified.

3. Cover the area of vaccination at once with sterile cotton and hold in place with collodion. A shield may be used over this dressing to prevent its removal.

4. Conduct the vaccination as you would any other surgical case. Have the patient return on the third, fifth and seventh days. If there are no symptoms of itching or of pain, do not remove the

dressing until the fifth or seventh day. On the day the dressing is removed, if there is no sign of vesiculation, reapply sterile dressing as before. On the seventh day, look again for the vesicles; if none, repeat dressing. Do this every two days until the tenth or twelfth day. If no vesicles show, revaccinate and proceed as before.

5. If the vesicle shows at any dressing, brush the surface with tincture of iodine, or with pure alcohol, then carefully clip the top off of the vesicle with a pair of sterile scissors. Paint the base of the vesicle with a thirty grain to the ounce solution of nitrate of silver, or with pure carbolic acid (followed with alcohol). Put on a sterile dressing, or an antiseptic dressing. Change the dressing every two days.

At the end of four or six days, there is a dry crust (*not pustulating*). Now the patient can take care of the wound, with a dressing of ichthyol (20 grains), phenol (10 grains), ointment (oxid of zinc ointment, 1 ounce), changed night and morning.

The evils of vaccination, particularly those incidental conditions following the pustulating arm, are prevented by such a procedure. There can be no impetigos, and multiforme erythema and its congeners cannot result from pus absorption.—DYER, in *Jour. Trop. Dis. and Prev. Med.*, December, 1913.

THE CONFERENCE OF LOCAL AND STATE HEALTH OFFICERS, MAYORS, ETC.,

NEW ORLEANS, APRIL 20, 1914.

This conference was held at the Auditorium of the New Orleans Association of Commerce, and was conducted under the auspices of the Louisiana State Board of Health, with Dr. Oscar Dowling presiding.

DR. JOSEPH HOLT, of New Orleans, delivered an address of welcome, and was followed by Dr. Dowling, who indicated the objects of the gathering.

DR. A. H. GLADDEN, of Monroe, presented a paper (printed elsewhere in this JOURNAL) covering the rights of the community to health protection.

DR. G. FARRAR PATTON, of New Orleans, discussed the laws on vital statistics for various States, and urged the importance of this phase of Public Health work.

DR. M. L. GRAVES, of Galveston, spoke on hookworm and pellagra, using this text to emphasize the many problems before the South in matters of public health.

DR. J. A. FARRELL, of Washington, D. C., urged the wider appointment of all time health officers, as among the chief desiderata in the health problem of the South.

MR. J. H. O'NEILL, of New Orleans, Sanitary Engineer, explained sewage disposal from the viewpoint of the engineer.

DR. G. C. CHANDLER, of Shreveport; DRs. W. H. SEEMANN and W. T. O'REILLY, of New Orleans, and DR. T. T. TARLTON, of Grand Coteau, also spoke, severally, on health topics, related to health records, bacteriological work of health boards, methods of registrations of birth and death and their betterment, and education in public health.

Quite a number of speakers appeared on the program for the afternoon session.

At night, DR. B. S. WARREN, of the Public Health Service, read an interesting paper on "Industrial Conditions in the Protection of Diseases." He covered many phases of the question, bringing into his discourse much of practical application.

DR. WM. C. WOODWARD, Health Officer of Washington, D. C., followed, and spoke on the obligations of legislative bodies in mat-

ters of health protection. He emphasized the relation as one of opportunity.

The session was concluded with exhibits, through moving pictures, showing the evils of nostrums, and showing the details of meat inspection as practiced in various places.

A further Conference of Southern Health Officials was held on April 24, dealing particularly with the negro problem. The JOURNAL will have a further report on this Conference in its next issue.

Louisiana State Medical Society.

NEW ORLEANS, APRIL 21, 22, 23.
THIRTY-FIFTH ANNUAL MEETING.

“Be just and fear not.
Let all the ends thou aim'st at be thy country's,
Thy God's and truth's.”

—King Henry VIII.

The meeting of the Louisiana State Medical Society was announced for four days, beginning on Monday with a joint session with the Conference of Health Authorities under the auspices of the Louisiana State Board of Health. Through some misunderstanding, however, a disagreement resulted, and the program of the Conference was carried out at the Auditorium of the Association of Commerce, while the State Society opened and went forward at the Grunewald Hotel. The sessions were well attended in spite of the poor acoustic qualities of the meeting hall. The registration totalled nearly three hundred and fifty of a total membership of about 800.

The country parishes were well represented, and Orleans Parish contributed a fair quota. Several distinguished guests were present at the meeting, notably Dr. B. S. Warren, of the Public Health Service; Dr. Wm. C. Woodward, Health Officer of the City of Washington, and Dr. M. L. Graves, President of the Texas Medical Association and Professor of Medicine at the University of Texas.

Dr. Fred J. Mayer presided over all the scientific sessions, and succeeded in finishing his program after many vicissitudes. A

number of papers announced were not read, through the absence of the readers.

The discussions throughout were excellent and full of merit, making the sessions all the more valuable.

The main points of the several sessions and papers are submitted in digest for the JOURNAL's readers.

It is a matter of regret to the JOURNAL that its many readers in the State will be deprived of the service of the publication of the Society's papers in full through these columns. The House of Delegates, however, came largely instructed to select a projected publication for the future service of the Society, and the JOURNAL is not willing by animadversion or direct appeal to attempt at this time any consideration by the members who were not present nor aware of the project.

To our friends who have followed our service for the past eighteen years, we submit that the JOURNAL was indicted, convicted and sentenced without notice of trial, and that we have accepted the situation in the hope that the Society may know better than we what its needs may be, while we must reserve the opinion that as no criticism of our publications for the Society has ever been received by us, we have presumed that we have fulfilled our obligations, so far as the routine administration of the Society's officers hitherto has permitted.

The JOURNAL solicits the patronage of its old friends, notwithstanding, and we shall be found at the same old stand, purveying scientific medicine, with the honest intention of serving the State of Louisiana and the profession of medical men therein.

The Public Meeting on the night of April 22 was well attended and was made noteworthy by the address of Dr. M. L. Graves, of Galveston, who delivered an oration on the aspects of preventive medicine at the present time. His subject was erudite, comprehensive and forceful in suggestions for child welfare, other defectives and for the modern application of preventive medicine.

President Fred J. Mayer spoke extemporaneously on the "Family Physician" and entertained his audience for over an hour with his inimitable humor and fluent oratory.

The final session closed on Thursday afternoon, April 23, and was followed that night by a smoker, which was well attended.

The new officers elected are as follows:

President, George S. Bel, New Orleans.

First Vice President, J. Ashton Blanchard, Shreveport.

Second Vice President, J. D. McAnn, Atkins.

Third Vice President, E. W. Mahler, New Orleans.

Secretary-Treasurer (for 2 years), L. R. DeBuys, New Orleans.

Councillors by Congressional Districts:

First, W. H. Knolle; Second, Homer Dupuy; Third, L. J. Menville; Fourth, H. H. Smith; Fifth, O. W. Cosby; Sixth, J. W. Lea; Seventh, C. A. Gardiner; Eighth, E. L. Henry.

Delegate to A. M. A., Dr. H. D. King, New Orleans.

NOTES OF THE MEETING.

The Pan American Surgical and Medical Journal (proposed appearance June 1) selected as official organ of the Society. The contract obligates the *Journal* to publish the transactions of the Society within 90 days of the meeting; to submit its advertising to the censorship of the Society, with the understanding that no advertising of a medical nature will be accepted which has not been favorably passed by the Council on Pharmacy of the A. M. A.; to include the President or Secretary of the Society on the editorial staff, as also the chairmen of sections. The contract provides a bond of \$2,000 for the fulfilment of agreements.

The contract proposed provides specifically that the Society shall have no financial liability to the *Journal*, in any way, and that the subscription to the publication shall be voluntary on the part of members who shall pay the *Journal* direct for such subscriptions.

The dues of members hereafter are to apply entirely to the service of the Society, and do not cover the subscription to the official journal, as heretofore.

The Society adopted resolutions proposed by Dr. C. G. Chandler, health officer of Shreveport, covering the methods employed in the United States Census record of statistics in the mortality rate of negroes and whites and of nonresidents of the State availing themselves of institutional treatment in Louisiana in cases of accident and disease, where both are prejudicial to low rate of death.

The following editorial in the *Times-Picayune*, of April 25, summarizes the purpose of these resolutions so admirably that we quote:

MORTALITY STATISTICS.

“The house of delegates of the Louisiana State Medical Society has approved the proposition of Dr. George C. Chandler, health officer of Shreveport, that the Federal Government in all future vital statistics and reports give the figures separately for whites and blacks. The manner in which these statistics have hitherto been presented, by the totals only, is misleading as to both races; it confuses the subject, and interferes with and obstructs much sanitary work, especially among the negroes, by clouding the situation. It affects the South unfavorably, tending to keep out would-be white settlers under the false pretense that this is not a healthy section for white settlers, whereas the correct figures would demonstrate clearly to the contrary. As for the negroes, the correct figures will show that they are as healthy in the Southern as in the Northern towns, and not suffering from any excessive mortality.

“The Medical Society also approved the other idea of Dr. Chandler, that the mortality of a city be calculated on residents, and should not include those who are brought in sick or wounded from neighboring States and towns because certain cities have extraordinary medical and hospital advantages. As we have noted, this plan has already been adopted in Great Britain and other countries; it should be adopted in the United States, as it will entail very little trouble or confusion. There is no reason why a city should be reported as unhealthy or suffering from a high death rate because it is a great medical center.

“The arguments in favor of this new and correct system of vital statistics are so convincing that the only surprise is the failure to adopt it long ago. Now that the matter has been taken in hand and is being pushed, there should be no reason to doubt that the former defective statistical methods will be dropped. Southern cities like New Orleans will then be able to show that both for whites and blacks they are as healthy and record as few deaths proportionately as any in the country. But to put this change into operation at as early a day as possible it should receive the approval and support of all the Southern health boards and officials, and all Southern health and sanitation conventions held. It is true that the whole country is interested in securing correct vital statistics; but the South is most interested because of its large negro population, which makes the figures, given as they now are by totals for both races, more misleading.”

LOUISIANA STATE MEDICAL SOCIETY.

THIRTY-FIFTH ANNUAL MEETING.

DR. GEORGE S. BEL, New Orleans, read on

“DISEASES OF THE AORTA, WITH SPECIAL REFERENCE TO ANEURYSM.”

Almost all aneurysms of the aorta are the result of syphilis. The lesion preceding the aneurysm is primarily in the outer muscular wall and consists of a gummatoid infarction. We do not know what percentage of patients who have syphilis develop syphilitic aortitis, but undoubtedly it is quite common and frequently unrecognized, as shown by autopsy. The essential signs and symptoms of syphilitic aortitis are precordial pain, paroxysmal dyspnea, tachycardia, increased pulsations of vessels of the neck, dilation of the aorta and the Wassermann reaction. It is important to treat all

cases of syphilitic aortitis early and properly in order to avoid the formation of aneurysm. Weeks and often months precede the actual aneurysmal formation after the syphilitic aortitis began which, in most of the cases, affords an opportunity for the clinician to recognize the specificity of the aortic disease, and thereby anticipate the formation of aneurysm by instituting syphilitic treatment.

DR. I. I. LEMANN, New Orleans, read on

“ANEURYSMS OF THE AORTA.”

Pointed out the importance of certain methods of examination to detect aneurysms of the aorta.

DISCUSSION.

DR. J. B. GUTHRIE, New Orleans: Without careful percussion of the base of the heart down in the first interspace, the practitioner is going to fail to diagnose cases of aneurysm, and the cases are not likely to be investigated from a radiologic standpoint. I cannot agree with the statement that of all means of physical examination percussion is the most valuable. It is undoubtedly to the average practitioner if one confines himself to one plan of examination, but I believe if we had to use but one method and X-ray every case, which is manifestly impossible with the facilities we have at hand, we would have to fall back on the selection of cases for further investigation by means of percussion. The importance of percussing the base of the heart in the region of the manubrium sternum is something we cannot emphasize too much from a diagnostic standpoint.

From the standpoint of therapeutics, we must determine the active syphilitic disease or not in cases of arteriosclerosis. We must institute treatment, if possible, in the prophylactic stage, when a certain amount of aortitis exists, where manifest arteriosclerosis exists in the peripheral arteries, we are not doing our duty to these patients unless we investigate them fully from the point of view of syphilitic disease.

DR. ADOLPH HENRIQUES, New Orleans: It is established beyond doubt that we get more information with the X-ray in the mediastinum than by any other single means, but in order to secure this information we have to make an examination in the proper fashion. Examination should be made with the fluoroscope and the patient examined from several directions. He should be examined from the front, back, from the side, and also a very important position in

what we term among X-ray men the oblique position, with the tube behind the patient to the left and looking diagonally through. If this is done with a knowledge of what constitutes the normal appearance of the aorta, I think I am safe in saying we can recognize 90 per cent. of aneurysms.

DR. RANDOLPH LYONS, New Orleans, read on

“CEREBRO-SPINAL MENINGITIS.”

In my paper I report twenty-two cases. There were eleven deaths in the series. As one of the fatal cases did not receive any serum, it is omitted. The mortality for the twenty-one cases treated with serum was 47.6 per cent. If three cases, which were practically moribund and died in less than forty hours are excluded, the death rate may fairly be reduced to 38.8 per cent. Of the remaining seven fatal cases, two had complicating pneumonias, and a third acute nephritis. Clinically, five of the cases died of uncomplicated meningitis. Unfortunately no post-mortems were obtainable. Nine of the eleven fatal cases died in the first week of admission. Even barring the moribund cases, a mortality rate of 38 per cent. may be considered rather high under serum therapy. The disease, however, was in many of the cases unusually severe. Another factor which may play a part in the mortality rate is race. Statistics gathered from the recent epidemics in the South and Southwest have uniformly shown a higher death rate in the negroes than in the whites, though both races had the benefit of the serum. Galveston was the only exception to this rule. This apparent lessened resistance to the disease among negroes may be due less to racial qualities than to insanitary living and ignorance. The negro usually waits until the disease is well advanced before coming to a hospital.

Of the eleven cases that recovered, only two showed any after effects of the disease. One case was totally deaf and the other partially deaf.

The hope is that with increasing knowledge in respect to the effects of the withdrawal of spinal fluid upon the system and refinements in the methods of intraspinal medication, the serum treatment will show itself to be more and more highly specific as time goes on.

DISCUSSION.

DR. M. L. GRAVES, Galveston: It occurs to me, the mortality mentioned by Dr. Lyons is entirely too high and must be explained

on the ground the patients received the serum treatment, either after the disease had progressed too far or other conditions that I am unable to account for. The reduction of mortality by the prompt, efficient and repeated serum therapy is very great.

DR. M. J. CARRUTH, Point Coupee: I would like to ask the author of the paper what he considers a large dose of the meningococcic serum injected into a child or an adult.

DR. LYONS (in closing): In my series of cases we had to deal with adults. I consider large doses of the serum anything over 40 c.c., but it depends upon the amount of spinal fluid withdrawn.

DR. E. H. MARTIN, Hot Springs, Arkansas, read on

“OBSERVATIONS ON PELLAGRA AND ITS TREATMENT.”

In the large majority of cases the salvarsan treatment of pellagra leads to an uninterrupted recovery without unpleasant symptoms. In some cases the intense pains in the lower extremities, and occasionally in the arms, from neuritis may be very persistent and such neuritis may continue for a time after the treatment has been completed. This is strictly a pellagrous symptom, as it does not occur in such cases of cerebro-spinal lues similarly treated.

A few cases will be met in which the infection is so intense, although the symptoms may not be correspondingly severe, that little impression seems to be made and the patient finally dies of the disease. These also are rare, and if specific treatment with soamin or salvarsan or both is used in all cases you may confidently expect to permanently cure over 80 per cent., taking cases as they come.

DR. J. T. HALSEY, New Orleans, read on

“FISHER’S ALKALINE SALINE THERAPY.”

Contrary to the impression given by many of Fisher’s own statements, many cases of general edema and of nephritis are not benefited by this alkaline-saline therapy and a certain proportion of such cases will be unfavorably influenced by it.

In spite of my own lack of success in applying this treatment in one case, I shall for the present continue to try it out cautiously, but fairly, and think it should be tried in cases of general edema or nephritis which do not respond to our usual methods of treatment.

DR. CHARLES V. UNSWORTH, New Orleans, read on

“INSTITUTIONAL TREATMENT OF NERVOUS AND MENTAL DISEASES.”

Of paramount importance in institutional treatment is the educational, industrial and moral training patients receive. Under education, I include physical as well as mental training inasmuch as the two are more or less interdependent. Industrial training should be directed towards encouraging contentment and industry by occupations suitably selected according to individual tastes. Patients should be assisted to lead well regulated lives, in order that they may be led to forget the irksomeness of confinement, and helped to believe that they are taking some part in the work of the world. In the Louisiana Retreat the results secured from industrial training have been most gratifying.

DR. ISIDORE COHN, New Orleans, read on

“RESUME OF PRESENT STATUS OF OSTEOGENESIS.”

For more than a year I have carried on a series of experiments on dogs, and at the present time more than sixty animals have been operated on. I am able to state that periosteal transplants or flaps have not reproduced bone in a single instance. I do not believe that periosteum is essential to the life and growth of the transplant, nor do I believe that it is essential to the repair of the defects in bone.

Conclusions: 1. Periosteum is not an osteogenetic agent. It serves to protect, to guide the growth of and nourish bone. 2. Bone transplants live and grow; they have an inherent osteogenetic function. 3. In the light of our present evidence, there should be a revision in our teaching in regard to the repair of fractures. Callus is not a product of the periosteum, but of the cortex and endosteum. The autogenous bone graft or transplant is destined to a greater field of usefulness.

DR. JOHN F. OECHSNER, New Orleans, read on

“AUTOPLASTIC BONE GRAFTING, WITH EXHIBITION OF LANTERN SLIDES.”

Conclusions: Autogenous transplantation of bone is an established surgical procedure. Whether dependent for growth on periosteum, or upon the grafts as a scaffolding for the development of

blood vessels, transplants for the present should be provided with both, particularly plenty of periosteum. Non-absorbable suture material had better be avoided, wherever possible dove-tailing, and absorbable material used in their stead. It is highly probable that organized bone tissue will, in the future, take the place of foreign material, now used in the Lane plates for fractures. For the present the thorough applicability for autogenous grafts has not been established. Bone grafting should never be done in the presence of an active infection. The most rigid asepsis should be exercised. Bone grafts owe their virility and ultimate success probably to the rapidity of blood vessel development plus the presence of osteoblasts wherever they may be.

DR. H. W. E. WALTHER, New Orleans, read on

“MODERN DIAGNOSTIC METHODS IN GENITO-URINARY SURGERY.”

The foundation of our diagnostic methods in genito-urinary surgery is urinalysis. We have, in the perfecting of the Buerger cystourethroscope, an instrument by means of which it is possible to obtain absolutely true pictures of the bladder neck and the posterior urethra. The relatively modern progress attained in perfecting the technic of kidney, ureteral and vesical surgery, has made the use of the cystoscope and the ureteral catheter a necessity in the diagnosis of all bladder, ureteral and kidney lesions as well as in the differential diagnosis of many abdominal conditions. The newer methods for determining the functional capacity or activity of the kidneys include cryoscopy, the estimate of the electrical conductivity of the urine, the production of temporary glycosuria by the subcutaneous injection of phloridzin, the production of experimental polyuria and chromocystoscopy, i. e., the elimination by the kidneys of certain color substances, as methylene blue, indigo-carmin and phenolsulphonephthallein. Pyelography is helpful in demonstrating the following conditions: 1. The normal kidney pelvis; 2, the amount of dilatation of the pathologic renal pelvis; 3, the position of the outlet of the pelvis of the kidney; 4, the condition of the calices and pyramids; 5, localization of shadows within the kidney; 6, the differentiation of abdominal tumors and extrarenal shadows; 7, congenital deformities of the kidney, and 8, the condition of the ureters.

DRS. HUME and LOGAN, New Orleans, read on

“TREATMENT OF BLADDER TUMOR.”

Deductions: 1. The surgical treatment of tumors of the bladder, benign or malignant, leaves much to be desired. 2. The need of improved procedures of treatment and the earlier diagnosis of this condition is imperatively to be urged. 3. The high frequency current (Oudin or D'Arsonval) is unquestionably the method of choice in all papillomas that are non-malignant clinically. 4. The high frequency current offers much of a palliative nature in inoperable cancer of the bladder. 5. As a hemostatic it is of unquestioned value.

DR. C. CHASSAIGNAC, New Orleans, read on

“COLLICULITIS,”

discussing especially the etiology, diagnosis and treatment of more or less chronic inflammation of the colliculus or veru montanum.

DR. M. THOMAS LANAUX, New Orleans, read on

“PITUITARY EXTRACT IN OBSTETRIC PRACTICE.”

Pituitary extract should not be given in normal labor. Its use should be limited to cases of primary or secondary inertia, to post-partum hemorrhages and in Cesarean sections as a substitute for ergot. In cases of inertia, in any stage of labor, it should not be employed unless anesthesia is at hand for immediate use and preparation has been made for immediate delivery. When obstructions exist in the second stage of labor small tentative doses of pituitary extract can be given, not with complete delivery by means of the drug in view, but to bring the head within easy reach of a single simple forceps delivery. In the second stage of labor it is a most valuable addition to our resources for the treatment of inertia.

DR. C. JEFF MILLER, New Orleans, read on

“THE NECESSITY FOR AN EDUCATIONAL CAMPAIGN IN CANCER.”

Discussed the advisability of such an educational campaign, and finally introduced the following resolution, which was adopted:

Resolved, That the Society approves of a public educational cam-

paign for the control of cancer and endorses the purposes of the American Society for the Control of Cancer.

It urges the State Board of Health to open its laboratories for the examination of tissue and to supply through its bulletin the necessary details for collecting and mailing specimens, and that the Society appoint a permanent committee on cancer that shall collect data, furnish as a committee articles for the lay press, and encourage the study of cancer throughout the State.

DISCUSSION.

DR. F. W. PARHAM, New Orleans, spoke of the early recognition of cancer and precancerous lesions of the intestinal tract, saying that primary cancer of the small intestine is marked in, at least, 40 per cent. of the cases so as to give rise to obstruction much earlier than in the case of the large intestine. Sixteen cases operated before complete occlusion gave a mortality of 18.7 with thirteen cures; ten cases after occlusion gave 70 per cent. mortality with only three cures.

DR. ISADORE DYER, New Orleans, said it is difficult to catalog all the lesions of the skin which might be listed under the title of precancerous lesions of the skin, for the reason that experience shows that almost any inflammatory process with destructive tissue may end in carcinoma. A destructive lesion of syphilis, a deposit of the gummatous or of tubercle type, or a lupus, persistent over a period of years, may change entirely its local appearance and under the examination of the pathologist show that the lesion has become a true cancer. He emphasized the relation of ordinary dandruff to cancer, stating his belief that fully 60 per cent. of facial epithelioma had this source.

DR. WILLIAM H. HARRIS, New Orleans, said a specific histopathologic picture for the so-called precancerous stage has not been recognized by pathologists, but a careful co-operation between the surgeon and the pathologist in such considerations is capable of bringing forward information of equal value to the patient as if the precancerous stage were a definite entity.

DR. WILLIAM KOHLMANN, New Orleans, discussed the radical (Wertheim) operation for carcinoma of the uterus. Since 1908 he has performed this operation in thirty-two cases, and a good number of these patients have been far beyond the stage where a cure could be expected. Only a very few of them have been clearly within the limit that may be called operable, and these have been cases only operated on in the last three years. In the years 1908 and 1909 he operated thirteen cases, of which three died, three were temporarily improved, and seven were free from symptoms for one or two years. They were all advanced cases.

DR. J. G. MARTIN, Lake Charles, read on

“GUNSHOT WOUNDS OF THE ABDOMEN.”

I have only operated on two cases successfully. One had a perforation of the small intestine and of the bladder. The other had three perforations of the ileum and one of the transverse colon. In the latter case, in which I operated about one hour after the receipt of the injury, the patient would have died from hemorrhage, if not from peritonitis, as active bleeding was going on from one of the mesenteric vessels. I feel both of these patients would have died if I had not operated on them.

DR. L. B. CRAWFORD, New Orleans, read on

“TREATMENT OF COMPOUND FRACTURES.”

and spoke in favor of the use of Lane plates in the treatment of these fractures, and reported four cases. The results obtained strengthen him in his conviction that this method of treating compound fractures is worthy of some note.

DR. E. DENEGRE MARTIN, New Orleans, read on

“POST-OPERATIVE MANAGEMENT OF SURGICAL CASES.”

In summing up his conclusions from personal observations, he is led to believe that results depend upon a more intimate knowledge of patients and the better management of operations, upon the exercise of judgment, which can be gained only by experience, not the mistaken experience of the useless administration of unnecessary drugs, but the experience of non-interference.

DR. ALLEN EUSTIS, of New Orleans, read on

“DIETETICS OF TYPHOID FEVER.”

In outlining a diet the fundamental principles of nutrition should be constantly kept in mind, viz., that fats and carbohydrates are sources only of energy, while proteins are tissue builders, serving to replace the tissue burned up in the body. Also, proteins are utilized only very sparingly as sources of energy, provided an abundance of carbohydrate material is available. Excess of protein, when not absorbed from the intestinal canal, undergoes putrefaction, with the formation of toxins which are capable of producing pyrexia, if not detoxicated by the liver.

The specific lesion of the bacillus typhosus is to be found in a proliferation of the endothelial cells throughout the body—in Peyer's Patches, liver, bone marrow, spleen and mesenteric glands. This leads to a form of coagulation necrosis as shown by Mallory, with formation of a slough in Peyer's Patches and subsequent ulceration, which is the usual lesion visible to the naked eye. However, there are histological changes in the liver and this organ must be relieved of the work of detoxicating intestinal toxins of protein origin. It has been the experience of the writer that if these toxins are prevented from forming by a suitable diet (the presence of indican in the urine serving as a guide), that the average typhoid patient will have a clean, moist tongue and a good appetite.

At least 1,800 calories should be given in twenty-four hours in three meals, fruit juices being given between meals. Buttered toast should be allowed, as it is easily digested and leaves very little residue. Patients should be allowed to sleep at night and not be awakened for nourishment, which is unnecessary if three full meals are given during the day. A breakfast of soft boiled eggs, toast, oatmeal gruel with butter, sugar and cream, and a cup of coffee and milk or cream will be digested in approximately the same length of time as a glass of milk, and with less residue. Inasmuch as it requires twenty-nine ounces of the ordinary broth to yield a hundred calories, which will be yielded by four ounces of grape juice, or five ounces of bean soup, the older method of feeding broths is to be deprecated. A variety in the diet should be insisted upon, which can be selected from corn meal mush, buttered toast, poached eggs, cream of celery, pea, bean or corn soup, orangeade sweetened with sugar of milk, chocolate, peppermint and molasses candy,

jellies, nabisco and vanilla wafers, custards, rice boiled in broths for three or four hours, tapioca and corn starch pudding and beer and claret with meals.

An abundance of water should also be insisted upon so as to dilute the circulating toxins, the specific gravity of the urine serving as a guide, the aim being to keep the specific gravity below 1018. In the two cases reported representative of a large number of cases treated during the past ten years along these lines, the patients gained in weight during the progress of the disease. They nourished well and their tongues were moist and clean. The daily nitrogen in the urine of one case was 6.5 gms. corresponding to 40.6 gms. of protein burned up. The experience of the writer bears out Coleman's statistics that the high calorie feeding of typhoid patients does not predispose to hemorrhage or perforation, while they are better able to combat these complications if they do arise.

COMMUNICATION TO MEMBERS OF THE STATE SOCIETY.

New Orleans, La., May 1, 1914.

To the Members of the Louisiana State Medical Society:

You are probably now informed that the House of Delegates at the last meeting of the Society authorized a contract for the publication of the proceedings in a journal which has announced the intention of making its initial appearance on June 1.

The arrangements with the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL permitted the dissolution of all agreement at any time and with no further notice the JOURNAL ceased its official connection with the Society at the time of the meeting, with the understanding that the May number should be mailed to all members on the list furnished by the Society.

Under the new arrangement the proceedings of the Society are to be published by the new journal, but there is no obligation on the part of the Society so far as the journal subscription is concerned. In other words, all members who have paid their dues for the year 1914 will get the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for the first months of the year ending with May; after that they will receive such journals as they may pay for, or such as may be sent free of cost.

We are desirous of maintaining and continuing the relation to the members of the profession in the State, including those who

are members of the State Medical Society. We know that many who were not present at the New Orleans meeting have had no part in the action which, without notice, left the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* in a position of attack and repudiation without the opportunity of defense. We have always believed that our service (continuous under agreement for the past fourteen years and more than co-operative before that) had been honest and adequate so far as the officials of the Society would permit, and we still believe that the membership of the Society has no serious motive in what appears to have been a successful political exploitation of the Society for a new venture.

We are desirous of continuing your name on our subscription list and, therefore, in good faith offer to continue sending the *JOURNAL* at the rate of one dollar, or at the same price at which the *JOURNAL* was furnished members through the Society.

The *JOURNAL* is independent of outside commercial interests of all sorts and is owned and conducted by a group of medical men who have been personally known to most of you for many years. We invite co-operation and criticism of our pages and of our management, at all times, and we want you to know and feel that the *JOURNAL* is conducted for the profession of the State and of the South.

Your contributions are welcome, as well of original articles as of news or other items of medical interest. We shall endeavor to devote the pages of the *JOURNAL* to the best medical literature we can obtain and the bulk of space hitherto devoted to the State Society at the sacrifice of other departments will from now on be employed in material of service to the subscribers whom we serve.

We are entirely at your service and trust that we may command your interest in our endeavor.

Very truly yours,

THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL,
CHARLES CHASSAIGNAC AND ISADORE DYER, Editors.

Medical News Items.

MEETING OF JACKSON STATE BOARD OF HEALTH.—At a meeting of the State Board of Health at Jackson, Miss., on April 2, Dr. E. C. Catchings, of Woodville, was chosen president, and Dr. David McDowell, of Jackson, state factory inspector. It was announced at the meeting that the date for the annual examination of applicants to practice in the State has been set for the first week in June.

HUTCHINSON MEMORIAL NURSES' HOME GRADUATES.—The Hutchinson Memorial Nurses' Home, an auxiliary institution of the Charity Hospital, graduated ten nurses from that institution after they had completed a two-year course. There were appropriate exercises, presided over by Dr. C. D. Wilkins, superintendent of the Charity Hospital. This is the last class to graduate after two years, as in the future a course of two and one-half years will be required. The graduates were: Misses Natalie Breaux, Gertrude Gastauer, Teresa M. Klein, Anna S. Reilly, Frances A. Carville, Angele M. Darby, Helen M. McLeod, Katherine D. McLeod, Helen H. Lancaster and Neil Freund.

GIFT TO NORTHWESTERN UNIVERSITY MEDICAL SCHOOL.—A gift of \$1,000,000 from James Dering to Northwestern University Medical School was recently announced. The money will be used in establishing clinics to furnish medical aid to the poor. The new free clinics will be at Wesley Hospital, in Chicago.

THE FRANKLIN PARISH MEDICAL SOCIETY met in regular session on Monday, the 13th of April, with the following members present: Dr. D. D. Gill, president; Dr. H. B. Womble, Dr. C. S. Wilson, secretary and treasurer; Dr. W. A. Mecom, Dr. R. L. Segrest, Dr. C. L. Guice, Dr. C. M. Jarrell, Dr. A. J. Reynolds, Dr. G. W. Durham, Dr. E. S. Little. Program: Paper on "*Pneumonia*," by Dr. Little, which was very interesting, and the discussion following the reading of the paper brought some very important points to the attention of the society—namely, the need of treating the patient rather than the disease, and the need of a vast variation of the kind of treatment instituted, never forgetting the fact that you may overtreat your patient as well. Paper by Dr. D. D. Gill, on "*Measles*," was rather a synopsis, yet it contained the most im-

portant features relating to the disease; the discussion of the paper was very thorough in view of the fact that there is an epidemic of measles in this parish at this time. Paper on "Wounds," by Dr. Reynolds, was one dealing with the class of wounds usually found in country practice, the features of which were the nonuse of water in cleansing fresh wounds, instead of which he recommended the use of swabbing the wound with tincture of iodine and alcohol, equal parts of each, and then applying a dry dressing. The use of hydrogen peroxide was condemned for use in wounds, as he thinks that it can only do harm. The discussion of this paper was very lengthy owing to the fact that a large number of those present could not agree entirely as to the effects of dioxygen as a mechanical agent for cleansing debris from wounds. The attendance was the best that the present society has ever had, and the interest was indicative of future success.

THE SOLLY TUBERCULOSIS SOCIETY.—A society for the advancement in scientific treatment and prevention of tuberculosis was formed on January 24, 1914, and named the Solly Tuberculosis Society, Colorado Springs, Colo., in honor of the late Dr. S. Edwin Solly of that city. The first regular meeting of the society was held February 17, 1914.

PAN-AMERICAN MEDICAL ASSOCIATION.—On April 15 a new medical organization formally announced its existence under this name through the daily press. The meeting on the above date was combined with a banquet, at which the speakers were enthusiastic over the prospects of the new body. Officers were installed as follows: Dr. S. W. Stafford, president; Drs. J. A. Estopinal, C. G. Cole, C. V. Unsworth, W. E. Mahler, vice presidents; J. J. Wymer, secretary; W. F. Patton, treasurer. The committee in charge of the banquet arrangements was headed by Dr. M. W. Soards, and included Dr. Amédee Granger, J. T. De Grange, W. T. Richards and Charles Gelbke. Dr. De Grange acted as toastmaster.

THE AMERICAN DERMATOLOGICAL ASSOCIATION will hold its annual meeting in Chicago, May 14, 15 and 16. The place of meeting selected for the coming session is the Hotel LaSalle, which will be the headquarters of the Association during the meeting. The subject for general discussion will be the nomenclature of diseases of the skin.

THE NATIONAL DRAINAGE CONGRESS met in its fourth annual convention, April 22-25, in Savannah. An interesting program was provided, including addresses and illustrated lectures by persons of national and international reputation.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION will hold its annual meeting at the Marlborough-Blenheim Hotel, Atlantic City, June 22, 1914. An interesting and instructive program and a large attendance are expected.

A NEW PUBLICATION RECEIVED.—The *Six Counties*, a monthly publication devoted to the interests of the Clarksdale and Six Counties Medical Society of Mississippi, has issued its first publication and has been received by the JOURNAL. The JOURNAL offers its best wishes for the future welfare and success of this undertaking.

THE UNITED STATES PUBLIC HEALTH SERVICE, in conjunction with the Louisiana State Board of Health, is anxious to obtain information regarding the subject of malaria and has sent out inquiry cards to every physician in the State in order to obtain same.

STUDY OF ANIMAL DISEASES.—The Rockefeller Institute for Medical Research announced recently that John D. Rockefeller had added \$1,000,000 to the general endowment fund of the institution, to be devoted to the study of animal diseases, and that James J. Hill had pledged \$50,000, to be used specifically for the investigation of hog cholera. The Rockefeller Institute has heretofore confined its investigation to the field of human diseases, but as animal diseases are as important, because of their close relation to human diseases, the institute has turned its attention to this field.

FARM GIVEN TO UNIVERSITY.—A gift to the University of Illinois of a farm of eighty acres on behalf of the Wesley foundation has been recently announced.

NO MORE THERMOMETERS.—There will be no more "smoking" of thermometers on board of fruit vessels entering New Orleans from Central America and Havana following the opening of the quarantine season, and passengers will be allowed to come through with no other hindrance than such examination as may be necessary to guard the United States, and particularly the South, from infectious or contagious diseases. Special regulations issued by the Department of Public Health and Marine Hospital Service will

apply to passengers arriving from Havana during the observance of conditions there with respect to the bubonic plague.

GOOD HEALTH OF SCHOOL CHILDREN.—After making 2,100 blood tests of the children of the Jefferson Davis Parish of Louisiana, under the direction of the United States Public Health Service, it was announced that there was not a single indication of malaria, and that the general health of the children was most excellent.

TOURO PLANS FOR NURSES' HOME.—At the annual meeting of the Touro Infirmary, held on March 26, it was decided to issue gold bonds in the sum of \$70,000 for the erection of a nurses' home on the square of ground in the rear of the infirmary. The bonds will be issued immediately and the work on the home begun.

FIREPROOF BUILDINGS FOR INSANE.—Dr. Clarence Pierson will present his report to the coming Legislature and will offer recommendations to the effect that no State building for the housing of patients or inmates of any sort should be erected that is not absolutely fireproof. He will hold it criminal to erect buildings for prisoners or the State's unfortunates that are not safeguarded by every precaution against fire.

TUBERCULOSIS RARE IN MISSISSIPPI.—The State Board of Health has prepared some statistics on vital statistics in Mississippi and a large area outside. In 1909-10 the death rate from tuberculosis of all forms in Mississippi was 126.9, compared with 168.7 in the area outside, while the rate from pulmonary pneumonia was 117.2 compared with 146.8 outside. Mississippi leads in number of deaths from hookworm, the rate outside being .1, compared with .4 in Mississippi.

GOVERNOR INSPECTS HOSPITAL.—Governor L. E. Hall inspected the Charity Hospital on March 24 and expressed himself as well pleased with the changes that have been made in that institution and the innovations that have been installed by Superintendent C. D. Wilkins. The hospital hopes to secure a largely increased appropriation at the coming session of the Legislature and the governor's inspection was significant in view of this fact.

MISSISSIPPI STATE MEDICAL ASSOCIATION MEETS.—The forty-seventh annual session of the Mississippi State Medical Association met in Columbus, Miss., on April 13. A most interesting meeting was enjoyed and Jackson was chosen as the meeting place next year.

INTERNS IN NEW ORLEANS HOSPITALS.—The following are the successful candidates for appointment as interns at the Charity Hospital and Touro Infirmary: Charity Hospital—T. B. Bird, H. S. Browne, A. G. Cowles, Claude Dean, C. T. Dufner, W. E. Goodson, J. E. Heard, O. B. Kiel, M. P. Lane, Monte F. Meyer, R. R. Niblack, W. O. Ott, M. L. Oliver, J. M. Perret, R. J. Platt, J. N. Pharr, P. L. Querens, L. J. Robin, L. W. Willis, T. J. McHugh. Touro Infirmary—C. W. Arrendell, R. E. Graham, L. W. Halloway, J. A. Speight, B. J. Wise.

THE AVOYELLES PARISH MEDICAL SOCIETY met in Bordelonville on Thursday, March 26, with the following members present: Drs. S. Y. Couvillon, T. A. Roy, Philip Jeansome, Leon Chatelain, E. A. Peret, R. G. Ducote, G. R. Fox and P. S. Brahic. The next meeting is to take place at Hessmer, June 25.

FRENCH HOSPITAL LAYS CORNERSTONE.—The cornerstone of the new addition to the French Hospital, Roman and St. Ann Streets, was laid on April 16, 1914. When completed the addition will be two stories high and will contain twelve extra beds, a clinic office, waiting-room, registry and all the requirements of an up-to-date hospital. The French Hospital will extend its benefits to the general public. Heretofore it has only included members of the Societe Francaise and to destitute countrymen.

Dr. M. L. Graves, Professor of Medicine at the University of Texas, was a welcome visitor during the meeting of the State Society, at which function he delivered the oration in medicine.

REMOVALS.—Dr. J. A. Shackelford, from Putman, Texas, to Thurber, Texas.

Dr. Gus Schulze, from Shiner, Texas, to 212 Gibbs Building, San Antonio.

Dr. H. Windsor Wade, from Tulane Campus, to Charity Hospital.

Dr. Peter Graffagnino, from 1416 Amelia Street, to Charity Hospital.

Dr. R. H. Blackman, from Monroe, La., to Rochester, Minn., Mayo Hospital.

Dr. S. E. Prince, from Noble, La., to Monroe, La.

American Medicine, from 84 William Street, New York City, to 18 E. Forty-first Street, New York City.

PERSONALS.—Dr. Wickliffe Rose, secretary of the Rockefeller Sanitary Commission, left recently for the British Colonies, where he is to undertake the survey of the field for a campaign against hookworm.

J. H. Kirkland, chancellor of Vanderbilt University, has been elected president of the Classical Association of the Midwest and South.

DIED.—On March 5, 1914, Dr. W. R. Locke, of Carriere, Miss.

On March 22, 1914, Dr. A. O. Hardenstein, one of the best-known physicians of Vicksburg, Miss.

On April 8, 1914, Dr. Alexander F. Chamberlain, professor of anthropology at Clark University, Worcester, Mass.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

Studies Concerning Glycosuria and Diabetes. Frederick M. Allen, A. B., M. D. Harvard University Press, Cambridge, Mass., 1913.

The work here reviewed represents three years of research in the laboratory of Preventive Medicine and Hygiene of the Harvard Medical School. In a measure, it was made possible by the bestowal on the author of the Charles Follen Folsom Fellowship by the trustees of the Proctor Fund by Mr. T. Jefferson Coolidge, of Boston, and by a loan from the Department of Preventive Medicine and Hygiene of Harvard Medical School. That the author fully deserved the support which was given him is well attested in his splendid contribution to medical science, and we hope that other earnest workers will be so encouraged. Those to whom indebtedness is acknowledged for various services are: Prof. A. I. Kendall, Dr. H. L. Amoss, Prof. F. B. Mallory, Dr. Elliot P. Joslin, Dr. Joseph H. Pratt, Prof. Harvey Cushing and Mr. L. S. Brown.

What we consider an unfortunate feature of the book is the absence of an alphabetical index. The table of contents, arranged by chapters in the front part of the book, is the only given means whereby an acquaintance with the subject matter may be had without looking through or reading the entire book. Chapter I, dealing with Glycemia Glycosuria and Glucose Tolerance is along the lines already accepted by advanced workers in this special field.

The physician who desires to be something more than a mere prescriber of drugs will find much incentive thereto within the pages of this book. His conception of diabetes mellitus will be much clearer, and while the whole field is not here covered by the author, still much in-

formation is garnered together from sound experimentation and logical deduction.

The definition of diabetes mellitus given by the author appeals to us: "Diabetes mellitus is the condition resulting from a reduction of pancreatic amboceptor below the requirements of normal metabolism." Further, he says: "The word amboceptor is here chosen as having the best-defined meaning. Possible synonyms may be fixator, fixative substance, intermediary body, or anabolic substance. The idea is of a substance which enters into some sort of relation with food on the one hand and cellular protoplasm on the other, so as to link them in some manner which permits assimilation, and without which normal assimilation is impossible. The relation may be one of vital or chemical union, solubility, absorption, or anything else. In a broad, general sense the hypothesis of such an 'anabolic' amboceptor substance is in line with Ehrlich's well-known hypothesis concerning food assimilation. It is similar to, yet different from, the hypothesis advanced by Cohnheim concerning the function of the substance furnished by the pancreas. Since the insufficient supply of this alleged substance (or substances) is the essential thing in diabetes, and all other things are secondary or accidental, the definition may be tersely stated as follows: Diabetes is deficiency of pancreatic amboceptor."

An ample bibliography, covering 67 pages, adds considerably to the literary merits of the work. While the book is large, inclusive of the bibliography, 1179 pages, it should be in the hands of every student of the subject of which it treats. STORCK.

Case Histories in Pediatrics. By John Lovett Morse, A. M., M. D. Second edition. W. M. Leonard, Boston.

The author states that the number of cases presented in the second edition of his work has been doubled, and that all cases are actual cases met by him. The treatment discussed is that actually followed in the individual case.

The work opens with a discussion of the normal development of the child and with a systematic method of physical examination on which the rest of the book is based.

This examination is presented from the clinical as well as the laboratory side.

The cases are arranged with some degree of order and, beginning with diseases of the new born, include a total of 200 cases, which cover all of the organs, appendages and states of the child at varying ages. Numerous illustrations are given, most of them actual photographs, delineating cases in point.

Next to the actual clinic, the case method of presenting diseases is the most practical, and in this the author has added materially to the opportunity of the student of pediatrics. DYER.

The Medical Epitome Series. Clinical Diagnosis and Urinalysis. By James Rae Arneil, A. B., M. D. Second edition. Lea & Febiger, Philadelphia and New York.

This handy volume is a systematic guide to clinical laboratory methods of diagnosis, dealing with a careful explanation of modern technic, laboratory equipment, accepted methods, with specific directions applying to a wide variety of conditions and diseases. Analytical, bacteriological and practical tests of many sorts are presented and, where possible, illustrations are employed to elucidate the text. The quiz method is satisfied by review interrogatories at the end of each chapter, aiding the student to study the text. The book is more of a guide, however, than a mere quiz compend, and will serve its purpose as a laboratory vade mecum. DYER.

Lectures on Tuberculosis—To Nurses. By Oliver Bruce, M. R. C. S., L. R. C. P. Paul B. Hoeber, New York.

Lectures on Medical Electricity—To Nurses. By J. Delpratt Harris, M. D. (Durh.), M. R. C. Hoeber.

These two books are meant for the nurse especially, but they are written on the plane of average intelligence and may be perused by anyone interested in a simple exposition of the subjects discussed. In the book on tuberculosis many technical terms appear relating to laboratory usage, but this does not detract from the practical advice given the nurse in the general hygienic outlook in tuberculosis, so far as the patient and so far as the nurse herself are concerned.

The book on electricity is apt and timely in putting in the nurses' minds knowledge enough for them to appreciate terms, and even practice applying to the electric instruments and mechanism. The nurse ought not to know too much, and the author has been quite tactful in giving information amply adequate, but not too technical nor too complete.

DYER.

Anatomy and Physiology for Nurses. By Leroy Lewis, M. D. Third edition. W. B. Saunders & Co., Philadelphia and London.

A very happy combined presentation of related anatomy and physiology is satisfied in this text for nurses. The more pretentious authorities have been freely employed for illustrations and general arrangement of subject matter, but the correlation of the subjects in general outline is original with the author. The fact that the work has reached its third edition speaks for its popularity as well as for its success.

DYER.

Outlines of Greek and Roman Medicine. By James Sands Elliott, M. D., Ch. B. (Edin.) William Wood & Co., New York.

The author sets out deploring the general indifference of the medical profession to its history and then undertakes to present a commentary on Greek and Roman medicine from earliest times. The convenient method of dividing the subject into epochs and then considering individuals of particular notice is employed, and with an interesting result, as the comparative customs, influences of different periods, philosophies of medical science are indicated in the running comment.

The work evidences care in references, and, while the subject is treated simply, the information contained will prove of material value to the student of those times.

DYER.

Medical and Sanitary Inspection of Schools. By S. W. Newmayer, A. B., M. D. Lea & Febiger, Philadelphia and New York.

In these days of regeneration in questions of public health, and especially of hygiene in the schools, any authoritative work on the subject will be timely and welcome. The book in review answers this need, and will find a place in the working library of all interested in school children and their care.

The detail covered in this work is far reaching, as every phase of the school and of the child is considered in greater or less degree.

The buildings, administration, the hygiene of the school and its inmates, the particular methods of surveying these things, the individual child and the possible defects of organs, habits, etc., are each discussed, and in a manner both clear and impressive. The size of the book is small enough to make it convenient, and both the print and arrangement of the text admirable for either reference or study. More such simple books with exact information are needed.

DYER.

The Unexpurgated Case Against Woman Suffrage. By Sir Alworth E. Wright, M. D., F. R. S. Paul B. Hoeber, New York.

This essay will not be popular with women standing for all the ideals of suffrage. It attacks the foundation of women's rights to a place by the side of man in the pursuit of affairs. The woman who sits as "a looker on at Athens" will enjoy the book, as we have, for while it presents the strongest sort of arguments against the woman in public places, it carries throughout the highest tribute to the real woman—the feminine woman in the home.

No advantage is taken of the suffragist in the text of this book; the author presents both sides, but in submitting the arguments for suffrage for women he is careful to counter with a mass of forceful propositions to show why women are wrong.

Perhaps the finest bit of logical attack on the whole question occurs in the chapter debating the moral unfitness of woman for public life, where her private, personal and domestic morality are set against the demand upon her sentiment where a sacrifice must be made to meet the public necessities; the woman will usually stand for family first.

Every page bristles with strong and convincing discussion and the militant group finds full consideration. DYER.

The Practice of Medicine. By James Tyson, LL. D., and M. Howard Fussell, M. D. P. Blakiston's Son & Co., 1914.

This is the sixth edition, revised and rewritten, with six plates and 179 other illustrations of Tyson's text-book for practitioners and students with special reference to diagnosis and treatment.

A considerable amount of new matter has been inserted without increasing the size of the book, which is, thus, brought thoroughly up to date. Condensed chapters by authorities will post the reader on the most recent views regarding pellagra, acute anterior poliomyelitis, caisson disease, typhoid and typhus fevers, tuberculosis, diseases of the heart and kidneys, diseases of the pituitary gland, trypanosomiasis, Rocky Mountain spotted fever, diverticulitis, bacteriuria, melanuria, ascularia, phosphaturia, indicanuria, cystinuria, erythremia, diseases of the thymus gland, hypothyroidism and hyperthyroidism, hypertrophic pulmonary arthropathy, osteitis deformans, osteogenesis imperfecta, osteosarthyrosis, and osteocapaly. DUPAQUIER.

Meningococcus Meningitis. By Henry Heiman, M. D., and Samuel Feinstein, M. D., with introduction by Henry Koplik, M. D. Published by J. B. Lippincott Company, Philadelphia and London.

This excellent monograph is founded on a study of cases of meningococcus cerebro-spinal meningitis, which have been treated in the children's wards of the Mount Sinai Hospital, New York, and reflects the methods of study of symptoms, diagnosis and treatment in vogue there.

The aim of the authors has been to present in compact form our present knowledge of meningococcus infection of the meninges.

It is a practical clinical guide, including first only so much of technical detail as can be carried out with ordinary laboratory facilities, and, second, all information on the subject gathered from the most recent sources. DUPAQUIER.

Publications of the Bureau of Social Hygiene. Prostitution in Europe. By Abraham Flexner, introduction by John D. Rockefeller, Jr. **Commercialized Prostitution in New York City.** By George J. Kneeland, with a Supplementary Chapter by Katherine Mement Davis, introduction by John D. Rockefeller, Jr. The Century Co., New York.

These two books open up the project of the Bureau of Social Hygiene, and indicate the method of analysis of conditions contemplated before

any effort at remedy is seriously planned. Both works are frank in the discussion of the subjects and the one of Mr. Flexner goes further than the presentation of observation and of facts. He philosophises over the deductions almost necessary from the study of the varying states of the social evil in Europe.

The book of Mr. Kneeland is more dissertative and the summary in each chapter offers material for analytic presumptions on conditions.

The scope of the subject in hand admits of the presentation of many phases and as the viewpoint of the observer varies, so must the study and the report.

The Bureau proposes the further publication of educational work on the same order, in the near future, on Prostitution in the United States and on the Police System in Europe.

Every physician interested in human motives and in the welfare of his own community should follow the work of the Bureau as indicated in the two books in hand.

DYER.

Publications Received.

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Le Traitement des Stenoses Aigues du Larynx, par le docteur Guillermo Zorraquin.

The Wassermann Reaction in Cancer, by J. Fox, M. D.

Cremation Versus Earth-Burial, by Hugo Erichsen, M. D.

Clinical Experiences with Phylacogens, by W. B. Coffey, M. D.; Experiences with Phylacogens in Surgical Infections, by B. F. Alden, M. D.

Syphilis in the Curriculum of Medical Schools, by William Thomas Corlett, M. D.

Arterial Ligation, with Lymphatic Block, in the Treatment of Advanced Cancer of the Pelvic Organs—With a Report of 56 Cases; Possible Errors in the Diagnosis of Abdominal Cancer—A Plea for Exploratory Laparotomy—Illustrative Cases; The Surgical Treatment of Cancer; Technic of Intra-Abdominal Administration of Oxygen, by William Seaman Bainbridge, M. D.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for March, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever.....	1	---	1
Intermittent Fever (Malarial Cachexia).....	1	---	1
Smallpox.....	---	---	---
Measles.....	3	---	3
Scarlet Fever.....	---	---	---
Whooping Cough.....	---	---	---
Diphtheria and Croup.....	8	4	12
Influenza.....	28	8	36
Cholera Nostras.....	---	---	---
Pyemia and Septicemia.....	3	---	3
Tuberculosis.....	64	35	99
Cancer.....	17	11	28
Rheumatism and Gout.....	1	---	1
Diabetes.....	4	1	5
Alcoholism.....	2	---	2
Encephalitis and Meningitis.....	4	2	6
Locomotor Ataxia.....	1	1	2
Congestion, Hemorrhage and Softening of Brain.....	24	10	34
Paralysis.....	4	1	5
Convulsions of Infancy.....	1	1	2
Other Diseases of Infancy.....	---	---	---
Tetanus.....	1	2	3
Other Nervous Diseases.....	18	4	22
Heart Diseases.....	90	57	147
Bronchitis.....	4	2	6
Pneumonia and Broncho Pneumonia.....	55	56	111
Other Respiratory Diseases.....	1	2	3
Ulcer of Stomach.....	---	---	---
Other Diseases of the Stomach.....	3	1	4
Diarrhea, Dysentery and Enteritis.....	13	7	20
Hernia, Intestinal Obstruction.....	2	1	3
Cirrhosis of Liver.....	4	2	6
Other Diseases of the Liver.....	---	---	---
Simple Peritonitis.....	2	1	3
Appendicitis.....	4	---	4
Bright's Disease.....	37	25	62
Other Genito-Urinary Diseases.....	9	2	11
Puerperal Diseases.....	7	---	7
Senile Debility.....	5	3	8
Suicide.....	2	3	5
Injuries.....	15	11	26
All Other Causes.....	33	17	50
TOTAL	471	270	741

Still-born Children—White, 18; colored, 18. Total, 36.

Population of City (estimated)—White, 272,000; colored, 101,000. Total, 373,000.

Death rate per 1000 per Annum for Month—White, 20.78; colored, 32.08. Total, 23.84.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure30.14
 Mean temperature58.
 Total precipitation4.17 inches
 Prevailing direction of wind, southeast.

New Orleans Medical and Surgical Journal.

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No. 12

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

THE PHILOSOPHIC ANATOMY OF THE KIDNEYS.

By EDMOND SOUCHON, M. D.,

Professor Emeritus of Anatomy, Tulane University, New Orleans, La.

The kidneys are incontestably the most important organs.

It is notable that in English there is no other name for them. However, the word *loins* is sometimes meant for them, although not very appropriately. The French besides the name *reins* have also another one *rognons* mostly used by the common people. It is worthy of notice that the word means truly the belly, the womb, say lexicologists. We then understand the meaning of the expression we sometimes meet in books and novels, to be of the same kidney, meaning of the same kind or origin.

We should remember how small the kidneys are when we consider their very important functions. This is quite in contrast with the liver.

It is to be borne in mind that they occupy about the center of the whole body. In books it is said that the right kidney is lower than the left because of the presence of the liver on the right. Yet it is my experience that the two organs are often on the same line, and that at times the right kidney is somewhat lower.

It is interesting to remember that their long axis is directed vertically like that of the bladder, spleen and lungs, whereas that of the brain is horizontal, of the heart oblique, the liver transverse and the pancreas also.

We should lay stress on the fact that there is no other organ so loosely situated and fixed, except the spleen. It is held in place simply by its large vessels and the peritoneum passing over it. No wonder, therefore, that it is of all the organs the one that is most commonly found floating about or wandering out of its normal position.

We should call attention to the fact that it receives no motion from any adjoining organ. Nor has it any intrinsic mobility. However, it is most remarkable that when held in the hand in an operation or an experiment it will throb like a little heart, so great is its arterial vascularity. The brain is the only other organ that thus throbs, except the heart and arteries, of course.

It is striking that the shape of the kidney is unique and typical. The word reniform is often used to express the shape of an object that looks like a bean.

It is a fact to be noted that the anterior surface of the kidney is rather convex. This is because that surface is free from any pressure. We should admire on that surface the pretty superficial arborescent venous capillaries known as the stars of Verheyn, the like of which is observed nowhere else. We should bear in mind that that surface on the right side is in relation with the liver and ascending colon, but on the left with colon only.

It deserves special mention that the posterior surface is quite in contrast with the anterior. We must note its flatness, due to the fact that it is its resting surface, lying on the square lumbar muscle principally. For that reason, this muscle has been looked upon as the guiding muscle of the kidney, the muscle that all surgeons must have impressed on their mind when they are attacking the kidney from behind, by the extraperitoneal route.

The external border of the kidney is also of special interest to the surgeon. We must note that it is convex and that it corresponds to the external border of the square lumbar muscle, which is the guide to it. It is of importance to note that that border is the safe border of the kidney, the one that is incised when an exploration of the interior of the organ is necessary. All that because it is the furthest from the large vessels.

We must lay particular emphasis on the internal border. To begin with, we must take notice that it is shorter than the external. Besides, it is concave and not convex like the external. Then we are struck by the deep notch it presents in its middle and which constitutes the hilum of the organ, so remarkable along with that of the liver and lung. We must remark that there, as in the liver, the external fibrous coat is reflected into the organ after the manner of the capsule of Glisson. We must lay special weight on the fact that the renal vessels are in the front part of the hilum, whereas the chalices and pelvis occupy the posterior part. This a most fortunate arrangement, because the kidney, chalices, pelvis and ureter can be reached from behind in all safety.

It is worthy of notice that the upper extremity of the kidney is its base; i. e., that it is larger than the other end and that that base is turned upward. In other situations the base is the lower part of the organ, but here it is the reverse. A unique occurrence is that the upper extremity is capped by the supra-renal capsule. No other organ is thus capped or surmounted by another. Perhaps it is to afford a sufficient surface for that supra-renal capsule that the upper extremity of the kidney is harder than the lower. It is notable that the upper extremity is in relation on the right side with the liver. The liver presses so on the kidney that this organ causes a slight depression on the under surface of the liver. On the left, we must state that there is no such peculiar relation.

Surgeons should have impressed upon their minds that the lower extremity is midway between the last rib and the iliac crest, along the border of the lumbar mass. They should remember that when the right kidney is lower than the left, this extremity on that side is lower.

A special point is that the kidney is dark brown. The liver is the only other structure resembling it. It is of interest to know that the organ is firm, but that it is friable, though not so much so as the liver and the spleen. It is of some importance to bear in mind that it has no elasticity, no retractility.

It is a unique instance that we find the kidneys embedded in such a mass as the adipose capsule presents. We may look in vain for another organ so ensconced in a soft place. Why? Here we must remember the important role that this layer plays in perinephritic abscesses.

The external fibrous coat deserves special mention because of its

thinness and yet great resistance. This is such that it can be peeled off the organ. This cannot be done with the liver nor any other organ except the spleen and the testicle. At the hilum we must take notice that it is manifestly visible with the naked eye, penetrating, reflected into the organ as in the liver, forming also a sheath for the blood vessels. But it is worth while to note that it cannot be traced with the eye alone. beyond the center of the organ, the base of the pyramids of Malpighi.

It is most interesting to note that the kidney, upon a section, is found to be composed of two substances. The supra-renal capsules, the thymus and the brain are the only other organs presenting the same peculiarity. One cannot help being struck by the differences in characteristics of the two substances in the kidney. The cortical is yellowish, granular, friable, easily penetrated by the thumb nail, sending the columns of Bertin into the central portion down to the hilum. These columns of Bertin are without a parallel in the human body. The central portion, with its pyramids, is unique; so is their purplish color, their striation and their resistance to the thumb nail. We should note that their base is divided peripherally. We must also lay stress on the apices of the pyramids, their elegant conical teat-like shape, their penetration into the chalices, their close insertion around the base of the peripheral extremity of the chalices. The kidney is the only organ presenting such a trait.

It is worthy of more than passing notice that the two substances of the kidney, although so different to the naked eye, are composed of the same anatomical element, extremely long canalicules; that they are numerous, closely packed and straight in the pyramids, hence the striated appearance of the tissue and its firmness. The dichotomous divisions of each one of the canalicules from the apex to the base is truly beautiful, thus forming a pyramid of Ferrein, or a lobule specially visible at the base of the pyramids. I cannot remember any other organ where this exists. The mammary glands present dichotomous division, but coarse and nothing like this.

Upon considering the cortical portion admiration still increases. There we must first note the twists, the kinks, the convolutions innumerable of the canalicules, so different from their straight course in the central portion. All for the purpose of increasing the surface of action. The convolutions of the seminiferous canalicules remind us of this arrangement. Then our attention must be

arrested by the termination, or, more properly speaking, the beginning of the canalicules by an abrupt dilatation, not a caecal one. This recalls that the sudoriparous glands, beginning by the same kind of dilatation, are very much kinked at first like the uriniferous canalicules in the cortical portion, then straighten up as they are in the pyramids of the kidney. The seminiferous canalicules also begin by an abrupt dilatation, not a mere saccule. We must be impressed by the foregoing that the kidney is a compound tubular gland outclassing every other of the same kind. The granular appearance of the cortical substance is due to the dilatation and its friability to the comparative looseness of the kinking.

It is truly a pretty sight, that of the dilatations situated in perpendicular rows on the periphery of the lobules or pyramids of Ferrein along the course of the arteries in the interlobular or inter-Ferreinic spaces so as to readily receive from them their vascular supply. They look like ruddy apples on an overladen tree. The like of this is seen nowhere else.

When on the same slide the arteries, the veins and the canalicules are injected they present a gorgeous rainbow effect, especially in the pyramids portion.

To mention the loop of Henle is to evoke many philosophic reflections. Its dipping, elegant curve is puzzling to the extreme and unique. What is truly the relation of cause and effect?

We must remember here that it is the lining epithelium of the canalicules that form the casts in Bright's disease.

The vascular supply of the kidney is wonderful, considering the small size of the organ. The renal artery is unduly large and the veins are comparatively larger than we find them in any other organ. This great vascularity is understood when we remember the active depurative function of the kidneys. We must note that when the kidneys are on different levels on each side, there is one artery that is higher than the other. The same applies to the veins. But whereas the arteries are of the same length we must consider that the two veins are of irregular length, the left being larger than the right, as it has to cross over the median line to reach the inferior cava vein. It is noteworthy that the veins carry a purer blood than the arteries, on account of the purifying action of the kidneys. We should not pass unnoticed that the left renal vein receives the left spermatic vein, whereas, on the right side, that vein does not discharge in the renal vein, but in the cava.

It is when we consider the arrangement of the capillaries in the kidney that admiration is forced almost as much as in the case of the liver. We must first lay stress on the dome-like division of the smaller branches of the renal artery over the base of the pyramids. Whereas in the liver it is the dipping branches that are the most interesting and beautiful, in the kidney it is the ascending branches which shoot up gracefully between the pyramids of Ferrein in the interlobular spaces of the surface of the organ. It is a most exquisite sight to see the little arterial branches given off to each capsule. It is remarkable that they enter the capsule at a point opposite to that of the penetration or dilation of the canalicule. It many times repays the time and trouble to seek a favorable slide that will show that little capillary in the capsule and to see that it does not coil in it at once, but first divides into several small branches, each of which coil separately, the whole forming the glomerule. The convoluting of the capillaries of the choroid plexuses of the ventricles of the brain are the only ones that approach these. It is quite pretty to trace the space between the glomerule and the capsule, into which the urine oozes continually. We must bear in mind that it is the whole capsule, space and glomeruli, that form the corpuscle which has immortalized the name of Malpighi. We may look in vain through the whole human body for anything that recalls such wonderful and beautiful arrangement. All these coils are to increase the excretory surface. In the kidney and the liver the Almighty Builder has truly shown brilliant conception and masterful handicraft.

The efferent vessel is another little poem in itself. We must note that it comes out of the capsule at the same point where the afferent vessel penetrates. It is also worthy of special notice that it is still an artery. Again, it is an exception also that it does not discharge immediately into the veins near by, but first breaks up into a set of capillaries. Now, this origin, cause and termination, is in thorough accord with a portal system. That is what it is, only it is an arterial one and a capillary one. All this is truly amazing in all its radiant beauty. Such another arterial capillary portal system is seen nowhere.

We have already mentioned the stars of Verheyn, which stand for the origin of the superficial capillary veins.

It is noteworthy that the kidneys, as large and important organs as they are, receive no separate and distinct nerve. Nor do the

spleen, pancreas, lungs. That is a trait common to all the organs of vegetable life. The liver, receiving almost the whole of the right pneumogastric nerve, is the only apparent exception to this law. However, we should be impressed with the extent of the nervous supply of the kidney, because the filaments from the lumbo-aortic plexus are so very numerous, owing to the large size of the arteries which afford them ample supporting surface.

The kidneys develop in the lumbar region, but it is most peculiar that sometimes a kidney is found in the pelvic cavity, receiving its vascular supply from the neighboring vessels, showing that it has been developed there. Surgeons must think of this when they miss a kidney in the lumbar region and explore the pelvis. I cannot remember any other organ that will wander as far away in its original development.

It is of interest that the two kidneys sometimes join by their lower extremities in front of the lumbar region, constituting that rare and interesting anomaly called the horse-shoe kidney. This may have caused more or less unwelcomed surprises to some surgeons.

It is notable that the kidney belongs to that class of organs that are developed by lobes and lobules, each lobe being composed of a pyramid of Malpighi surrounded by cortical substance. It is to be remembered that in some of the lower animals the lobes remain separate and independent. The lobules themselves will do so. I was much interested when I read somewhere that in the lion and the bear, I think, the kidney resembles a bunch of grapes. In the human subject the lobes all finally coalesce, but it is very interesting that in babies and young children the surface of the kidney is nodulated. In the adult we must understand that a lobe is formed of a pyramid, surrounded by the central substance of the periphery and laterally by the half of the adjacent column of Bertin. Another fact not to be forgotten is that a lobule or pyramid of Ferrein is formed by the dichotomous divisions and sub-divisions of one single canalicule from the apex to the periphery, or surface of the kidney. Also that it is between these lobules, or pyramids of Ferrein, that the vessels take their course specially in the cortical portion, where it is notable they are much more numerous and larger than in the medullary.

In the development of the kidney, it is significant that sometimes there are two or three smaller renal arteries and veins instead of a single large artery or vein.

THE OPERATIVE TREATMENT OF JACKSONIAN EPILEPSY.

By CARROLL W. ALLEN, M. D., New Orleans.

The immediate results of operative intervention for the relief of cranial injuries is one of the most brilliant chapters in surgery, the late results, the after history of these patients is often one of the darkest.

The immediate treatment of the less severe class of cranial injuries is one which I believe does not receive sufficient attention at the hands of the profession. Many injuries short of producing fracture are lightly passed on and are thought to be of no significance. Two points stand out prominently in my observation of this class of injuries: First, no injury capable of producing unconsciousness should be regarded or treated lightly; second, no severe trauma, even though short of producing unconsciousness, when occurring in those of neurotic or syphilitic taint, should be regarded as trifling. Each may be productive of the most serious after consequences, the outset of which may be delayed ten, fifteen or twenty years; epilepsy is particularly to be feared, although other disturbances may occur. Statistics from asylums show that one in sixty of the inmates owe their trouble to cranial injuries. The time to treat these cases is not after the development of the trouble, but at the time of the receipt of the injury. Any severe trauma of the skull may produce on the underlying meninges and brain the same changes which we are accustomed to see in the exposed soft parts of the body in contused and lacerated areas, such as extravasation of blood and the later changes which follow in these parts. The meninges bleed readily, and a small clot may pass undetected, in so far as immediate symptoms are concerned, and need not be of any great size to be productive of later serious mischief. It may lead to permanent thickening of the dura, and this thickened area lead to continuous irritation, which in time sets up reflexes which gradually break down the inhibitory or resistant influences until, with a crash, a general convulsion occurs, and that patient is an epileptic.

Instead of the thickened meninges the clot may undergo cystic degeneration and be productive of the same later consequences, and these results are the more likely in those of neurotic or syphilitic taint or who have an alcoholic parent or have themselves been

addicted to alcoholics. How often do we see in the ordinary routine treatment of serious injuries to the head, we will say, for illustration, a fracture of the base, which gives the usual history—*injury, period of unconsciousness, hemorrhage from nose and ears, with ecchymosis of conjunctivæ and lids, progressing from behind forward.* I have looked up the records of many such cases, and find that their stay in the hospital will average ten or twelve days (unless in a severe case), often due to the patient's insistence to get out, when he resumes work after a few days. If we consider what has happened in such a case, which has probably been a fracture of the middle fossa, and the escaping blood has been sufficient to force itself extradurally over such an extensive area as to enable it to make its way through the orbit and appear in the conjunctivæ and lids.

Operative experience upon such cases often reveals clots and extravasations of similar extent, as in the above, which are from one-eighth to one-fourth inch thick in places. Subdural hemorrhages may behave in the same way, though do not give such external ocular evidence of their existence; more often they are less extensive in area and of greater thickness. When we consider such cases with this pathological picture in mind, and even those of less extent, where slight hemorrhages may be suspected, or are possible, we realize how totally inadequate is the time allowed for convalescence. The brain has no sense of pain, and is unable to tell us of the existence of clots; when small and of limited extent the only symptoms we may get is slight headache, dizziness or a sense of mental dullness. Sufficient mental and physical rest, with light diet and good elimination, is not allowed for such extravasations to be absorbed; they become organized; undergo cystic degeneration or thicken the underlying dura, and later we are confronted with the problem of relieving a case of Jacksonian epilepsy. If two weeks is considered the usual time for a laparotomy to remain in bed, then four weeks should be the minimum time for all cranial injuries, where hemorrhage is suspected, to be given the same attention. I wish to report several operative cases, with comments upon them, reserving for a later time and more extensive discussion of the subject the best methods for the operative relief of this class of injuries.

Case I. Mr. X. Age 28, white male, single. Family history: One older sister, epileptic; otherwise history negative.

Previous history: Usual diseases of childhood, amebic dysentery three years ago, gonorrhoea several times; uses tobacco moderately, alcoholics sparingly; no history of syphilis. Wassermann negative. When a child fell from a tree on his head and was badly hurt, but no history of unconsciousness; several years ago received a blow on vertex of the head with a bottle, producing a scalp wound. About one and a half years ago first noticed tickling sensation in right foot; at first this disappeared on stamping the foot or kicking it against some object, but later it became constant, and he was always conscious of it during his waking hours; later there developed a twitching and jerking of the foot, which he was unable to control. During the early part of 1913 his brother, who slept with him, was awakened one night by his having a convulsion; he felt better for it next morning and did not have the tickling in his foot for several days. Three months later there was another convulsion, also occurring at night. There have been five such seizures in all, each time at night, excepting one which occurred during the day, when he was asleep on a seat in a railway coach.

Following each convulsion there was always a diminution in the tickling and twitching of the foot, and the approach of a seizure was always heralded by the twitching becoming more violent.

During this time heavy doses of bromides were used without effect, and mercury and iodids seemed to produce no benefit.

Operation Oct. 15, 1913, in association with Dr. F. W. Parham. The entire motor area of the left side of head was exposed by an osteoplastic flap and the dura was incised, revealing two cysts about as large as a chinaberry just back of the Rolandic fissure, one just below the paracentral lobule; the other about one inch above the fissure of Silvius. The brain was then explored with an aspirating needle inserted to a depth of about one inch at two points each about one and one-half inches in front of the fissure Rolando. The dura was then excised over the entire motor area and a piece of fascia lata taken from the thigh fitted in its place with the fat surface down and lightly attached to the margin of the dura with fine cat gut sutures.

The brain, which was considerably congested, the patient not taking the anesthetic (ether) well, was now herniating from the wound, projecting about one inch beyond the dural margin; considerable pressure was required to force it into place and to hold it there while the scalp sutures were being inserted. A copious head dressing was applied and patient was returned to bed.

After recovery from the anesthesia it was observed that there was a complete right hemiplegia, including the face and tongue. Patient remained semicomatose for several days and did not attempt to talk for three or four days, and it was eight days before he could utter an intelligible sound; on the tenth day he was able to move his right foot. He was discharged on October 25, twenty days after the operation, able to move his right foot and leg fairly well, but not able to stand.

His speech was still badly disturbed and vocabulary very limited. His mind seemed fairly clear. His right arm was still almost completely paralyzed. His progress at home was steady and without event; he was able to walk by the end of the first week, and by the end of one month was nearly normal, except for his right arm, which still showed considerable disability, although he was able to use it fairly well, speech good and the use of his right leg almost perfect. By the end of the second month he had returned to his occupation. He was seen by the writer in May, 1914, seven months after his operation, and seemed thoroughly normal, except his right hand, which was still slightly spastic and clawlike, but he used it fairly well in shaking hands and for ordinary purposes, but was yet unable to write; the use of the arm and forearm seemed perfect. There had been no return of the con-

vulsive seizures and no tickling or twitching of his foot. He was taking no medicines.

In this case no lesions were found at operation which could be attributed to trauma; two cysts were located, but their origin was not plain, both behind the motor area, one below that for the foot, the other above that for the arm. The family history in this case is bad, as one sister is epileptic, though no family taint could be determined. The fairly long post operative hemiplegia, with persistent spastic paralysis of right hand, is not easily accounted for. The evacuation of the cysts should not have produced this result, as neither cyst was in direct contact with the motor area of the hand or arm. The aspiration was done with a fine needle, was superficial and in front of the motor area, and not associated with any hemorrhage. It is possible that the pressure necessary to replace the brain within the limits of the skull may have contributed to this result, although it was gentle and without trauma.

The final results so far, however, have been very satisfactory, but further time is needed to determine their permanency.

Case II. J. R. Age 32, white male, single, laborer; family history negative. No nervous troubles. Previous history, measles at 12 years. Gonorrhoea at 21 and twice since. Chancre in 1908, followed by general eruption; diagnosis of syphilis, with treatment for two months. Drinks moderately; smokes excessively. On October 11, 1911, he received, in a railroad accident, a severe blow on right side of head, knocking him down, but was able to get up and walk off. On October 22, 1911, after sitting down for about twenty minutes and attempting to get up found that he could not move his left leg; at the same time he tried to move his left arm, but failed. A physician who was called also noticed paralysis of left side of the face. The doctor later gave him 606 in the right gluteal region. After six days he was able to get up and walk with only a slight muscular weakness in the left arm and leg. In March, 1912, first felt a drawing sensation in left thumb, quickly followed by contraction of muscles of arm and forearm, rapidly passing toward the trunk, when unconsciousness occurred, and patient is told that he fell and had a general convulsion, which lasted a few minutes. A similar attack occurred the following June; one week following he was given a second dose of salvarsan, which was repeated again in two weeks. This, however, did not seem to affect the convulsive seizures, which became more frequent, averaging about one every three weeks at the present time, when patient entered hospital for the relief of a hernia which had recently developed. He was operated on by Prof. Matas, by the Bassini method, on December 5, 1913, and put on bromides and iodids, with mercury by needle and mouth, at alternating intervals.

This treatment had no effect upon the convulsions, which gradually increased in frequency, and which were always of the same type, beginning in the left thumb and spreading up the arm to body before becoming general.

Operation January 31, 1914, by Prof. Matas, to whom I am indebted for permission to report this case. Exposures of right motor area by

osteoplastic flap; the skull seemed normal and showed no evidence of previous injury; the dura and underlying meninges over almost the entire hemisphere, but most intense over the Rolandic area, presented a condition of serious meningitis, being much thickened and edematous. The dura was incised in a horseshoe-like manner over a wide extent, corresponding to the bony opening and the arachnoid punctured at multiple points permitting the escape of serous fluid. The dura was then lightly held in place with sutures and the bony flap removed, thus decompressing a wide area; the overlying soft parts were then sutured back in place and the wound dressed.

P. O. history: For several days the patient was quite weak. On the second day there was severe muscular twitching over the entire body, but most marked on the left side, which lasted for several minutes, during which time patient was thoroughly conscious. At intervals during the two days following there was decided twitching of the left arm, after which this subsided and did not again appear. Severe headache appeared on the fifth day, which lasted several days. Patient, who was now feeling stronger, complained of a muscular weakness on the entire left side, but most marked in the arm, which he could move very little.

On the tenth day temperature, which had ranged around 100° F. since operation, now went to 104°, and for one week following remained at this point or slightly less. The wound had healed by first intention, and there was no evidence of infection of the deeper parts. Blood examinations were negative and there was no apparent reason discovered for this temperature, which subsided after ten days. Patient was out of bed in three weeks, but complained of some weakness of left side, most marked in arm. He had been kept continuously on mixed treatment. Discharged April 1, 1914, feeling quite well; he had had no further convulsion, but there was still some weakness and disability in left arm. The same night following his discharge he was brought in unconscious suffering from a fractured skull, with the report that he had attempted to leave town upon a freight train and had fallen; just how or why he fell we were unable to learn. He died a few hours later, the autopsy showing a contused brain.

This case is very interesting, both in his previous history and in the operative proceeding. The point of earlier trauma was indicated as over the motor area, but we little expected to find such extensive intracranial pathology. What part his earlier syphilis played in its development is problematical, but it no doubt exercised some influence. His early accidental death was unfortunate.

Case III. P. A. White male, age 28, married, admitted to hospital April 7, 1914.

Family history negative; uses alcoholics and tobacco moderately. No previous illnesses. Three and a half years ago, while chopping wood with a companion, stooped and was struck on vertex of head by his companion's ax. The blow was severe, producing a scalp wound, but did not render him unconscious. The wound was sutured by a physician. He did not go to bed, but was unable to work for ten days. About three years ago, five months after the accident, had a convulsion which lasted ten or fifteen minutes, followed by another the same day; three weeks after had a third attack. Convulsions have continued since, at times on successive days, but occasionally with an interval of several weeks. The seizures are usually confined to the left side of the body, being initiated by a twitching of the left eye and corner of the mouth.

At times the attacks are general and involve both sides of body. General examination negative.

Operation April 29, 1914. Ether anesthesia. The right motor area was exposed by a large osteoplastic flap. The bone, dura and underlying brain normal; no evidence of the earlier injury could be found except the scar on the scalp.

The dura was removed over the motor area and a piece of fascia lata sutured in its place with the fat surface down.

It is too early yet to draw conclusions from this case, but the long duration of the condition, with well-established epileptic habit and the absence of any removable lesion would all make the prognosis unfavorable.

The operative relief of all types of epilepsy is a subject which has often occupied the mind of the profession, and many have been the procedures adopted for its relief.

Even in the idiopathic type transient postoperative benefit has often followed almost any kind of intracranial interference, but in the present state of our knowledge, in which practically nothing is known regarding its pathology, intracranial surgery is to be discouraged.

In the traumatic, or Jacksonian type, more benefit is to be expected from surgery, for here we deal with a definite localised injury, which if capable of removal and before the habit has been well established, and in those of good previous and family history, we can look for decided postoperative relief.

What part the removal of the apparently normal dura and the substitution for it of other membranes, especially layers of fascia, plays in the later control of these seizures, I should like to reserve for discussion at a later time when this and other phases of the subject will be presented.

THE EPIDEMIOLOGY OF WHOOPING COUGH.

By HOWARD D. KING, M. D., New Orleans.

WHOOPING COUGH.—A specific and localized infection of the respiratory tract, highly contagious, self-limited and immunity-conferring, characterized by violent paroxysms of convulsive coughing and a long-drawn inspiration, during which the "whoop" is produced.

SPECIFIC CAUSE.—The organism, discovered by Bordet and Gengou, is now admitted by the majority of observers to be the specific

microbe of whooping cough. It is a small cocco-bacillus, resembling in shape the influenza bacillus. Examination *in situ* shows that it is rather longer and plumper, but during the process of subcultivation it diminishes in size until finally it appears as a mere point when seen under the highest powers of a microscope. It grows best in a medium of defibrinated human or rabbit's blood mixed with an equal quantity of 3 *per cent.* agar, containing a small amount of extract of potato and glycerin. It is an obligatory aerobe. Cultures obtained from growths in unfavorable media develop new traits, and differences of a striking type from the mother culture.

Microscopic preparations taken from the exudate in the early stages of the disease reveal the presence of bacilli in enormous numbers. It grows by choice in the deep and remoter parts of the respiratory tract, seldom above the level of the larynx, and more frequently below it. The tonsillar crypts may also harbor large numbers of the organism, and give rise to well-defined recurrent attacks of tonsilitis, characterized by alternating periods of hoarseness and aphonia. As the disease progresses, the bacilli decrease and are not present in large numbers in the secretions from the respiratory tract. In order to obtain suitable material for cultural work, it is necessary to pick out of the phlegm a strip of viscid exudate rich in leucocytes, coming from the depth of the bronchi, the expulsion of which marks the end of one of the violent whooping paroxysms in the early stage of the disease. The true organisms found nearly in pure culture are non-mobile, Gram negative, and stain very faintly with the usual basic dyes.

PREDISPOSING CAUSE.—The susceptibility to whooping cough varies according to age and physical condition. Babies and the younger children take it most readily, so that it is far more common before the sixth or seventh year than at a later age. The largest number of patients are in their fourth year, and after that age is passed the susceptibility decreases each year. The fourth year is the age of greatest morbidity, because ordinarily epidemics of whooping cough recur every four years. Nevertheless, in communities where whooping cough prevails epidemically every year, the age of predilection is also the fourth year. And if there is added to this the fact that children are seldom attacked under the second year, it must be assumed predisposition to a certain extent depends on age.

Epidemics of whooping cough have a peculiar relation to other diseases, often preceding or following epidemics of measles, and, less frequently, of scarlet fever. The clinical relation which measles bears to whooping cough is very interesting. Measles and pertussis may follow each other in the same individual at a short interval, sometimes one, and again the other taking the initiative. Epidemics of the two diseases prevail with such comparative frequency at the same time that some epidemiologists suspect causal relationship between them.

Nervous and excitable children manifest more violent paroxysms than those of hardier constitution. The opinion of two German observers is worthy of mention, namely, that deaf mutes and blind children show milder attacks than those possessed of all their senses. It is believed that through the absence of a sense organ there is a defect in the development of the respiratory organs, making the subjects less liable to injurious influences. A certain amount of protection in these cases is undoubtedly afforded by institutional care.

INCUBATION.—The period of incubation is not absolutely fixed; probably it varies in different individuals. It may be as long as a fortnight, or as short as four days. The infectiousness of the malady begins with the earliest symptoms. It is indeed in this early non-spasmodic stage that the sufferer is most likely to be a source of danger to others; for, when the whoop appears the power of communicating the disease begins to decline. However, the infectivity of the disease is not at an end until a period of at least six weeks has elapsed from the beginning of the attack. The contagion is so virulent that an infant may be affected after being a few minutes in the company of a patient suffering from whooping cough.

IMMUNITY.—A natural immunity has been mentioned, but it must be remembered that children may have the disease in a mild and hardly recognizable form. In Scotland there is a belief that the disease may run its course during the fetal period, and that a child whose mother had whooping cough during pregnancy remains immune throughout life. Second attacks are extremely rare. The protection afforded by whooping cough appears to be greater than that conferred by the majority of infectious diseases.

TRANSMISSION.—That the disease is highly infectious, especially in the earlier period of the illness, can admit of little doubt. Obser-

vations indicate that the virus can attach itself to inanimate objects, such as clothes and fomites in general, but the chief agency in the spread of whooping cough appears to be direct contact with the infected individual. The virus seems to be thrown off from the air passages, and certainly by the sputum. In all probability, it is the sputum rather than the breath which serves as the medium by which the infection is conveyed; in some cases, possibly, it is inhaled in the form of dust by the recipient. If means be taken to disinfect the secretion from the air passages, or to prevent it from coming into contact with healthy children, the latter, although living in the same house with the sufferer, will probably escape the disease. It has been noticed in certain children's hospitals that whooping cough, when admitted into the wards, rarely spreads to the adjoining beds.

Water and milk are thought not to act as transmitting agencies.

In the opinion of some authorities the lower animals are able to contract the disease. Save in a few isolated cases, animal inoculation in cats, dogs and monkeys has proved disappointing. Feeding with the sputum and vomited material of typical pertussis cases has apparently produced the disease in cats. Thus it would seem the cat may be an etiologic factor in the dissemination of the disease.

The disease is in nowise dependent on sanitary conditions.

AGE.—Whooping cough is principally, but not entirely, a disease of childhood. In the discussion of predisposition to the disease, its relationship to age has been fully argued. The well-nigh exclusive predisposition of children to whooping cough is probably explained by the fact that the frequent recurrence of the disease in the course of years finds only the young children, who have never been attacked, susceptible. Moreover, this is supported by the knowledge that in newly discovered countries, uninfected until the arrival of traders and travellers, whooping cough, like other infectious diseases, respects no age, but works havoc among adults as well as children. Some few observers, however, believe that children between the first and second dentitions are most liable to be attacked. Sucklings, though, are not exempt, and very severe attacks in infants under six weeks have been reported. Even congenital cases are occasionally described. Adults and elderly persons, in endemic centers, are sometimes attacked. In the aged, it frequently proves a very serious affection. Whooping cough in the aged is almost always without the pronounced features of *tussis convulsiva*.

SEX.—Girls are more subject to the disease than are boys of the same age, and, it seems also to run a more severe course in girls. It is true that, according to statistics, females are more susceptible than males, to such a degree that about twice as many girls are attacked as boys, which is the more remarkable when it is considered that more boys than girls are born. Moreover, among adults, women (and among these, especially, those who are pregnant, and wet nurses) manifest an increased susceptibility; yet in this there is no protection for males.

RACE.—The disease attacks all classes. All races are equally affected. In the United States, however, the negro falls a more ready victim than does the white race. This racial predilection is thought by some to be anatomical, on account of the nostrils of the negro being very flat, wide and open, thus facilitating the passage of large amounts of infectious material, such as pertussal discharges. The real reason for this seemingly racial predisposition, however, is primarily social.

GEOGRAPHICAL DISTRIBUTION.—Whooping cough has an extremely wide distribution. No latitude has entirely escaped it. The disease can exist, and even cause epidemics, in tropical, sub-tropical, temperate and sub-arctic regions, though it is neither equally common nor equally severe in all. It is chiefly a disease of temperate and cool climates. In warm countries the disease is rarer, less malignant and less fatal than in cold countries. A raw climate causes the course of the disease to be especially dangerous, because of inflammatory conditions in the chest walls. Evidence of this relation of the disease to latitude is strikingly illustrated by a comparison of the mortality rates of the disease in Southern and Northern Europe. That there are marked exceptions to this rule, however, is amply demonstrated by the frequent "pernicious epidemics of whooping cough" which occur in many islands of the West Indies. Again, the presence, in a very mild form, of the disease in Iceland, shows that distance from the equator does not necessarily imply increased prevalence or severity of whooping cough.

SEASON.—In its seasonal aspects the malady exhibits the same relation to temperature as does its geographical distribution. By this is meant the disease is most common and severe during the cold months—autumn, winter and early spring. It is at these times that the greater proportion of deaths occur, for sudden changes in the atmospheric conditions, by increasing pulmonary catarrh, add

to the intensity of the disease. However, no season completely excludes its appearance. A beginning epidemic is favored by nothing so much as a change of weather, say, one by which a sudden continued cold period, never reaching the freezing point, is followed by moist, warm weather. Rainy autumn weather often ushers in an epidemic of whooping cough. Notwithstanding the preference of the disease for the cold months, a large number of summer epidemics have been recorded.

ALTITUDE.—The distribution of whooping cough is not influenced by elevation above the sea level.

SOIL.—The geologic formation of a country has no influence on epidemics, so far as is known.

PREVALENCE.—Sporadic whooping cough is decidedly doubtful. When an individual is attacked by a cough, even though it agrees in all of its symptoms with pertussis, if it is not prevalent, and does not become epidemic, the diagnosis is suspicious. From urban centers there have been reported apparently well authenticated cases of the disease in sporadic form.

Whooping cough gives rise to epidemics in school or other groups of susceptible individuals. Epidemics of the disease assume varying proportions. Entire towns, countries, and even several adjacent countries, have been overrun with wonderful rapidity by epidemics. Again, the disease may be wholly restricted to a street, a certain district or a neighborhood. It may attack, simultaneously, several individuals in close proximity, and from this focus spread far and near.

In those regions where it is endemic, its degree of prevalence varies greatly from year to year. The "cycles" of greater and lesser prevalence are very irregular and not regulated by any fixed law. A violent epidemic recognizes no difference in sex, constitution or hereditary qualities. The more acute its development, the fewer escape among all who come in its way, and the most rigid prophylactic measures avail little.

SERO-DIAGNOSIS.—The agglutination titre of whooping cough patients is very low.

The method of blood culture for the diagnosis of whooping cough has proved unsuccessful. Thus far, the effort to detect the microbe in the blood of patients during the spasmodic period of the illness has been a failure. It may be assumed, therefore, that whooping

cough is not a bacteremia, but a local infection of the respiratory tract. This is more or less in harmony with the clinical picture of the malady, and with the opinion held by Brodet, who proved that the specific organism produced an endotoxin which is responsible for the symptoms of pertussis.

REPORT OF SOME INTERESTING CASES OF OBSTRUCTION OF THE BOWELS.*

By E. DENEGRE MARTIN, M. D., New Orleans.

Obstruction of the bowels cannot in itself be considered a surgical disease, but is a term to indicate in a general way a condition quite common and produced by many causes, and one of which is sufficient in itself to give the surgeon the deepest anxiety. The diagnosis of obstruction is not difficult; the cause is often unrecognized until an exploratory operation reveals the trouble.

In the following cases which I shall report some of these causes are well illustrated.

Case 1, V. G., is that of an ileus in a child 12 years of age. She had been operated upon some months previously for suppurative tubercular arthritis and had made a complete recovery. She was suddenly seized with a violent attack of indigestion, vomited persistently and complained of pain in the right iliac region, some rigidity, but no tenderness. Laparotomy revealed a collapsed ileum, involving about a foot of the gut extending from the ileo-cecal valve. The cause was not apparent, but was due, no doubt, to some reflex phenomenon; the child was not relieved, as her condition did not warrant resection, and she died shortly after the exploration from shock. This condition would doubtless be classed among the cases of dynamic ileus.

Case 2. That of a boy 16 years of age. Taken suddenly ill with nausea and vomiting. Pain in the umbilical region, slightly to the right. When seen, diagnosis of obstruction was made. Had been sick only a few hours; no elevation of temperature; pulse 110. Enemata gave no relief; morphin, one-eighth grain, by needle relieved pain, but did not check nausea. Laparotomy revealed a Meckel's diverticulum; was about three inches in length, resembling the finger of a glove. The tip was adherent to a portion of the gut, forming a loop through which a coil of the ileum had herniated, causing a complete obstruction. The adherent band was severed, the gut relieved the diverticulum resected and the stump closed transversely. The boy made an uneventful recovery.

Case 3. Mrs. Y., aged 42, frail constitution and mother of three children. Two years ago was operated on for dermoid cyst of the mesocolon. Had made an excellent recovery and up to the time of present attack was in fairly good health. During a visit to her mother's country home, and while seated at the breakfast table on the morning of January 14, 1912, she was seized with a sharp, sudden, severe pain in

* Read before the Orleans Parish Medical Society, February 9, 1914. [Received for publication, May 4, 1914.]

the region of the umbilicus; the pain persisted and a physician was sent for. Morphin was given, but with no relief; enemata brought but small results. Repeated doses of morphin were administered, but still with little effect. During the night she began to vomit, and it was apparent that the bowels were obstructed. I was sent for the next morning, but as the train had left it was impossible to reach her home until the following day, about thirty-six hours after the onset of the attack. On arrival I found the patient fairly comfortable, abdomen distended and tender on palpation, pain referred especially to the region of the umbilicus, where a well-defined tumor could be seen. Temperature 101° F. and pulse 120. In the absence of ether, a little chloroform was administered. An examination of the rectum and a flush of the sigmoid soon satisfied me that the obstruction was higher up and an operation necessary. To do this at the house of the patient under the existing conditions meant failure. Arrangements were made for transferring the patient to the city, but this could not be done until the following morning, and under the most adverse circumstances. We reached the sanitarium on January 16, at 3:30 p. m., and, assisted by Drs. Parham and Daspit, I operated at once, just fifty-six hours after the onset of the attack. An incision was made in the median line below the umbilicus, revealing at once a mass of gangrenous ileum resembling very much a bunch of sausage about six inches in diameter. This was lifted from its bed and the volvulus easily isolated from the surrounding intestines. Dr. Parham grasped the gut with his fingers on each side of the mass, and, with a pair of sharp scissors, I hastily released the adhering bands formed by the volvulus and removed thirty-five inches of gangrenous gut; the mesenteric vessels were secured with a running suture; an end-to-end anastomosis was made, using catgut for the mucosa and silk for the serous surface. Bands of adhesion from the mesentery to the broad ligament—the cause of the volvulus, in my opinion—were found and the wound closed with small drain, as the abdomen contained a quantity of fluid. The operation lasted just thirty-six minutes, and the patient, though greatly shocked from the long ordeal through which she had gone, made a slow but uneventful recovery.

This case is rather remarkable, as the patient was a very frail woman who had been through several severe experiences and was not operated on until fifty-six hours after the onset of the attack, whereas it is a well-established fact that few of these cases recover from operation if operated upon after the first forty-eight hours.

Case 4. Miss C., aged 28, slight figure, in good health until six years ago. Attributes her illness to a fall; has constant pain in right iliac region. Always constipated. Pain exaggerated when exercising. Menses regular and normal. Diagnosis: chronic appendicitis. On March 10, 1913, appendix removed; tonsils also; recovery uneventful. On August 2 seized with pain in umbilical region; suffered all day and night; was seen by me on August 4 and diagnosis of obstruction made; sent at once to the hospital. Operation revealed volvulus of ileum near cecum; bands of adhesions to bowel extending from stump of appendix present; nine inches of gangrenous gut removed and end-to-end anastomosis done; abdominal wound closed; time of operation, thirty-four minutes. On August 13 patient was again vomiting and obstruction at seat of operation discovered. Adhesions completely obstructing bowel, resulting apparently from a leak in the gut at point of anastomosis. Adhesions released and Pezzer catheter inserted in gut; recovery uneventful after

second operation. Catheter removed by Dr. Parham and opening closed on eighth day. Is in excellent health to-day.

Case 5. A. J., aged 37, colored female. Stated that a large abdominal tumor weighing fifteen pounds had been removed about one year previously. Right ovary and appendix also removed. Wound suppurated and convalescence was slow. Has been well since, until six days before, when she developed pain in the upper part of the abdomen, followed by vomiting, which continued up to the day of operation. Was given purgatives and enemas without relief. Pain and vomiting persisted. Saw patient on morning of November 23 at request of Dr. Halsey; diagnosis of obstruction was made and immediate operation suggested; to this the patient readily assented. From the history and appearance of the wound, showing ventral hernia at upper end, I felt certain the obstruction was due to adhesions. On opening the abdomen an ileus was revealed. This was caused by a string-like band of tissue extending from the cecum, near the stump of the appendix, to the ileum about three inches from the ileo-cecal valve. Through the ring formed by this band on the lower side and the gut on the upper side a coil of ileum twelve inches long had slipped, which strangulated the gut sufficiently to obstruct the fecal current, but not enough to produce gangrene. The band was severed and the gut released. The gas soon passed through the collapsed gut, the colon was restored, and in a short time it was normal in appearance. The ventral hernia was closed by overlapping the fascial flaps and the wound sutured. Recovery.

Case 6. Mr. A., 53 years of age. Previous health good. About six months before operation suffered severe pain in abdomen. Condition grew steadily worse until first week of June, 1910. Physician was called and prescribed medicine for indigestion. Few days later, getting no relief, another physician was called and a consultation suggested. Patient called doctor's attention to a movable mass in the abdomen. Nausea and vomiting had persisted for two weeks and condition was growing rapidly worse. On June 28, 1910, condition became more serious and pain and distension increased. Patient was seen by Dr. Callan and sent at once to the sanitarium. Saw him in consultation with Drs. Callan, Parham and Halsey. Patient was greatly distressed, abdomen tense, pain severe, and a peristaltic wave could be distinctly seen at regular intervals. Just below the umbilicus could be felt a mass the size of an egg and quite movable. Immediate operation was decided upon. Exploration revealed in the ileum a mass the size of a hickory nut, springing from the mesentery and encroaching upon the gut, almost occluding the lumen. The diagnosis of sarcoma was made; about two inches of the gut and a good portion of the mesentery was resected, and an end-to-end anastomosis was made and the abdomen closed. Recovery uneventful. The operation required only fifteen minutes and the patient left the table in better condition than before operation. The relief was immediate and permanent and convalescence without event.

Case 7. Mrs. M., 52 years of age, mother of five children. General health good. Was seized during the night with an attack of cholera morbus. Saw her first several hours after the onset. Morphine, one-fourth grain, given and repeated. Patient relieved of pain and apparently comfortable. Saline purge administered. Two hours later vomiting began again, but more persistent; bowels became distended. Enemata returned clear; obstruction was evidently in the sigmoid, as the colon above was distended. Dr. Parham, who saw the case with me, was able to introduce his entire hand into the rectum and palpate a tumor which was believed to be a sarcoma of the sigmoid. The patient was prepared for operation and a left colostomy decided upon. As soon as the cavity was opened a huge purple mass presented itself. On further examination this proved to be an ovarian cyst; the fluid was evacuated and the

cyst, containing a mass the size of an orange, delivered through the incision and the pedicle tied and severed and the wound closed. The obstruction was removed and recovery uneventful. The tumor proved to be a hematomata, caused no doubt by a rupture of a large vein into one of the cyst cavities, which became fixed in the pelvis and obstructed the sigmoid.

Case 8. P. B., age 14, was a most interesting case, showing the result of a subphrenic abscess, resulting in adhesions which so constricted the colon at the splenic flexure that it was almost completely obstructed and a colo-colostomy had to be done to relieve the condition. The history in brief is that on July 28, 1913, he felt bad and went to bed, and soon after had a chill, the chills continued for some time, morning and night, with temperature rising to 102°. This condition existed for three weeks, but fever lasted over a period of six weeks. All the time he suffered with a severe pain in the left hypochondrium and thought the trouble due to a blow he received in the side on July 20. He suffered also from distention, which gradually grew worse as the illness progressed. Encemata would relieve the lower bowel, but the distention above continued. Was always constipated. Has had no fever for a month previous to admission to Touro Infirmary—temperature, in fact, was subnormal. Ten days prior to admission noticed that whole of left side was flat. Examination on admission showed a boy tall for his age, but extremely emaciated; no edema and no glandular enlargement. Intracostal spaces markedly depressed, with entire left thorax anteriorly retracted. No respiratory sounds heard below fourth interspace. The cause of this condition was suspected to be the result of an empyema which ruptured through the diaphragm. The lung condition was not, however, the cause of complaint. The discomfort and pain were produced by the obstruction of the colon, which was gradually growing worse, and, though he was almost in extremis, it was determined to explore the abdomen and, if possible, relieve the constriction.

On November 11, 1913, he was operated upon; examination revealed stomach apparently normal; kidneys, liver and gall bladder normal. Transverse colon enormously distended; at the splenic flexure were numerous adhesions, holding the transverse and descending colon firmly bound to the diaphragm and costal arch, and constricted by numerous bands until the caliber of the gut was reduced to a small opening. To free these adhesions was utterly impossible, as they could not be reached. I therefore determined to do a colo-colostomy. The transverse and descending colons were apposed with little difficulty and an opening made between the two about one inch and a half in length. The wound was closed and the patient returned to his room in fair condition. Though relief was obtained from obstruction, the patient's digestive apparatus was in such shape as to require the closest watching, and, though relief was given to the mechanical obstruction, the patient's ultimate recovery was due unquestionably to the untiring efforts of Dr. S. Simon.

DISCUSSION ON DR. MARTIN'S PAPER.

Dr. Parham: These cases of intestinal obstruction are most difficult. The search for the obstruction is often the cause of death. It is better in some cases to do an incomplete operation, and, if the cause of the obstruction is not really apparent, it is better not to search too long, but to relieve the obstruction and toxemia by the insertion of a De Pezzer catheter above the obstruction. Later more can be done. There are so many varieties of obstructions that differential diagnosis is difficult. It is more important to relieve the toxemia than to overcome the obstruction. In some cases, if we relieve the obstruction and not the toxemia, we get absorption of toxins and death. It is best to drain

the bowels above the obstruction whenever possible. I would call your attention to a phenomenon called fecal drowning, first described by Wyllys Andrews, which may occur in these cases. I have seen it in two cases; the first one in February, 1913, the patient dying; the second one this morning, this patient not drowning, as I took precautions to avoid it.

Dr. Chavigny: Is this regurgitation a sign that the obstruction is relieved?

Dr. Parham: Yes, but it is not necessarily a good sign.

Dr. Louis Levy: Dr. Martin's paper emphasizes and calls for early operation in intestinal obstruction. Many times treatment is overdone before abdomens are opened, with the disastrous results of soapsud and other solution in the peritoneal cavity, to say nothing of ruptured bowel or gangrene. I recall a case of obstruction following pelvic peritonitis, in which merely the cutting of a band of adhesions relieved the patient. Early operation in this case made the pathology difficult to find, but gave brilliant results.

Dr. Martin (in closing): I am glad that Dr. Parham reported these cases of fecal drowning. I have seen it occur, and it is very alarming. There is no doubt that the diagnosis of intestinal obstruction from volvulus or bands of adhesions, causing ileus, is very difficult. It is easier in case of the larger bowel. In case diagnosis of obstruction is made, early operation is imperative. Dr. Parham's suggestion of temporary relief by the insertion of a catheter in the bowel is very good. We have used it in eight cases. In one case obstruction developed four or five days after operation. The catheter was used, with prompt recovery. In another case, after an operation for ruptured appendix, the patient did well for many days, until a secondary abscess formed. We cannot always make a diagnosis and we cannot always find the obstruction after the abdomen is opened.

LOCAL HEALTH ADMINISTRATION. PRACTICAL PHASES.

The Conference of Local and State Health Officers, Mayors and Presidents of Police Juries Was Held in the Auditorium of the Association of Commerce, New Orleans, La., Monday, April 20, 1914.

The meeting was called to order at 9 A. M., DR. OSCAR DOWLING, President, State Board of Health, presiding.

Opening Address.

In opening DR. DOWLING said:

On behalf of the Louisiana State Board of Health, and for myself personally, I extend this morning fraternal greetings and a cordial welcome.

This conference was called because there is need for a oneness of effort in health administration throughout the State. Let me give you a few statements which will bear evidence to the discord and confusion which exists and the imperative necessity for some timely action.

The facts quoted are gathered from replies to a questionnaire sent to Health Officers and Mayors. There are 195 incorporated communities in the State (Department Baton Rouge); 156, after one, two or three requests, sent answers. Of these 104 report qualified health boards, some not active; 73 pay no salaries to officers. Where there is compensation, the average salary is \$15.91 per month; 119 have no appropriation for the work. Outside of Alexandria and Lafayette, which budget each \$2,500 (Shreveport, Baton Rouge and Monroe sent no report), the average annual amount for sanitation is \$310. Thirty-eight towns have sanitary inspectors with salaries which range from \$2.50 to \$75 per month. One officer says he is paid 15 cents in summer and 20 cents in winter; one writes in red ink "not a red cent."

A town of some size, where conditions have forced the State Board to drastic action, pays no salary to the President of the Board and \$15 to the inspector. Inspection is the gratuitous job of the town marshal in many places. One officer, in a progressive city, gets \$50 a month in times of an epidemic.

A town where conditions are notoriously bad is reported, "No public water supply, no sewerage, no scavenger or garbage service, no inspection, no provision for any sanitary work, meningitis, measles and pellagra"; yet conditions are, in three years, "much improved."

One place reports diphtheria, typhoid fever, scarlatina, malaria, whooping cough, etc.," but conditions are "improving." An officer in reply to the question as to comparison of present and past conditions, says, "Same old thing. * * * Our town is in a frightful condition. We need help."

In almost every report malaria, typhoid and one or more epidemic diseases are given. The number of deaths or cases, except in a very few instances, is unknown.

With no money and a public not awake, is it possible to remedy these conditions? It is said of Cavour that he had an "enthusiasm for the possible," and that this made a united Italy. He created a large unit by beginning with a small one; this can be done in health work.

But the officer is not paid; there is no money; his time is worth too much to do work for an unappreciative public. All true, but there is another side—the tremendous civic importance of this kind of effort.

Any citizen who feels the import can do something, but the physician or health officer much more. He can begin with one pertinent effort which appeals, and from that impetus will spread. Health work has a personal aspect; it is worth while to make an effort, however slight; it may be the hog wallow at the public well; the dirty ditches in the heart of town; the horrible insanitary 'inconveniences' which offend taste and decency. Any one may become a Sardinia from which a real movement may spring.

To realize these problems, the dire need for concerted action and altruistic work is our purpose to-day. We have in Louisiana a good health record. Nature is kind; she overcomes in her prodigality the artificial conditions bad for health. With improvement such is possible and practicable; with some unity of effort our 'life extension' period in Louisiana will take care of itself.

With this in mind let every one speak his mind, so we may begin to do that which is worth while in every section and for every citizen of the State. It is pre-eminently the health officer's—the physician's—privilege.

DR. DOWLING—Gentlemen: I have the pleasure of introducing to you the original health officer of the State of Louisiana; a man who has done as much as any other man in health matters in this section of the country—DR. JOSEPH HOLT of New Orleans.

Greeting—Dr. Holt.

“GENTLEMEN: Members of the Louisiana State Board of Health and honored guests in Conference: I find myself in a position of delicate responsibility in accepting the invitation to give words of inspiration and greeting on the opening of this session.

There is so much to be proud of and thankful for as a reward of scientific effort along lines of discovery in the latest modern advancement in preventive or state medicine that it would require a rare gift of genius, far beyond my power, hampered by a sense of inadequacy, to compress into the compass of a few complimentary remarks, a recognition of the works accomplished, without omissions chargeable to negligence and ingratitude.

Avoiding the insincerity of rhetorical flight, let us come bluntly to the question: What words of inspiration; what positive and demonstrable facts have we to show as a basis of encouragement, that would justify the emotion of a heartfelt greeting in this professional body, trained in the exactions of science?

If we think to felicitate ourselves on the accumulated evidences of success already achieved, as the reward of nearly two centuries of struggle with incredible hardships and tribulations; if, at enormous cost of life and treasure, we have brought under subjugation the conditions of semitropical environment, that here and elsewhere, until these later days, have baffled human ingenuity; if, passing from the darkness of ignorance into the glare of modern enlightenment, we are casting off the old and putting on the new; no longer tolerating a high death rate and conditions repulsive, insanitary and degrading; if, under this emancipation New Orleans is firmly assuming her industrial and commercial position in the sisterhood of American cities and in the rivalry for trade through the Panama Canal, has not experience taught us to expect the insidious commingling of wormwood and the gall of bitterness in our cup of joy and gladness?

Has there not been in this city and State a voice of pessimism, a perpetual whine of adverse criticism, belittling and condemnatory of both city and State; ready on the spot and obstructive to every modernizing effort?

But, charitably and more profoundly considered, are we not their debtors? Are not these ever-present objectors an essential make-weight, devised by an inscrutable Divinity, as counter-checks to celerity at the expense of thoroughness, and by resistance, like the weights of a clock, energizing in us a persistent struggle, driving us to a more capable fitness for higher things of existence? In our final redemption, too, do we not drag them into unmerited salvation?

To demonstrate now our first congratulation, here is that wonderful mortality chart of New Orleans, with which you are already familiar, worked out by the late Dr. Sidney Theard, of the City Board of Health, showing the annual death rate from 1808. This mountain chain runs far back of that date, to the days of Bienville and the Louisiana Colony at Biloxi.

At first glance it looks like the Andes of Peru and Chile in profile, shading off into the foot-hills of Brazil and Argentina. I assure you it is not so; but a panoramic retrospect of the stupendous tragedies wrought by pestilential infections, when nature exacts her penalties to the uttermost farthing for the violation of every principle.

Hygienic law, under an anarchy of corruptible matter dominating the community. This is a historic health delineation of a people in an environment of absolute sanitary neglect; heaping up accumulated retribution in sickness, misery and death; inflicting injury, at times prohibitive of the public livelihood; and in social commotion often upheaving to the surface as an earthquake the baser elements of fear and selfishness, under terrifying conditions, second only to war.

Later and to-day, in these lower levels falling in gentle undulations to a plain, is a charting of the same people, like Israel, wandering in a wilderness and chastened in suffering as the rod of instruction; finally emerging through education into a willing subjection to hygienic law, with all of its blessings of decency, health and comfort, and the vastly added increment of industrial and commercial prosperity.

Under the present reign of aggressive science in a modernized system of maritime sanitation, in the water, sewerage and drainage systems and extension of paving, the mortality chart shows a decline from such annual figures as 54, 68, 86 and in one instance, 147 per thousand, or one in every six and three-fifths of population, to a

present total of 13.56 for resident whites, 16.83 for white and colored.

Our second congratulation refers to the assumption by the General Government of a strictly Federal function, interstate and international, as much so as the postal service, when it placed our maritime quarantine in charge of the Marine Hospital Service, where it is properly and vigorously administered, without interference, fear or favor; the authority coextensive with the responsibility.

The physiological performance of this Federal function is in the Federal body, and cannot be exercised vicariously in any other body without pathological derangements in the changes of administration.

The third inspiration of greeting extends to the people of every parish, town and neighborhood in Louisiana, for the laborious preaching and the practical illustrating to them the gospel of right living, in cleanliness of person and premises. How can they know of the saving grace of preventive medicine except the gospel be preached to them?

They who sat in darkness saw a great light when Dr. Oscar Dowling and the State Board of Health journeyed in every direction through city and State, persuasively educating, admonishing and firmly enforcing the law provided for the health redemption, the social elevation, true happiness and prosperity of this people.

Through this ingenuous and original missionary work, energetically campaigned with crowning results, Louisiana has become a Nation-wide example of applied State Medicine.

The fourth inspiration emanates from the phoenix-like resurrection of our world-famous Charity Hospital, soon to appear full-anoplied to date in the latest armament against physical suffering, disease and death.

No longer content with the slack forms of discipline, the institutional management and general antiquity of the fifties and sixties, seemingly as fixed as a crystallized fossil the Charity Hospital, literally in "renaissance," is now being born into large activities, a new being in all modern adaptations of construction, completeness of appointment with a co-ordinated reorganization of the visiting staff; all of this impossible, except as a highest evolution of Christian civilization.

And finally, gentlemen, for ourselves a reflection that each may take to himself: that in all we enjoy of exception from preventable

ills, and in the growing prosperity and brightening future of Louisiana, with a density of population-sustaining power not surpassed by any equal area on the globe, in no instance has fortune befallen us through accident of good luck, but only in our own inveterate and determined struggles have we compelled redemption through applied science and through science alone: The informing spirit of God, indwelling and manifest in the creatures of His image, with no limitation to the transforming power of the reasoning mind over matter, through knowledge, which is science."

THE CHAIRMAN: The first topic on our program, "THE PUBLIC HEALTH LAW—THE SANITARY CODE," will be discussed by MR. BENJAMIN T. WALDO, former attorney for the Board.

The Public Health Law—Benjamin T. Waldo.

"The American people are deluded with the idea that they govern themselves. Such is far from being the truth. We are governed by cliques, committees, boards and commissions, to which, either passively or by law, we have delegated practically all of the powers and functions of government.

In a broad sense, the decline of this government as a republic is unfortunate; but it must be admitted as obvious that here are many governmental matters which can be more advantageously handled through boards and commissions than by a popular assembly, and first in the category of these must be placed health and hygiene.

In 1898, by Act No. 192 of that year, Louisiana formally provided that the health of the people and the hygiene of the commonwealth should be placed in the hands of a board composed of physicians; and, at the same time, authority was given to this Board to make and to promulgate a Sanitary Code. Deeply as we may regret the passing of popular government, it must be acknowledged that Louisiana acted wisely in delegating to a body of trained scientists the work of compiling and enforcing the supreme health and hygienic law of the State. It is a task, for many reasons, far beyond the layman, and had the formulation of the code been left to the Legislature, I venture to assert that the code would never have been completed. As it was, the Board of Health took almost as long to put forth the first draft of the code as did a committee of Louisiana lawyers to revise the Civil Code, and, consequently, the first Sanitary Code was not published until 1906.

The best that can be said for the first draft of the code is that it was a conscientious effort which needed immediate and thorough revision, and in 1910 it was practically rewritten and appeared in its present form.

Immediately upon an effort being made to enforce its provisions, about ninety-nine out of every one hundred lawyers in the State pronounced it unconstitutional. The serious objections urged were (1) that the State could not constitutionally delegate to the State Board of Health the powers properly belonging to the Legislature, and (2) that the code could not be promulgated by simple publication in pamphlet form. In the case of *State vs. Snyder*, decided in 1910, the Supreme Court, by a unanimous decision, upheld the hands of the State Board of Health and pronounced the Sanitary Code constitutional; consequently, the Sanitary Code is to-day the permanent health law of our State and, under the decision in the case of *State Board of Health vs. Susslin*, decided in 1912, is enforceable in every part of the State, whether city, hamlet or remote rural locality.

I desire to reiterate, the Sanitary Code is the supreme, paramount health law of the State, and it is applicable and enforceable in every part of the State, just as is a State statute; it is enforceable in the State courts, the same as any other State law.

It seems to me that of all the acts of all time evidencing the confidence of the public in the medical profession, that of the citizens of the State of Louisiana in delegating to a body of physicians the power to enact a sanitary code is the most noteworthy. It seems to me, too, that as a whole—as a class the medical profession has little realized the powerful weapon for good placed in its hands. This is deplorable because, while the Sanitary Code is anything but perfection, by a concerted effort among physicians and health officers to enforce the beneficent provisions of the code—even if nothing else could be accomplished—communicable diseases, particularly tuberculosis, syphilis and gonorrhoea, could in five years be made practically extinct in the State.

I repeat: It is not claimed by anybody that the Sanitary Code is perfect; yet its perfection, or imperfection, matters little until a certain percentage of medical men change their views as to two very important matters. One is the reporting of vital statistics, particularly deaths and the cause of death, the need of which can not well be exaggerated; the other is the reporting of communi-

cable diseases—above all, tuberculosis, syphilis and gonorrhoea. A physician would resent the imputation that he had suppressed the facts as to a case of scarlet fever, or smallpox, or measles, yet the most that can accrue from these diseases is death; while syphilis and gonorrhoea affect, or may affect, the remotest generations and are only conditionally reportable.

The full benefits of the Sanitary Code and the fruits of the fights which have been made to maintain it can not be gathered until three things shall have come to pass:

First: The realization on the part of the health officer that he is to act as the law prescribes and is not to hesitate to enforce the law with vigor, impartiality and courage;

Second: The education of the people up to the fact that hygiene and sanitation are to be dealt with by physicians and sanitarians and that the layman is not to set his opinions and views up against the result of the experience and experiments of scientists whose lives have been devoted to the subject matter;

Third: The understanding on the part of medical men that their patients are merely the units of society—nothing more and nothing less; that it is necessary that the affliction of the individual unit shall be so treated that benefit, and not damage, shall accrue to the race; that neither the ethics of the profession, nor decency, demand that facts vital to the whole of society be suppressed for the extremely doubtful benefit conferred upon the individual unit; finally, that the Sanitary Code is their achievement, their gift to humanity and that no loftier professional attainment can be theirs than to accomplish obedience to its precepts.”

“The Community’s Right to Health Protection.”

The next number on the program, “*The Community’s Right to Health Protection*,” is one of great importance.

DR. A. H. GLADDEN, of Monroe, vice-president of the State Board of Health and for many years connected with the Board of Health of Ouachita Parish, will give us his views on the subject. (See NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for May, 1914.)

THE CHAIRMAN: Dr. A. A. Herold, of Shreveport, Parish Health Officer of Caddo, has written he will be here and I am sure that his train must be late so we shall have the pleasure of hearing

from Dr. Herold later. In the meantime, we shall hear from Dr. G. FARRAR PATTON, State Registrar of Vital Statistics, who will discuss the "Model Law" and the importance of getting complete returns.

"The Model Law"—Dr. G. F. Patton.

The subject can not be introduced in any better way than by reading from the "Physicians' Pocket Reference Guide to the International List of Causes of Death," published by the United States Census Bureau, in Washington, the following brief, but admirable, statement relative to the working of the Model Law in this country:

The Model Law and Essential Principles of Registration.

Practically all the progress made in this country during the past decade in the extension of adequate registration laws and the promotion of uniformity and comparability of the mortality statistics is due to the **Model Law**. This law was based upon tested principles of successful registration, as worked out by practical registration officials in the American Public Health Association with the aid of the Bureau of the Census. It has lately been revised by a committee formed of representatives from the American Medical Association, American Public Health Association, American Bar Association, Children's Bureau, and the Bureau of the Census. Its operation rapidly brought states such as **Pennsylvania, Ohio, Missouri, and Kentucky**—which prior to its adoption had had no, or only utterly worthless, vital statistics—into the registration area. Very recently it has been adopted by **Arkansas, Mississippi, North Carolina, Tennessee and Virginia**. Other States have adopted it, in some cases with unfortunate modifications which have required subsequent amendment (**Kansas**, amended 1913) or without giving it adequate support (**North Dakota**). Some of the older registration States, with fairly good laws, have amended them to comply with the provisions of the Model Law (**Massachusetts**) or adopted it entire (**New York**, 1913). From this extended experience, we can confidently state that the **Model Law, with reasonable provision for its support and with a fairly capable administrator in charge, will yield successful results in its registration of deaths—and better results in the registration of births than any other law.**

The essential principles of registration as embodied in the **Model Law** may be briefly summarized: (1) **Immediate registration** (deaths before interment, births within ten days and not, compulsorily, less than three days in rural districts); (2) **Standard certificates** (copies on request); (3) **Compulsory burial or removal permits** for deaths, and some effective **check on the accuracy of registration for births** (by deaths of infants under one year, special enumeration, newspapers); (4) **Efficient local registrars**, properly compensated (twenty-five cents) for each certificate registered and returned in compliance with law only, and so distributed that the least possible inconvenience will be caused physicians and undertakers in filing certificates; (5) **Sole responsibility for registering deaths and obtaining burial or removal permit in advance of interment upon undertaker or person disposing of body and sole responsibility for registering births, within the time limit set by law, upon the attending physician or midwife** (parent in absence of such attendance); (6) **An efficient State Registrar, with full power and responsibility to enforce the law, in DIRECT connection with the local registrars** (any county official intervening in any capacity between the State Registrar and local registrars means failure of the law); (7) **Prompt monthly returns of the**

original certificates from the local registrars to the State Registrar, with report of "No births" or "No deaths" when such was the case, and official statement of completeness of registration or report of delinquencies; (8) All this is useless to secure complete legal records and statistics of the highest practical value, unless penalties are provided in the law, and those **PENALTIES ARE ENFORCED.**

At present there are only twenty-two registration states, with thirty-eight registration cities in states not yet included in the Registration Area. It is our ambition to bring Louisiana into that area, and, with that object in view, the State Board of Health, through its Bureau of Vital Statistics, aided by the other departments of the Board, is now striving to enlist the co-operation, not only of the medical men of Louisiana, but of public-spirited people in every walk of life. It has been said of non-registration states that they allow their children to be born and to die "like stray dogs" and we wish to redeem our State from the reproach of being in that despised category. The agency by which that redemption is to be accomplished is *The Model Law*, already engrafted in the Sanitary Code of the State and lacking only the support of our own people to make its operation successful.

Those of us who live in Louisiana know that there is no more healthful State in the Union, but in the absence of any general statistics for the State at large we have been powerless to bring forward official figures to refute slanderous imputations of Louisiana being the home of deadly fevers and of its general unhealthfulness.

On behalf of the State Board of Health, the people of Louisiana, who have already learned so many valuable lessons under the teaching of the Board, are being earnestly entreated to respond to the requirements of the Model Law for the collection of vital statistics. We especially need a wide-spread movement for the registration of births. By general consent the birth-rate of a country or community is regarded as being in some measure an index of the health and prosperity of the people. We must show that we are not behind our neighbors in this respect and in particular that our infant death-rate is not excessive.

This means that we must submit definite figures, to secure which people must be encouraged in every possible way to register the births of their children. Generally speaking, deaths are more apt to be registered because of the requirements for burial, but that only makes matters worse if infants who do not die are not registered. These considerations weigh heavily in favor of the wisdom

of a policy looking toward the abolition of all fees paid by parents for registering births. Entirely aside from selfish and mercenary considerations, there is no denying the general proposition that poor people will try to evade registering the births of their children if there is even the smallest fee to be paid. Therefore, instead of interposing such an obstacle, would it not be infinitely better, so far as securing results is concerned, to go to the other extreme and offer a premium for every birth registered? This is done in North Carolina by presenting each mother with a neat certificate of congratulation bearing the signature of the Governor, a document suitable for framing and which can be handed down from generation to generation as a valued possession.

These considerations are worthy of the serious consideration of those who frame laws and ordinances. The practical question is, shall we punish motherhood by a tax, or shall we honor and reward it? And again, in a matter which concerns the public welfare as much as it does the individual, can we not afford to relinquish a paltry registration fee wrung from even the poorest of our people, just as we refrain from imposing a license tax on clergymen and school teachers? Let us take this subject under consideration in its relation to public policy, regardless of all selfish and mercenary objects.

We have provided for distribution a number of copies of the "Physicians' Pocket Reference Guide" kindly furnished by the United States Census Bureau and will be glad to have everyone present take away one of those booklets as a souvenir of this meeting.

THE CHAIRMAN: We shall now listen to DR. G. C. CHANDLER, City Health Officer of Shreveport.

Local Statistics Problems—Dr. G. C. Chandler.

None of the duties of the health department in cities are more important than the careful keeping of mortality statistics, which should be studied daily, for from them the health officer can learn the health conditions of the people under his care and he will know the section of the city and the diseases needing his special attention. It is known to all that diseases do not come without cause, and if this cause is discovered early the spread of disease can be stopped. A great many diseases, where the source of con-

tagion is known, can be stamped out as promptly as the blowing out of a candle. For an illustration, let us take typhoid fever. This disease never occurs without a specific germ. Suppose one or more people are taken down with typhoid and are reported to the Board of Health. The sources of possible contamination should at once be investigated, especially the water and milk. If the germs are found and the use of the infected article prohibited and flies excluded from the patients and their excretions, the disease will end with those already infected. But suppose the source of infection is undetected—hundreds may contract the disease. This applies to many diseases, and it shows how important it is for the physician to report promptly all reportable diseases; his failure to do so may spread the disease and put him in a very awkward position; the worse construction may be placed on his carelessness and he will be placed in a most unenviable light before the people.

To be of any value statistics should show the real health conditions of race and section. The inclusion of non-residents' deaths in making out the death rate of cities render the statistics worthless as to showing the health conditions. What have the people who die from diseases contracted elsewhere and brought into a city for treatment to do with the health conditions? What has the size of the city to do with its health conditions? The inclusion of non-residents in making out the rate increases the rate in proportion to the city's size. Small cities are outrageously increased. A death of a non-resident in New Orleans will increase the rate 16 times, in San Antonio 60 times, Shreveport 150 times, and in Monroe 600 times as much as in New York. With mortality reports that show the real health conditions a large number of non-resident deaths would be an asset for city instead of an incubus, for it would show that the city was important as a medical center.

The cities of the South are small and so distant from each other that the territory contributing non-resident deaths is large, whereas in the North the cities are large and so numerous that the non-resident deaths are more divided than in the South, so the South gets the worst of the classification, just as it does by the inclusion of colored deaths in making out the total rate.

New Orleans is injured more by the present method of rating mortality reports than any large city in the United States. For generations it has been the metropolis and the recognized center of the South. So, with its large colored population and its compara-

tively small size in comparison with the principal cities of the North, it has been unjustly given a high death rate, when, in my opinion, it is one of the healthiest cities in the United States, and the statistics will show it when we win the fight that has been inaugurated by the Shreveport Board of Health for the rating of whites and colored separately and cities on their resident deaths. This fight will be won, for it is fair to both races, and every section and the people of the United States stand for fair play. Until it is won the South should keep its own statistics so as to show the true health conditions.

It is folly for any Southern State or city to go into the government registration area under the present methods used by the Census Bureau in keeping mortality reports. It simply gives our endorsement to false and injurious reports as to the health conditions in the South when we all know they are false, as can be proved to any reasonable man from data obtained from the bureau's own reports of 1910 and 1911. These reports show the colored death rate is as high in the North as it is in the South; the inclusion of the colored deaths in making out the total rate in the North increases the white rate in some States by nothing, and usually .1 or .2 to the thousand population. It shows that the white race of the South can be compared to the total rate of the North without any injustice to that section, while the inclusion of the colored deaths in making out the total rate of the South, owing to our large colored population increases our rate 3.1 to 11.4 to 1,000. If a city has a lower death rate among the colored and a lower rate among the whites, you will all say that it is the healthiest city; but you are mistaken if it happens to be a Southern city. The United States government mortality reports will tell you that it is much more sickly than some other city with a higher death rate for both races if the other city happens to be in the North. Ever since 1900, Shreveport has been trying to get into the Government registration area on a fair basis, without success, so we decided to take the question to Congress, and the indications are that we have won, for the Bureau has sent to all cities, with over 10,000 population, blanks to be filled out as to non-residents, white and colored separately; but this does not go far enough; the whole country should have fair play. Congress should pass an act requiring the rating of whites and colored separately in a city on its resident deaths, even if the Bureau voluntarily corrects the wrong;

for the power should not be in the hands of any bureau to do so great a wrong to any section of the country.

THE CHAIRMAN: We are very fortunate in having with us a physician from our sister State, a doctor well known for his various activities, and I am going to ask Dr. Graves to give us a few points about the way they do things in Texas.

Remarks—Dr. M. L. Graves, Galveston, Texas.

“MR. PRESIDENT, AND GENTLEMEN OF THE HEALTH CONFERENCE— I wish to say that I esteem it a privilege to be requested to speak on this occasion and hear this very excellent program. It seems to me that you have a program at this conference which would do credit to the American Medical Association. I am particularly glad to be here, because Louisiana has taken such a foremost position in the administration of health laws and is known throughout the nation for her good work in that respect. I think I should say that the South has a great many problems yet untouched by real science. We have 10,000,000 negroes in the South full of disease and degeneracy. Perhaps the reproach is ours that was voiced by Kraft Ebing in regard to general paretics, that “civilization and syphilization” have been their undoing. The army officers of the United States Government have removed the danger and fear of yellow fever from our midst. The large donations of John D. Rockefeller have been the means of solving one of the problems of the South, but none of these problems can be solved alone by benefits of this kind. In my own State the Hookworm Commission is operating and has under its direction an excellent field force for the eradication of the disease. Eighty-seven counties have been found to be infected with hookworm, and, in an examination of more than 21,000, more than 42 per cent have been found to be infected. It is quite true that there are other States in the South that are worse infected than we are. Then it seems to me that pellagra offers another very important subject for study. Last year we had in Texas 295 deaths from pellagra. Another thing, I do not believe that the malaria problem has ever had anything like the scientific consideration to which it is entitled. Last year 687 persons died from malaria in the State of Texas, and throughout the registration area of the United States, which, as you know, comprises about two-thirds of the population and of which only four Southern States are mem-

bers, there were 1,848 deaths from malaria alone, and this does not comprise the chief malarial districts of the United States. If we compare the loss of life, since we remember that the deaths were 1,848 in the registration area and 687 in the State of Texas alone last year, and when we remember further that the mortality is only .2 to .3 per cent., we can readily realize that more than 100,000 persons were invalided and great economic loss was occasioned in the registration area, to say nothing of the much greater economic loss outside of the registration area. Another thing, as soon as the Panama Canal is completed we are certainly going to be subjected to the importation of diseases of Oriental origin or of South American origin. We already have sprue in Texas, and probably you have it in this State. Unless some means are taken to prevent the introduction of these diseases the result will be very heavy in invalidism and great economic waste.

I must congratulate you, Mr. Chairman, on what you have been able to accomplish in this State, and hope this tremendous effort will result in accomplishing your aim to get into the registration area, and I believe every State in the Union should join in a movement to get complete registration of vital statistics, and thus have a uniform and efficient system prevailing throughout the United States."

THE CHAIRMAN: We have with us the health officer of one of the most important cities in the United States, perhaps I might say, without fear of contradiction, the most notable city, and he is always equal to any emergency. Dr. Woodward will talk to us to-night, but I am going to ask him to speak on the topics under consideration. It is with the greatest pleasure I introduce DR. WM. C. WOODWARD, Health Commissioner of Washington, D. C.
(To Appear)

THE CHAIRMAN: There are 1,368 postoffices in the State of Louisiana, and almost everybody goes to the postoffice at one time or another. They are apt to talk over the news, and the postmaster hears of births and deaths. We pay him 25 cents for every death and birth certificate he sends in properly filled out. By this method we hope that the time is not far distant when we can say to Dr. Woodward we are getting 96 per cent. of births and deaths.

There is present another gentleman who has traveled a long way from home to be with us on this occasion. He is a native Southerner and a man we shall be glad to hear from. He is now connected with the Rockefeller Commission—DR. J. A. FERRELL, of Washington.

Remarks—Dr. John A. Ferrell.

MR. CHAIRMAN AND GENTLEMEN—It is a great privilege to be here and to hear these able discussions on public health work. Inspiration and enthusiasm will come to the health officers, who in turn will accomplish larger results in the lessening of human sickness and suffering.

Dr. Graves, of Galveston, has pointed out some of the splendid accomplishments during recent years in the field of preventive medicine, and outlined some of the numerous health problems which are as yet practically untouched. Dr. Woodward, of Washington, has emphasized the importance of collecting and using effectively vital and morbidity statistics as a basis for knowing the character of the work needed, and for measuring progress. Both are agreed that the work is large, and that there are comparatively few real laborers in the cause.

It occurs to me that since we can know definitely what our mission as health officers is, and that the possibility of making real headway is undisputed, the point of greatest interest is to determine how best to do the work. This involves, I think, the employment of an adequate force of trained, whole-time men, properly directed. I believe the time has come for the full-time county health officer, and the full-time health officers for the districts or townships comprising the counties. In insisting on whole-time men we should not forget the debt of gratitude we owe many part-time men, who have been the pioneers in the great cause; but the best of these men will not claim that their work was as thorough and as intensive as it should have been.

We as a people are beginning to realize the full importance of genuine health work, and are ready to provide the funds needed when the proposition is clearly presented. The educational work through the use of bulletins, the press, exhibits, etc., is being continued by the State health officers, and the people are awake; they are in the conversant stage; they are becoming saturated. The possibility for advancement in health activities is dawning on them, and they are realizing the necessity for action.

Before there can be any extensive action with satisfactory results, we must have a force of men at work paid to devote their time and brains and energies to the work. Provision should now be made to have a whole-time health officer in every parish or county, working as the long arms of the State Board of Health to bring visible action and results down close to the individual. The people must see some real progress in coping with disease. When such results are demonstrated, funds for defraying expenses in the State and county will be obtainable with little effort. Ultimately smaller units than the parishes will provide for the employment of physicians as teachers of hygiene and sanitation, and as guardians of the people against unnecessary sickness and death. As this work progresses it should be remembered that the State Board of Health must take the initiative in the work, and when it is begun it should be effectively administered by the State. It is of the utmost importance, therefore, that generous appropriations be made and continued to the State Board of Health.

THE CHAIRMAN: Mr. J. H. O'Neill, sanitary engineer, will now give us a paper on "*Sewage Disposal.*"

Sewage Disposal—Mr. J. H. O'Neill.

The proper disposal of the body wastes is demanded not only on the grounds of convenience and of avoidance of nuisance, but on the higher and more important one of the protection of the health of the public.

The germs of typhoid fever, dysentery and other intestinal disorders are present in large numbers in the excretions, not only of persons suffering from these diseases, but also of so-called "carrier cases." There are persons whose power of resistance is so high that, although the germs live and multiply in their bodies, the individual does not suffer from the disease, or else has only a mild or "walking case."

The eggs of the hookworm and other intestinal parasites are present in the excretions of many in this part of the country, and may infect others if polluted material comes in contact with the skin or is swallowed with polluted food.

The results desired in sewage disposal are:

1. Immediate removal of sewage to a point where it may be properly disposed of; and,

2. That it be so treated as to permanently lose its power for doing harm.

These results are best attained by the use of a water-carriage sewerage system, with a disposal plant where the sewage may be treated. The methods of treatment are many, and vary for different localities, kinds of sewage and sizes of communities. To give even a brief outline of them would require more time than I have at my disposal, and I will limit the rest of my remarks to the problems of communities which are without a sewerage system.

For places with a water supply, but without a sewerage system, water closets may be used and the sewage disposed of by a system comprised of a septic tank and filter beds, or subsurface irrigation tiles. The State Board of Health has prepared for distribution an article explaining such a method, with a plan of a typical installation. The common form of cesspool, with open bottoms or porous sides, is dangerous. It pollutes the soil and may endanger the purity of wells a considerable distance away.

For places without a water supply—that is, without a supply piped into the house—some form of a sanitary privy is necessary. The essentials of the sanitary privy are:

1. Privacy.
2. Prevention of soil pollution.
3. Prevention of the access of flies or small animals to the excretions.

By far the larger number of the privies in Louisiana provide for only the first of these essentials.

The simplest form of the sanitary privy is the so-called Stiles type. This is a small wooden structure, with all outside openings screened. The seat is provided with a self-closing cover. Beneath the seat is a metal container in a fly-proof compartment. This compartment is provided with a ventilating flue and a flap door at the rear to allow the removal of the containers when necessary. Such closets should be cleared once a week, or oftener if necessary. The sewage, or night soil, as it is commonly called, should be disposed of by burying or burning.

Another form of closet, devised by the Kentucky State Board of Health, and which has met with considerable success in that State, consists of a privy placed directly over a septic tank. This form of closet is self-cleaning, the solids being decomposed to liquids and gases by bacterial action. The overflow from the tank

is distributed by lines of porous drainage tile laid about eighteen inches or two feet below the surface of the ground. Here the organic matter, in solution and in suspension, is acted upon by the nitrifying bacteria in the soil, and changed to the harmless mineral state, in which form it is available as food material for plant life. This action is the same as takes place when stable manure is spread on the fields as a fertilizer.

Another form of closet is the so-called chemical closet. In this type the wastes are deposited in a metal tank, in which is a strong caustic, which disintegrates the solid constituents of the sewage, kills the bacteria and changes the chemical nature of the organic matter. If sufficient chemical is used, the sewage is rendered harmless and may be easily disposed of when the tank is full.

That the rural sections of Louisiana are greatly in need of improvement in this regard is shown by the following figures taken from the report of the Hookworm Commission:

Of 23,476 homes inspected by the Commission, 7,407, or 31.1 per cent. had no privy, and 14,167, or 60.3 per cent., had the open-surface toilet, which, from a sanitary standpoint, is no better than none. That is, 91.4 per cent. of the homes inspected were deficient in this most important measure.

Of 749 schools, 185 had no closets, 20 had closets for girls only, and 440 had only the openback surface type of closet. Such conditions are inexcusable. When we send children to school they should be taught how to live as well as how to make a living, and should be provided with proper sanitary conveniences, and should not be forced to risk their health in insanitary schools.

In some of the parishes the hookworm infection was as high as 79.8 per cent., the average for the State being 46.6 per cent.

The State Board of Health has available for distribution literature bearing on this subject, showing the results and danger of insanitary conditions, and giving plans and specifications for remedial measures. We will be glad to furnish these pamphlets to any who desire them.

THE CHAIRMAN: One of the most important features of community life is its water supply. We have asked MR. GEO. G. EARL, superintendent of the Sewerage and Water Board of New Orleans, to discuss this topic.

Water Supply—Mr. Geo. G. Earl.

Within the last fifteen years progress, in finding means for obtaining a safe and satisfactory water supply from an unpromising source, has been great, and many communities have already benefited vastly in health and comfort thereby.

Perhaps the most spectacular thing of recent accomplishment has been in inexpensive and efficient methods of promptly sterilizing a supply which is found to be polluted by specific pathogenic bacteria, by the application of minute quantities of chlorine gas or hypochlorite of lime or soda. In a number of cases these means have been used with great success to promptly check an invasion of typhoid fever which was due to some contamination of the public water supply, and in many cities, where it is not felt that the water would be otherwise entirely safe, this method of treatment is a regular procedure.

This, however, is only a special phase of the general advance which has come about with the close study of the particular condition, or variety of conditions, which must be corrected in each case, and the willingness to apply the remedy which these conditions demand, in order to procure the most safe and generally satisfactory supply practicable.

Until within a comparatively few years there was a strong popular sentiment against so-called mechanical filtration which involved the utilization of any chemical means toward the correction of obvious defects in a water supply, and there was also, upon the part of the advocates both of slow sand and mechanical filtration, a lack of understanding as to the limitations of their processes, with the result that each attempted to do things which were beyond the limit of their ability to do. As instances of the troubles which ensued, it will suffice to cite two cases:

Washington, D. C., had the Potomac River water to purify. This water, at certain seasons, carries a small amount of very fine clay in suspension which cannot be entirely removed by any practicable sand filter, except the water be previously treated in some manner that will coagulate or mass these infinitely fine clay particles. Public sentiment in Washington would not tolerate coagulation, and for a number of years the people of that city, with a splendid slow sand filter system, tolerated a water which was noticeably turbid at times, and which at these times was not entirely satisfactory as to its bacterial status. Eventually this prejudice was

overcome, and the original suggestion of the engineers who devised and recommended the system that, whenever necessary, coagulation with sulphate of alumina be resorted to, was followed, with the result that a perfectly clear water is now obtained at all times, that the bacterial results are under much better control, and the filters can yield a much larger supply and still maintain these improved conditions.

On the other side, I will instance the effort made in 1892-93 to filter the Mississippi River water at New Orleans by the use of mechanical filters, aided by heavy doses of sulphate of alumina, added immediately before filtration, but without any time for the chemical to fully react or any settling basin to permit of the removal of any portion of the mud in suspension by deposit before it went to the filters.

In this case, a plant to cost nearly \$200,000 was built, under guarantees as to what it would accomplish, and only succeeded in proving the utter impracticability of the proposed procedure, without throwing any light at all upon the proper solution.

When the Mississippi River water carried its maximum of suspended matter this plant could hardly filter enough water between the washing, necessitated by the clogging of the filter surface, due to the retained suspended matter, to provide the supply of filtered water necessary for its own washing.

Five or ten thousand dollars invested in a judicious experiment would have demonstrated the fact just as well, and, fortunately, other waterworks authorities, notably at Louisville and Cincinnati, and at many other cities later, adopted the method of working out their problems through experimental plants, conducted by trained engineers and water experts, before they undertook to make contracts for the required improvement in their water supply.

Through investigation of this nature, and through experience and studies carried on at the various newer plants subsequently by the men in charge, who are usually, as they must be, well trained men in this line of work, the general character of treatment required for various classes of water has been quite thoroughly determined, and it has been found that the so-called mechanical filter, combined with proper means for the preliminary preparation of the water, offers a general method which gives its operator wonderful control over all of the processes and a wide range of choice of possible combinations to combat changing conditions as they arise.

Colored waters are rendered colorless; excessive quantities of dissolved carbonates or sulphates or of iron are removed; the most turbid waters, no matter how fine the suspended matter, are rendered perfectly clear, and even badly-polluted waters can be rendered acceptable, their bacterial content reduced to an unobjectionable number, and, if found advisable, sterilization can be resorted to if there is ground for suspicion that pathogenic bacteria still exist.

The cost of water purification, assuming proper skilled attendance for plants of various sizes from one million gallons daily up, will range anywhere from, say, four cents per thousand gallons for a small plant handling a difficult water, down to three-tenths of a cent for a large plant handling a water which presents the least difficulty.

The curtail of waste, so that a moderate-sized plant and a moderate consumption have only to be provided for, becomes of prime importance when the question of financing a waterworks system, and especially water purification, is considered.

New Orleans, unmetered, would now be using up to the limit of the capacity of her new plant. In fact, 12,000 premises unmetered in 1909 were using as much water as 58,000 metered premises are using to-day. Yet, no one stints himself in the least in the actual use of water, because it only makes seven cents per thousand gallons difference in the bill of any water consumer if he uses an additional thousand gallons of water, and every one has learned that liberal use does not produce a material addition to his water bill, but that a constant waste, large enough to record on the meter, will make a marked increase. The result is that water is *used* freely, but *wasted* judiciously.

The average actual domestic consumption recorded by the meters for New Orleans for 1913 was 25 gallons per capita, or 125 gallons per premises served, while the total amount of water pumped, which, of course, includes that used by public and charitable institutions and for other public uses, as well as that used for commercial purposes, was about 60 gallons per capita of the total population of the city.

It was originally assumed, in designing the plant, that the average total water consumption would amount to about 80 gallons per capita. Some unmetered cities use and waste two or three hundred gallons per capita, and have found it a great strain, or have as yet been unable to undertake the purification of their water supply, because of this large consumption.

The problems of a proper source of water supply in some sections of Louisiana, as the State develops, is going to give more or less difficulty, particularly in the delta lands on the southwestern coastal plane at points remote from the Mississippi River. North of Lake Pontchartrain, and east of the Mississippi River, the artesian supplies, to the limit of their capacity, are fair, and some of them excellent in quality; and the local rivers are of a character that will afford an excellent supply, with proper purification, as the artesian supplies become inadequate, or when they are found unsatisfactory in quality.

However, in the great low flat areas of the State, in the Mississippi Valley and in the delta and on the southern coastal plane west of the river, where many of the streams are not adequately fed to maintain an effective current, and where their beds lie in bayou formations, subject to tidal action and the inflow of salt water, the greatest care to avoid objectionable pollution will have to be exercised as population and industries increase, and unless the stream flows can be made adequate by water diverted from the Mississippi or Atchafalaya Rivers to prevent the inflow of salt water at all times, their use as a water supply will be impossible, as no way has yet been found which is commercially practicable for the removal of common salt from a water supply.

The proper drainage of all these lands for agricultural use is a comparatively easy problem, and the drainage and sewerage, and the proper purification of the sewage of the towns and cities which must eventually develop in this vast fertile region, is also comparatively easy. The prevention of objectionable pollution by trade wastes, escaping into the bayous, will be harder, and the conservation of or provision for sources of adequate public water supplies, aside from that furnished from the Mississippi or Atchafalaya rivers, will be still more difficult. Fortunately these rivers carry an inexhaustible supply for all purposes, and the diversion of their waters by gravity for large portions of these areas, and by pumping through relatively low lifts, and distribution through canals for the remaining areas, is easily practicable. Fortunately, also, the methods by which this water may be rendered most desirable for all domestic and manufacturing uses are cheap and well understood.

The City of New Orleans, following the introduction of the sewerage, water and drainage systems and of the general sanitary

improvements, of which, in large part, these were essential foundations, has had a gradual reduction of death rate of about 25 per cent. since 1899. Malaria has been almost entirely eliminated; typhoid fever shows a marked reduction, and general intestinal complaints are vastly decreased. The total improvement in death rate applied to the present population, as compared with the average death rate prior to 1900, indicates a saving of 2,600 lives in 1913, and as yet only five-sevenths of the premises of the city have water connections and four-sevenths have sewerage connections. With the present rate of new connections, however, practically the whole population will be connected with both systems within the next two years. The premises yet to be connected comprise, largely, the poorer sections of the city, especially the sections inhabited by the colored people, 27 per cent. of the population, among whom the highest death rate prevails in all Southern cities, and it will be interesting to note whether the introductions of these facilities will show such a marked improvement in the death rate of the colored population as should be reached through the general improvement of their living conditions.

THE CHAIRMAN: I see we have with us our friend, Dr. B. A. LITTELL, of Opelousas. Dr. Littell, we should be glad to hear what the progressive little City of Opelousas is doing in sanitary work.

Remarks—Dr. B. A. Littell.

“MR. CHAIRMAN AND GENTLEMEN—Our little city of Opelousas has been making some improvements along sanitary lines. We have a population of some five thousand. Our city owns its water works and electric light plant. After the installation of the water works residents of the city began putting in the so-called sanitary closets and septic tanks. Before this we had nothing but the open closet. I think that we had something like 110 or 112 of these septic tanks in our city. After a campaign of twelve years, chiefly educational, we succeeded in carrying an election for a sewerage tax, and we now have one of the best sewerage systems in the South. This sewerage district comprises the largest and most densely populated portion of our city. I have had a good deal of experience with the open closet and septic tank. My conclusions are that the open closet is always a nuisance and dangerous, and the septic tank will in time become the same. There were a great variety of these

septic tanks installed in our city, some of which were very elaborate and costly, but I don't know of a single one that was satisfactory or that did not in time become a nuisance. I would never give my consent to have another septic tank placed in our city. A sewerage system is the only safe and proper method of disposing of the sewage and night soil of any city or town, no matter how large or small that city or town may be.

THE CHAIRMAN: A member of the "old guard" is here; he is always present when anything is going on for the good of the public. I refer to Dr. C. M. Menville, city and parish health officer of Houma. Dr. Menville, won't you tell us something about the sewerage system, the water supply, and other improvements which you have inaugurated in Houma?

The Water Supply—Dr. C. M. Menville.

"I am an old-timer. Dr. Dowling will tell you that I have been attending health conferences for many years back, and in other days we took up this question of health, and as we have grown older we have kept up with the fight; but our wages have not been increased. I can say this much: that, in our little City of Houma, which has a population of between 6,000 and 7,000, we have a sanitary inspector whose duty it is to go around every day and visit all bakeries, all restaurants, all hotels and markets and streets—everything in general—and I think if you were to go there to-day you would find our little city as clean as the majority of cities of its size. We have no sewerage, but contemplate putting in a system. We need a new market; plans and specifications have been launched, and I hope that proper appropriation will be made for a new one. This will require, necessarily, a slaughterhouse also.

As far as the health of our city and parish is concerned, I can say this much: that it will compare favorably with other parishes in Louisiana. We have had the pleasure of having Dr. White, of the Public Health Service (whom I see here in our midst), and he took several hundred blood smears in order to find the presence of malaria. I think Dr. White will bear me out in the statement that he failed to find a single instance, which I think is a good thing for our parish. We have had, though, since the 10th of last October, smallpox, and I have had a great deal of trouble to contend with. The great trouble has come from the doctors them-

selves, owing to their lack of coöperation in the diagnosis of the disease. They like to call it chickenpox, and I would right here make this remark, that physicians ought to study seriously their textbooks and really find the difference between chickenpox and smallpox, principally in the summer, because, generally, chickenpox in children in summer develops into smallpox in winter, and if they studied the question and brought it out better, and if the physicians would take this community question to heart and act conscientiously as to the diagnosis of the disease, I think this would do much to make the work easier to eradicate the disease and save dollars and cents and life.

On the question of vital statistics, that is another handicap that we find at the hands of physicians. They are not willing to report cases to the health officer, principally in small localities. I do not know whether this is true on account of the intimacy that exists in small localities, where a physician objects to his failures being given out to one of his confreres, but the doctor does not report. In Houma I went to work and I exacted from the sextons of graveyards to refuse a burial permit unless presented with a certificate from the health officer. Naturally, these people were referred to me, and I did not issue a certificate until I could find out the name, age, sex, color and what disease the deceased died of. In that way I managed to have vital statistics, but I found this handicap: that all the negroes who died in my city were buried out of the corporate limits, and my jurisdiction did not extend that far, and naturally they were buried without a certificate. Consequently, the statistics I got were merely for the white. I saw this change: Dr. Dowling, with the coöperation of the United States Government, has put this into the hands of the postmasters. I think it is going to redound to good. It will do away with this animosity among physicians in the country, and the postmasters are in a position to see many people, and, as they are paid a little money for each notice, they will find out these things.

In the case of births, I think the postmaster can get these better than we can, because births are not generally known to physicians in the country; they generally come through the hands of midwives, and they cannot read or write, and this does not come to the knowledge of the physicians, and often they do not report because they have not had any opportunity of reporting."

THE CHAIRMAN: A few minutes ago I noticed the arrival of Dr. A. B. Nelson, of Shreveport; I am sure you will want to hear from him. For a long time he was connected with the Health Board in the little town of Arcadia, but since then he has studied and traveled abroad, and has had the advantage of working with some of the most eminent physicians of the country. We will ask DR. NELSON to tell us something of the work he enjoyed abroad.

Remarks—Dr. A. B. Nelson.

“MR. CHAIRMAN AND GENTLEMEN—The Doctor was very kind to make these remarks about me. I didn't expect to be called on to talk, and I shall not take up much time. In just a few words I will tell you what I think about this work that Dr. Dowling mentioned—that for the benefit of crippled children, with club feet, etc.

The first thing that impresses me, and that which I think of as most important, is that it is unfair to the child to allow this condition to remain and not try to fit him for his fight in life. We are in the stage in America to-day where it is hard enough for the child with two feet and two hands to battle with the world, and how much harder, then, for the cripple? I see quite often these children growing up to ten years, and maybe older, with club feet, and merely because not enough attention has been paid to the facts of this line of surgery.

You know—and I do, too—that the profession in general pays very little attention to orthopedics. In fact, it is too much neglected in our schools. Now, one reason is because it is a difficult subject. You will find you cannot correct a club foot at one sitting. All right, if not at one, do it at two; and, if not then, keep on. It is more difficult than abdominal surgery, because, if you are not very expert in doing bone surgery, it will tell on you, whereas in abdominal surgery you can go ahead and cut and then sew up the wound and others can guess at what you have done. By this, however, I don't mean to reflect on those doing abdominal surgery, for I do some myself. But it is a fact that bone surgery must be given close study if you want it to be a success. We must know what we want to do and how to do it before we can accomplish anything. There is no doubt that Dr. Dowling's idea of establishing a home for cripples along the line he mentioned is an excellent one, and I would do anything I can to assist him. However,

better than a home, I think, is to educate the people, and then a home of this kind will be unnecessary—I mean so far as club feet are concerned—because we can correct club feet, as well as many other conditions we might refer to here. Maybe not the first time, as I said—but, if not at first, try again. In six months we can straighten almost any club foot of any patient up to fifteen years of age.

I had the pleasure of seeing Dr. Lorenz do some work, and it is his plan of correction that I use. Probably you all saw him when he was over here. I have seen him straighten club feet of men 20 and 25 years old. As you know, there is no cutting in his method of surgery. Dr. Robert Jones, of Liverpool, however, says it is barbarous and there is no use in it. There is this about it: We have no infection, although we do subcutaneous tenotomy on the tendo Achilles.

I think, gentlemen, that it is high time that we pay more attention to surgery of this character—and may I deviate from the subject a little and say nerve surgery, too.

If there is anything I can do in the way of helping Dr. Dowling out in this home I shall be only too glad to do it.”

THE CHAIRMAN: Dr. O'Reilly, we shall be glad to hear you discuss some of the topics given.

Discussion—Dr. W. T. O'Reilly.

“The papers read this morning that attracted my especial attentions are those by Dr. G. Farrar Patton, State Registrar, and Dr. Chandler, City Health Officer of Shreveport. With reference to the paper of Dr. Patton, I will say that in the City of New Orleans I judge that we meet with about the same success as Dr. Woodward does in Washington. Heretofore we were very derelict about the law, but of recent days, in the last two years, a very comprehensive ordinance has been adopted and put in force. I doubt seriously if any city in the United States can present an ordinance which is more comprehensive than the ordinance of the City of New Orleans. I know to-day that we are getting 90 to 95 per cent. of the births reported, and possibly that number recorded. In our ordinance for the reporting and recording of births we have a clause which serves as a check on the physician against the parent and on the parent against the physician. The physician or mid-

wife must, within seventy-two hours, report the birth to the office, and the parent, or, in the absence of the parent, some relative, or, in the absence of a relative, some one present, must record the birth within thirty days. The ordinance, in my judgment, cannot be improved on, except in one way, and our board is perfectly willing to accept that improvement when it can be made in a way so that the expense of reporting and recording, and keeping of records, furnishing certified copies of such records, will be paid by an appropriation to cover these expenses. Then we will dispense with the fee which is now charged by our board. However, we claim, and I think we can prove, that we are getting this high per cent. in the City of New Orleans. I do not say that the number of births reported and recorded is in proportion to what it should be when you make the comparison with the death rate. Other agencies come in and interfere with our getting full returns. With these, you are familiar. I say we are getting 95 per cent., and this accounts for the other 5 per cent.

As I stated, the paper of Dr. Patton is one which interested me very much on that feature, and I have always been willing to have a feature of that sort made general all throughout the State of Louisiana. I do not think the City of New Orleans should have regulations different from any other city in the State in matters of that kind. New Orleans, Shreveport, Baton Rouge and other large cities should come under one common law. I think, however, they should have a voice in framing that law, because you will find the conditions, especially in the City of New Orleans and Shreveport, similar in the application of a law of that character. I want to say to the State Board of Health that the City Board of Health (or Parish Board of Health, as it is now designated) will be ready to go before the Legislature and help in any way in its power to get a general vital statistics law that will apply equally all over the State of Louisiana. I have expressed my views before, and I want to go on record as stating that I am in favor of the abolition of the fee system in the registration of births. This is a subject which should receive the consideration of every municipal officer in the State of Louisiana.

In regard to the paper of Dr. Chandler, I have raised my voice against the method and style which has been adopted in publishing the local statistics by the United States Government. It is a law, no doubt, which is uniformly applied, but it does not fit conditions

everywhere. Southern cities which have large colored population are the sufferers—New Orleans especially. I think we are parallel with Washington in this respect. The population of New Orleans shows one-third colored. The method of publishing the deaths on the statistical tables of the Government inflicts a hardship and an injustice on most Southern cities. The smaller the city is the more apt, if it has a large colored population, to suffer. Keeping these statistics separately is the only way our Southern cities can escape the reflection they are now under, simply because we have to carry such a large colored population. Again, cities like New Orleans and Shreveport, as justly claimed, are large medical centers; our hospitals bring a number of invalids into our midst, and as a result we are forced to carry them on our vital statistics tables. As far as that movement of the City Health Officer of Shreveport is concerned, I think it merits the support of every health officer in the State of Louisiana. I am heartily in accord with what his paper has brought out, and I am only too glad to help Dr. Chandler. It was my intention to have taken up this subject, but the doctor got into the field before I did, and I stand behind him to help in every way possible. I am reasonably sure that a law is now about to be introduced in Congress shaping up measures so that evils of that character, which have been the bane of all southern cities, will find some remedy.”

THE CHAIRMAN: We have with us the senior member of the assistants of the Hookworm Department, DR. ADAMS.

Remarks—Dr. George B. Adams.

“I did not expect to be called on to-day, and to be asked to make an extemporaneous talk to this body of sanitarians and health officers causes me to feel most keenly my inability to appropriately respond to this invitation.

I appreciate, and am glad of the opportunity to say a few words concerning the field-man's work. The State Board of Health, in its unity, is a great organization, whose every effort is to better the health of the people, either by bettering the condition of the individual or his environment.

In my position I feel as the outstretched finger tip of the Board of Health reaching into the remote rural parts of the State, teaching and preaching the gospel of health and sanitation. By means

of the field men of the Hookworm Department the Board of Health is enabled not only to reach the little railroad only, but to extend its influence for good to all sections where we find habitation. The field men are organized, working systematically, with a definite end in view, and even now I see that we are doing a great good towards improving the insanitary conditions of little towns, public schools and rural communities.

Probably the greatest good we are doing is in an educational way. There are so many people in the rural sections who do not believe in the germ theory of disease, and in our work with the microscope we demonstrate the hookworm eggs to as many as possible; they observe the hookworms that have been expelled, and note with amazement the rapid improvement in the individual treated. Seeing, they are convinced, and when told about a germ that causes typhoid fever, and one that produces tuberculosis, they more readily accept your statements concerning the spread of disease and are willing to take such steps as they can to prevent preventable diseases.

After all, sanitation means education, and the field man's work is education. I feel convinced that the money given by Rockefeller to assist in eradicating the hookworm is doing more good to suffering humanity than any money ever spent."

THE CHAIRMAN: Dr. McKinney, won't you tell us something of interest connected with your experience in the field of the hookworm work?"

Remarks—Dr. G. C. McKinney.

"The ultimate solution of the hookworm question depends on sanitary closets. We are all agreed that hookworm disease can never be eradicated by treatment alone. To accomplish this eradication some type of closet must be provided that is both inexpensive and easily cared for. As yet no such closet has been devised, although several attempts have been made. The best known of these is the Stiles, which is inexpensive, but very difficult to care for. The latest of these is the so-called Kentucky closet, which meets the requirements perfectly, that the Stiles does not, in that it is entirely automatic, requiring no attention whatever. However, the serious objection that will always bar this type of closet as a solution of the hookworm problem is the cost of construction. It might well

be argued by those who advocate it that its cost is not sufficient to bar it, being only about \$10. But those of us who are constantly thrown with the class of people in whom hookworm disease is most prevalent know that the cost is prohibitive.

Therefore, to meet these two requirements of low cost of construction and ease of cleaning, I have offered the following type of closet as a solution. Nothing original is claimed for it, the idea being borrowed from the Stiles closet. All the features of the original Stiles are to be retained except the container. Experience has taught that these containers will not be emptied except where scavenger service is employed. The farmer who does his own work, and, therefore, has no one in his employ on whom he can place this very unpleasant duty, will not do it himself. Inevitably the closet becomes so foul that it is worse than none at all. It will be seen, then, that the object is to retain all the valuable features of the Stiles closet without the container. This is obtained by substituting a frame of boards one foot in depth to just exactly fit in the rectangle under the closet seat. This frame is filled half way with dry road dust, which can always be readily obtained and stored in a barrel for use. Of course, wood ashes or other material could be substituted for the road dust. This dry material will absorb all the liquid and allow the privy to be practically odorless. This is a very valuable feature, as rural persons who have been accustomed to no closet at all will not endure the odor of a Stiles closet, and consequently it is not used after it is built. This closet can very easily be cared for by merely removing the contents occasionally and by transferring it to a hole near by, covering it with dirt. It will thus be seen that the unpleasant part of removing a container is dispensed with.

Of course, objections will be offered to this type of privy, principally the following: It is not sanitary; the board frame will decay; soil pollution is not prevented; the contents will not be removed. All this is granted, but until we can offer some closet that will meet all these requirements at a cost that will permit of its practical instead of theoretical use I believe it comes nearer solving the problem than any that has been devised. Then, too, in answer to the objections: If the closet is built on elevated ground, so that water cannot run under it, soil pollution will not occur; the boards will last several years, and the farmer will have but little objection to removing the contents with a shovel.

Supposing the contents are not removed at all, the closet is just as well flyproof as the Stiles, and, as far as hookworm disease is concerned, it will completely eradicate it, along with all other intestinal parasitic diseases.

After all, what we want is a means of reducing soil pollution as much as possible, and to do this some type of closet must be built that will meet the two fundamental requirements—low cost of construction and ease of cleaning.”

THE CHAIRMAN: We have present another representative of the Hookworm Department, Dr. G. M. Trezevant, from whom we shall now hear.

(To appear.)

* * *

THE CHAIRMAN: Gentlemen, Dr. Perkins, the Secretary of the Board, is sitting over here, a kindly, intelligent critic, and I am sure you would like to hear what he has to say.

Remarks—Dr. Wm. Perkins.

“The community is undoubtedly entitled to health protection, but very few of them fully realize the importance of or the necessity for it. In many communities the position of health officer is treated merely as a favor to be handed out to some friend, or as a piece of political graft to be enjoyed without the return of a *quid pro quo* to the community. Many health officers are both ignorant of and indifferent to their duties and responsibilities, and accept office without any idea of giving the necessary time and attention to its details. The community expects little and pays for less, and thereby encourages laxity and inefficiency. Large sums are expended on sheriffs, clerks of court and similar officials, but such matters as the lives and health of citizens are not thought adequate for appropriations. Furthermore, the people have not learned to look upon a health officer as a guardian of their lives and health, and pay scant attention to the efforts of those officials who are trying to do their duty.

Incessant rotation in office is not conducive to the educational development of the health officer himself. Public hygiene and preventive medicine are specialties, just as much as surgery and laryngology. It is too much to expect a man to devote special

attention and time to the study of public health work when his community is liable at any time to replace him by an untrained and poorly qualified man.

Conservation has just now become almost a national fad, and is being applied to new national and State resources every day. Among these resources, the lives and good health of citizens have only recently been considered as worth conserving. Health conservation is by no means the least important.

The present plan being pursued by the State Board of Health, under the direction of Dr. Dowling, for the education of the people in health matters, is one of the surest ways to accomplish definite and permanent results. When the people are aroused to the consideration of the value of adequate health laws and energetic health officials in the protection of individual life and happiness, then, and only then, may we expect that coöperation which, after all, makes laws effective and that public demand which makes officials efficient."

THE CHAIRMAN: When we have with us men who have given study to the points at issue we are glad to hear from them. DR. J. H. WHITE, of the Public Health Service.

(To appear.)

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AFTERNOON SESSION.

The afternoon session was called to order by DR. DOWLING at 2:15.

THE CHAIRMAN: The opening topic on our program this afternoon is "*State Bacteriological Service*," which will be discussed by DR. W. H. SEEMANN, State Bacteriologist.

Bacteriologic Service—Dr. W. H. Seemann.

The subject assigned to me in this health conference is "Bacteriological Service." I do not feel that my exposition of the subject can more than open the door to a frank and free discussion of the wants and needs, in this line, of the public service.

In connection with public health work, it is an accepted fact that bacteriologic service is of indispensable and prime importance.

The time nor the place is proper for a technical discussion as to laboratory methods or paraphernalia in use in various health laboratories. Different men have different methods; if the men are well trained and efficient they usually arrive at the same ends. The American Public Health Association, however, has recognized justly that as bacteriology has arrived at a stage of exactness with regard to certain examinations, especially of value in public health work, it is proper that these examinations be standardized according to proven standards. It has, therefore, recommended these standard methods for routine use to men engaged especially in public health work, so that results may be arrived at with precision and when reported may be well understood. Such methods, so far, have only been recommended in the case of milk and water examinations. It would seem to me as an appropriate and advisable thing if all examinations coming within the purview of a public health laboratory should be so standardized. This would result in a better understanding on the part of the party receiving the report and might result in a more general and sympathetic co-operation on the part of physicians with the health laboratories.

It is remarkable, although the service is free, that some never make use of any laboratory aids. It is true that the work of the laboratory has increased over 300 per cent in the past three years; nevertheless the very active educational work on the part of Dr. Dowling and his aides should have met with a greater response, great as that response has been. It is inconceivable how our plans for a glorious health future are to be realized unless the infectious diseases are promptly and certainly recognized. At least one of the greatest, if not the greatest, aids to carrying out this condition is the use of some bacteriologic service, and as the cost of same might be used as an argument against its general use, free laboratories have been generally installed and are in use by health boards, in order that the greatest good may accrue. This service must, obviously, be at the service of all reliable persons.

The law is very general in taking within its meaning persons who are compelled to report cases of infectious diseases. We cannot, in turn, consistently refuse any aid to the recognition of these diseases. Color, creed, position, medical equipment or prejudices should not constitute a condition for, nor an obstacle against, the furnishing of such service. The danger of giving diagnostic information to one who may make injudicious use of it is a responsibility

not to be overlooked, but to be guarded against with watchfulness and met with diplomacy.

One of the greatest drawbacks to the more general use of the laboratory is the transportation problem. A considerable portion of the physicians regard the bringing and sending of specimens as too much trouble. On many occasions, here in the city of New Orleans, we have been asked by doctors to send for specimens, or to have material for the collection of specimens sent to the offices of physicians. It would seem to a fair minded person that the furnishing of free examinations and service should be all that could be expected; nevertheless the condition of apathy on the part of some physicians could possibly be met by an increase of facilities in the way of payment of transportation charges under proper restrictions, and I believe that is a question which will have to be answered by some such a gathering as this, as to whether the added security and information thus obtained for the public and the health officers would well compensate for the added expense entailed. As the condition now stands, there are many doctors who make sporadic use of the laboratory, when it is convenient for them to do so. Such a man will treat a case for a prolonged period and finally, long after the time for best results has passed, will send to the laboratory a badly prepared specimen and wonder that the laboratory is not able to tell him in twenty-four hours what he has been trying unsuccessfully to find out for twenty-four days or more. Usually in the country, as well as the city, we find some physicians who are indifferent about the time of the collection of their specimens. Very often specimens will be dropped in the mail box long after the time for the train which carries the mail. On account of such tardiness a delay of about twenty-four hours, which is avoidable, is entailed, and the specimen exposed to a deterioration which is often the cause of disappointments and misunderstandings.

We really need a closer and more thorough affiliation between the laboratory and its clientele. Men who get reports should inform themselves as to the limitations and meanings of these reports. They should be consistent and by more routine practice school themselves to prepare and send properly, and at the proper time, specimens for examination.

In our health laboratory at present we make the following routine examinations: Water and milk, for evidences of bacterial pollution; blood for malaria; serum for the presence of agglutins

against the typhoid and para-typhoid bacilli; smears and cultures for the presence of the Klebs-Loeffler bacilli; smears, cultures and spinal fluid for evidences of meningococcic infection; sputum and other material for the presence of the *B. tuberculosis*; urine and feces for the presence of the bacteria of infectious diseases, as, for example, typhoid, cholera, etc.; feces are also examined for the presence of intestinal parasites, and these are asked for where a blood picture of a specimen sent in for another examination would indicate that an examination of the feces would be advisable; in addition examinations for evidences of anthrax, glanders or rabies have always been promptly made, as well as the examination of rodents for evidence of plague infection.

In addition to the examinations enumerated above the laboratory has always attempted to aid the practitioner by making such other clinical examinations for indigent persons as might be requested. These have in the past included Wassermann tests and the examination for gonococci; likewise urine examinations, and tissue examinations. Many boards of health are including these examinations in their routine; we do not see in the case of indigent persons any reason not to make these examinations.

The brilliant result attained by the use of bacterial vaccins (anti-typhoid, in particular) imposes on us a duty of furnishing these means of prophylaxis and encouraging their use in households and communities in which infection exists. The vaccins and sera of known worth should be made and furnished free by the bacteriologic service, and their use promoted by their free distribution.

These additions have been contemplated for over a year, but on account of various reasons, financial especially, they are as yet in the formative stage. It is obvious that to do all these things proper equipment and sufficient funds are a *sine qua non*.

In conclusion I would say that it is the purpose of the bacteriologic service of the health board to issue a pamphlet in which the present facilities and the plans and the hopes of the future will be brought to the attention of the health officers and the public.

For the present if any of the attendance would be kind enough to make any comments on any improvements that might be made, we would be grateful. We feel that a laboratory that has made, during the past two years, over 25,000 examinations for the public without a serious complaint, is in the confidence of the public, and it is this feeling that imbues us with the ambition to increase our field of usefulness.

THE CHAIRMAN: DR. TARLTON, wouldn't you like to tell us what you think about some of these questions?

Discussion—Dr. T. T. Tarlton.

"The subject of my few remarks, namely, the educational work of the health officer, may lead to a very wide field of discussion, consequently I will be as brief as possible, giving simply an outline of the work of these officers in the past, at present, and what should be its scope in the future, from my point of view.

The State Board of Health really came into existence when Governor Foster appointed the Souchon board; before that time all its members were residents of New Orleans, and its work was confined almost exclusively to that city.

The Souchon board had its hands full taking care of the quarantine station and the various contagious diseases, and had neither the time nor funds to attend to other sanitary conditions.

At present you, gentlemen, and the people of the whole State, are aware of the efforts of the President of our State Board of Health in his endeavor to improve the sanitary conditions of the State and to instruct the people in the rudiments of sanitation.

But what are our Parish Health Officers doing? Simply attempting to handle properly the cases of smallpox, etc., that come under their observation or that are reported by their fellow-physicians, who unfortunately do not always report in time to prevent the spread of these diseases.

What is the remedy for this state of affairs? Our President is doing his best to educate the people, not only by sending our exhibit car throughout the State and by giving lectures on health matters, but by distribution of pamphlets and bulletins on the same subjects to all physicians and to public schools; unfortunately in a great many instances these are thrown into a waste basket.

In my opinion this is not all we should do; we do not reach the majority of our grown people in this work. Our physicians should talk health matters to their patients, and do it continuously. There should be some one in each parish to go around and lecture to the people, and especially to the uneducated. Unfortunately the Board is handicapped for money, and the Police Juries in most of the parishes claim that they cannot afford to give more than a few hundred dollars a year to their Health Officer.

Another matter that the Board is attempting is the enforcement

of the law of Vital Statistics and the education of the people as to the necessity of the law. So far as the deaths are concerned, I am certain that we will succeed finally in getting a full report, but on account of the plantation midwife law it will be more difficult to get all the births that occur.

In conclusion, to give you a resume of my experience as a health officer during the last ten or twelve years, I find, first, our fellow-physicians do not take the proper interest in the matter; secondly, that the people at large do not appear to realize the truth of what they hear on the subject. At any rate, they do not act on it; third, that the Parish Health Officers are hampered for want of funds."

THE CHAIRMAN: DR. WARREN, we are anticipating your talk this evening, but the gentlemen here would like to hear from you this afternoon. You have come so far to be with us, and your work is so comprehensive, we shall appreciate information which in this case will mean inspiration. Won't you tell us something about your work?

Discussion—Dr. B. S. Warren.

"MR. CHAIRMAN AND GENTLEMEN—As you see, I am on the program twice. I am here in a sort of dual capacity; here to represent the Public Health Service, because for some time I was inspector of government buildings in Washington under the executive order of the president. And I am here in another capacity, having been recently detailed for temporary duty with the United States Commission on Industrial Relations. At present I am more interested in the effects of industrial conditions upon public welfare than I am in the inspection of public buildings.

When I began the work of inspection of government buildings I found there was a great lack of standards. For instance, there were no uniform standard of air space or fresh air requirements per person, though there was a lack of ventilation in all of the government buildings—I should not say all—but in nearly all of the government buildings in Washington. For the most part, except in one or two new buildings, they depend on the doors and windows for ventilation, and when the room is crowded with clerks the one next to the window is going to object to an open window if it is cold and others will object if the window is closed; the one next to the window usually objects, as I say, and you cannot blame

him. Consequently, when the temperature in Washington is below 60° F. every window and door in the government buildings is closed and it is difficult to secure proper ventilation. There was no way to change the buildings and no money for the installation of expensive apparatus, so I could not accomplish a great deal in securing improved ventilation. At any time the temperature dropped very much below 60° F. it was impossible to obtain the proper amount of fresh air, and when I entered a room I found it stuffy. There was no money to overcome this, and it became a great problem. This was especially true in one building where little boys between the ages of 15 and 20 years had to work in a garret with no ventilation; there were no doors or windows or any other means of ventilation. In summer, when it was hot, their faces were covered with perspiration and dust, it was impossible to tell who they were. They looked like little monkeys—in fact, the chief clerk called them “powder monkeys.”

Since I have been connected with the Commission on Industrial Relations I have met with many business men throughout the United States, and their cry is for a standard. They say you tell us a place is not sufficiently ventilated, that it is overcrowded—what does that mean? The cry all over the United States is to fix standards. Now, I do not know of any scientific standards which have been fixed in this country or abroad as to sanitary requirements in shops and places of business.

Just take this outline that I tried to follow in my inspections: Heating, overcrowding, lighting, ventilation, plumbing, water supply, cleanliness, special conditions, etc. I did not have any scientific guide. I know in some States they have tried to work out standards. New York, for instance, requires 250 cubic feet of air for every person. That was so ridiculously small that unless the building had a very good mechanical system for ventilation it would be practically impossible to secure the proper amount of air per person. Most government buildings have tall ceilings—some 15 and 16 feet high—and 250 cubic feet meant practically nothing. I thought in an arbitrary way to fix overcrowding at 75 square feet of floor space per person. This was suggested by one of the men in our service. The greatest danger in overcrowding is due to the contact transmissions of disease, and a radius of five feet in every direction would probably eliminate some of the danger from contact.

The next question was ventilation. We know now from experiments that have been made recently that ventilation does not mean so much a change of air and carbon dioxide and other things that we used to hear of in our physiologies, but rather high temperature and humidity. However, the last word has not been said on this subject; but with our present knowledge we believe it is the humidity and temperature we suffer from in a room more than the carbon dioxide or animal impurities, or anything of that kind.

The next question that presented itself was lighting, and I could not settle that, because again I had no standard. Lighting engineers all over the country are asking for a standard. I tried to fix on some arbitrary standard to protect the individual from glare and excess light, but I found in government buildings there was no protection afforded. I had more discussions with government employes over this one question than any other. One claimed there was not enough light and the other that there was too much light and glare. It seems to me there is room for a lot of work along this line.

The next question was cleanliness. There is no standard by which we can fix that. You have inspectors all over the country; you fix an arbitrary standard, but what is good in one man's opinion may be bad in another's. I mention this subject to show you some of the problems which the sanitary inspector is trying to work out. These are the conditions as they exist.

Now, as doctors—national, State and local—we have got to get together and fix some standard. They may be arbitrary at first, but the business world is demanding them, and we must endeavor to make them uniform and enforce them in a uniform way. If we don't treat every man alike we are not going to enforce our standards.

It was suggested some time ago at the meeting of the National Council of Safety in Chicago, which represents a large number of manufacturing interests, that this question of hygienic standards be studied. The Public Health Service has agreed to cooperate with the National Council of Safety, and a committee has been formed, which is going to try to work out for the council hygienic standards, especially for heating, lighting and ventilation. I do not say it will be scientific, but it has got to be what is accepted as the best according to our present knowledge.

The next proposition is to find the sanitary inspector and have

some kind of standard of education fixed for him. At present men with little or no previous training are detailed as sanitary inspectors, and they are left to their own resources and must train themselves. In Germany they require a special training in this subject and two years' study in certain technical schools is required of their sanitary inspectors before they graduate them and give them a position. You might say that because a man is a doctor he will understand these questions. This, however, is not possible. There are so many details in hygiene and public health work to-day that it requires more extensive study than that required in the medical schools, and a degree in medicine does not mean a degree in public health. At present there are several schools which give special training in public health and confer the degree of doctor of public health, but they are turning out a supply insufficient to meet present demands. If, however, this proposition that I hear so much talk about to-day—that of the whole-time health officer—goes through, and we divide the State in eight or ten districts, each district requiring health officers, the demand will be greatly increased and the supply must be increased to meet the demand.

The idea has been suggested to me—I will not say by whom, but by a man who has considerable knowledge of public health requirements, and this is not official; it is not a public health service idea at all. However, it is an idea worth considering. It is the establishment by the United States of a United States Sanitary Academy, something similar to the United States Military or Naval Academy, with a corps of teachers paid by the United States Government, with students appointed by each congressional district as at present to West Point and Annapolis. Make it a four-year course, and pay the students' expenses while there, just as at the Military and Naval Academies; train them for four years and then give them a degree of doctor of public health. There are 435 congressmen and 96 senators, and that would give about 531 students there to complete the course every four years.

The total annual expenditure for the United States Military Academy at West Point is about \$1,000,000, and it is safe to state that a sanitary academy would not cost any more, and would be as efficient an agency in the protection of the nation as the Military Academy. The graduates, or a large number of them, would be required for the National Government. They would be so well

trained they could immediately secure places outside if not needed by the government. But train them up—that is the important point—and by increasing the supply we would create further demand, because these students would go back to every congressional district in the State, and by talking public health would help to educate the people and would create renewed interest.

There is another remedy. I do not know, however, if the United States is ready for it or not—that is insurance against sickness. When we have insurance against sickness, and some one has to pay in dollars and cents for each person as he gets sick, and pay part of his wages while he is sick, you are going to see that there will be a different value placed on the employe. Just as at present in those States where the workman's compensation acts are in effect, there are extensive "safety first" movements being inaugurated because employers are compelled to pay for accidents; so where insurance against sickness is in operation those who must pay will inaugurate effective campaigns to prevent sickness.

All interested workers in the accident prevention movement agree that without the workmen's compensations acts little progress would have been made, but now the movement is almost nation-wide, and the business men affected have joined in the movement and are organizing their employes into "safety first" associations.

The same results may be expected when compulsory sick insurance is on the statute books of a considerable number of States, and some one is called upon to pay for the time lost on account of sickness.

THE CHAIRMAN: The question of "*Drug Inspection*" will now be discussed by MR. EDW. H. WALSDORF, President of the Louisiana State Pharmaceutical Association.

Drug Inspection—Mr. Edw. H. Walsdorf.

"It is my pleasure, on behalf of the Louisiana State Pharmaceutical Association, to extend to you hearty congratulations and fraternal greetings. The great progress which your State Board of Health has made along ethical lines and drug inspection, has been observed by the Louisiana State Pharmaceutical Association with great delight, and we on our part have taken every encouragement and inspiration from your endeavors in our common need; for let

those who wish it otherwise say what they please, there is, and always will be, between the true physician and the true pharmacist the most cordial, the most brotherly relation.

For the last few years physicians and pharmacists working hand-in-hand have set themselves to change some of their mutual errors and mistakes of the past.

It lies not in the mouth of the pharmacist to reproach the physician nor in the mouth of the physician to reproach the pharmacist—we have erred mutually; we have erred together, and we are determined to redeem ourselves together.

The subject of Drug Inspection carries with it so much of vital importance that at first thought I feel myself not equal to properly place this great subject before this learned body, more especially when limited to ten minutes.

The movement to make drugs and foods—whether the product of the manufacturing houses or the product of the individual—what they should be, is one in which you and we have a common interest, and in which our public have the greatest interest of all. My own observation has led me to recognize that the medical associations, the pharmaceutical associations, the individual physicians and the individual pharmacists, have taken steps to place themselves in proper relation with the great movement for drug and food inspection and regulation.

The standards of drugs are better maintained than ever before. Drugs, oil and pharmaceuticals are now assayed, physiologically tested and standardized to an extent unknown ten years ago. Purity and reliability are the rule.

As president of the State Association, whose every effort in the thirty-two years of its existence has worked diligently to elevate the practice of pharmacy, and as former secretary of the State Board for several years, I have come in close contact with the true conditions.

The pharmacists throughout this great State (with few exceptions) are now endeavoring to assist in driving out the unprincipled dealers, who sell drugs and foods below standard in competition with those of standard grades, dealing, as they do, in articles essential to the public health and the preservation of human life, a sacred obligation rests upon them to comply with the laws, which have been formulated for the good of the many and not the convenience of the few.

Drug Inspection, or Drug Regulation, in the few years of its existence, has made notable strides. The Federal law, known as the Pure Food and Drug Act, which went into effect June 30, 1906, regulating drug inspection and applying to interstate traffic and foreign imports, has proven of great benefit to the pharmacist as well as to the public at large. The market of the United States, prior to the enforcement of the Pure Food and Drug Act, has been the dumping ground for inferior grades of drugs, drug products and many other things.

The crude and powdered drugs coming into this country under the new stringent regulation of inspection of drugs now prevailing in the United States will make it almost impossible for adulterated drugs from abroad to make their appearance so frequently on the market. Adulterated drugs are rarely offered on the German market, being, doubtless, due to the conscientiousness of the German jobbing trade, who immediately reject all drugs that fail to reach the acceptable standard of purity and quality.

The pharmacist believes that the medical profession and the pharmaceutical profesison must all work together to eliminate the low standard of drugs and foods and to perform any other duty which will tend to raise the standard of health and lower the death rate of our cities and to continue the fight in this State under the able guidance of our health officer, Dr. Oscar T. Dowling, thus guaranteeing absolute safety and protection to the general public, knowing that I am voicing the sentiments of the pharmacists of this great State of Louisiana.

I desire on behalf of the Louisiana State Pharmaceutical Association to express to this body our high appreciation of your confidence and esteem in us, and, my friends, I thank you."

THE CHAIRMAN: No doubt a number of you are acquainted with DR. E. S. KELLY, formerly connected with the State Board of Health as secretary, who will further discuss the subject of "Drug Inspection."

Drug Inspection—Dr. E. S. Kelly.

"Drug inspection has been prosecuted here only within the past few years. Discussions with reference to the subject of inspection ought to include the different interests concerned, from the druggists' standpoint, and having been connected with the State Board of Health, I understand, to a certain extent, the situation.

Our trouble is that the druggists in the State have not embraced the opportunities presented them. I know a year and a half or two years ago, before general inspection was undertaken, representative druggists from different parts of the State and the State Board of Pharmacy were asked to confer with the State Board of Health as to methods of inspection, so that regulations for adoption might be framed harmoniously, both sides being present to state facts as they saw them. The purpose was to have these regulations formulated in a manner that would be fair to the drug interest, to the general public and exact from a legal point of view. They did not take advantage of this.

Now, one exception that the drug interests have taken, and in which to a certain extent they are entirely correct, is that there is no qualified pharmacist to make these inspections. As far as the inspections of the Board have gone to date there has been no need for this, and they might go along that way indefinitely, but to go in and make a systematic inspection of a drug business it is absolutely imperative that a man thoroughly qualified be provided to do the work. By that I don't only mean a man posted in chemistry, not alone that, but a man who is experienced in the drug business and whose experience covered a number of years. Until then dissatisfaction, and justly so, will exist. So much for that.

I didn't understand just what was to be discussed in this connection when the conference was called.

I think there is another important matter that should be considered. That is the question of the disposal or selling of poisons to children. The regulations do not prohibit this. I think this prohibition ought to prevail, irrespective of having a physician's prescription.

I would like to add these recommendations, which I think are important:

1. That the State Pharmaceutical Association annually appoint a committee on conference with the State Board of Health. The northern, central and lower portion of the State to be represented by one member each, with two members from the Parish of Orleans.

This committee to act in an advisory capacity with respect to regulations relative to drug interests and as to methods of drug inspection.

2. That the Food and Drug Regulations be amended to provide for the employment of a Registered Pharmacist of no less than ten

years' practical experience, to act as assistant commissioner or as inspector of drugs.

The selection of this official to be made from a list of three names to be submitted by the State Pharmaceutical Association.

3. That the sale to children of recognized poisons, either by prescription or otherwise, be prohibited."

THE CHAIRMAN: One of the greatest fights we have been making recently and one of the industries we are using every effort to improve is the dairy. MR. GEO. B. TAYLOR, State Analyst, will tell us about "*Dairy and Milk Inspection.*"

Dairy and Milk Inspection—Mr. George B. Taylor.

A good, clean milk supply is of paramount importance in the life of a community. This is especially the case in cities where the milk is produced and handled far from the place where it is consumed. It devolves upon the health officer therefore to lay particular stress on the purity of the milk supply. Wherever there is a health board that is at all active, the principal part of its activity will be toward regulating the sanitary production and handling of milk.

To properly supervise the milk supply of a community there must be

1. Thorough and efficient dairy inspection.
2. A properly equipped and well manned bacteriological and chemical laboratory.

The inspection and scientific force will depend, of course, on the size of the community and the work to be done. Special stress should be laid on efficiency. One thoroughly capable man is worth five inefficient, politically-appointed inspectors.

Every community large enough to support from five to ten dairies should have supervision of its milk supply. In cities from 3,000 to 10,000 population, one capable man devoting his whole time to the work can control the milk supply from a sanitary standpoint. A capable man is one who knows how to inspect a dairy, who can make chemical tests of the milk, and who is able to determine the purity of a milk supply from a bacterial standpoint. Any graduate in the agricultural course of the Agricultural Colleges should be able to do this work. The services of almost any graduate of these colleges may be secured for \$1,000 for the first year. Five hundred dollars will easily fit up a small, complete bacteriological and chemical

dairy laboratory. It is needless to say that the health returns to the community would be worth many times this amount.

A dairy inspector must be efficient, and, what is especially important, he must have good judgment and common sense. He must realize his duty to the community; but must be considerate and just in his dealings with the dairymen under his supervision. A man can do his duty to the community and still possess the friendship and respect of the best class of dairymen. An antagonistic attitude toward the producers will be resented and the work handicapped from the start. The inspector can almost invariably get the co-operation of the dairymen by being friendly, by advising, by encouraging and by being practical. The dairymen must be taught to realize that cleanliness is economy in the long run.

In supervising the milk supply the first work to be done is at the dairy. The dairy score card approved by the United States Bureau of Animal Industry should be used. This card is universal and represents the best thought in the dairy world. By its use scientific and exact inspection is made. Comparisons are rendered easy. The score card encourages rivalry among dairymen in bettering conditions. The dairymen should be encouraged to improve their equipment, but cleanliness must be the keynote in dairy inspection. A perfectly constructed dairy may be foul; while a shed where cleanliness reigns may be a model in sanitation.

These things are necessary in the production of clean milk:

1. Healthy and clean cows with clean udders.
2. An abundant supply of good, pure water.
3. Absolutely clean utensils.
4. The small-top milk pail.
5. Clean milkers with clean, dry hands.
6. Immediate and proper cooling of milk.
7. Milk kept cold until consumed.

These points must be emphasized and enforced by means of laws if necessary. The only item of extra expense is the ice supply.

Regarding equipment, good light and proper ventilation are requisite. Then come the tight, sound floor and proper gutter.

Tuberculin testing should be encouraged, and required wherever funds are available to partly compensate the owner for the loss of his cows.

On the streets or during delivery, milk should be tested for temperature and sediment. In the laboratory, milk should be tested

for number of bacteria, sediment, adulteration by watering and skimming, and presence of preservatives. The bacterial test is of primary importance, for this is a guide to the healthfulness of the product. While the number of bacteria is decidedly important, the differentiation of bacteria should be carried out if practicable. These tests may be made both by growth on culture media and by the microscope. The microscope will determine the number of leucocytes and the presence of different bacterial forms, for example, the streptococcus form. Foreign sediment indicates dirty milk; but absence of sediment, on the other hand, does not indicate pure milk. It simply shows the milk to have been properly strained. The presence of preservatives should be most severely condemned, as these may hide dangerous and poisonous conditions. The adulteration of milk by watering and skimming is, of course, fraudulent; but from a public health standpoint this is of no great importance.

There should be standards for dairies and milk. A dairy should not be allowed to operate which scores low on the dairy score card. In this State a dairy must score at least 50 in order to furnish milk to the public.

There should be chemical standards to insure a proper food value to the product. Usually there is set a minimum standard of fat and solids not fat. These standards should be such as to discourage the entire use of breeds of cows noted for quantity of milk but not quality.

As for bacterial standards, a great diversity of opinion exists. The New York Milk Committee places the limit as 1,000,000 for milk used for other than cooking purposes. A great many cities have standards of 500,000 and lower. A minimum standard of 1,000,000 would exclude a great deal of milk now used in the South, and there is opposition among many scientific men against any numerical standard for bacteria. It is believed that individual cities should study their own milk problems and make their own bacterial standards, regarding as insanitary milk having more living bacteria per cubic centimeter than is found in normal milk produced under the normal sanitary conditions of that community.

In general it is believed that all milk not produced in dairies subject to immediate and frequent inspection by city inspectors, should be pasteurized—that is, all milk shipped into a city from a point outside the limits of city inspection.

Notwithstanding the fact that a community may have good laws

and efficient inspection service, there are several outside factors which must enter in order to get good results.

The first of these is publicity. By publicity is meant published statements of results, the knowledge of which will benefit the community as a whole. The citizens of a community should know what is being done in the service, should be taught to realize the necessity of care in selecting the milk supply. The sanitary dairyman will obtain deserved advertising, and the insanitary milk producer will get some deserved notoriety, which he most earnestly deprecates. After a round of inspection of dairies, the scores of all dairies should be published in the local papers in the order in which they rank. This will give information to the consumer and act as a stimulus to the producer. The chief of the service should then, by all means, give individual hearings to the dairymen. He must point out defects and suggest remedies, giving the dairyman a copy of his score together with other helpful literature. The producer must be impressed with the necessity of complying with instructions and the results of neglect on his part. A second inspection must take place soon after the hearings have been given. Legal measures should be adopted against all producers too ignorant, careless or stubborn to correct conditions. The unfit should be rapidly weeded out. In this way splendid results along sanitary lines will be accomplished.

The consumer must not only be given the results of the inspection, but must be taught the proper care of milk in the home.

Not only must there be competition among dairymen as to the scores of their dairies, but the inspection service should institute milk, butter and cream contests. The producer must be shown the bacterial count of his milk, and must be taught how to reduce it. These results must also be given publicity. Great care should be taken that every step be absolutely just and fair. Recourse to the courts should be taken only when other means fail. There must be no let down to the work, however, and the producer must understand that the requirements must be met.

Publicity through the local papers, circulars of information to both the producer and consumer will awaken interest and obtain results.

It might also be practical to institute a series of lectures on subjects relating to milk supply. These could be delivered by the chief of the inspection service, the health officer, local physicians, members of the State Agricultural College and United States Depart-

ment officials, and by the use of slides and moving picture films general interest could be created.

Summarizing:

1. There must be an efficient and energetic personnel with proper facilities for doing scientific work.
2. The principal work must be at the source of supply.
3. There must be modern scientific control of the products.
4. Educational and publicity propaganda relating both to producer and consumer must be established.

In this way it is thought a great deal of good can be established, both from a civic and a public health standpoint.

THE CHAIRMAN: We are very sorry that Dr. Melvin and Dr. Rawl found it impossible to be with us, but we are fortunate in having a representative of the United States Bureau of Animal Industry, DR. R. W. TUCK, who will tell us of his work connected with "Meat Inspection."

The Difficulties Encountered in Inspecting Small Slaughtering Plants, and Remedies Suggested to Overcome Them—Dr. R. W. Tuck.

We not infrequently find that the local meat supply of a city of five or ten thousand inhabitants is obtained from several small slaughter houses, located one to three miles from the city in different directions, so that to visit them all an inspector would have to travel ten or more miles. As the butchers have limited means for storing meats it becomes necessary for them to slaughter every day and, having but two or three employees to do the work, during the morning hours, of necessity they must serve customers in the market; all the remaining portion of the day and sometimes far into the night must be allotted to the slaughtering. One can easily see that the expense necessary to have an inspector present at each establishment during the entire slaughtering period would be prohibitive.

A second objection is that many small slaughtering establishments are located with little or no regard to the necessary sanitary surroundings and are not properly equipped. Not infrequently the location selected is along some small bayou, pond, swamp, or low ground where proper drainage is impossible and a suitable water

supply is not obtainable. In many instances I have known the water used in washing the carcasses to be obtained from this swamp, or pond, or from shallow dug wells, where surface water is readily admitted and the character of the water is very undesirable. Facilities for dressing the carcasses are such that it is practically impossible for the operation to be performed in a satisfactory manner. Little or no hot water is provided for the proper cleansing of the building, utensils, the hands of the employees, or dressing the carcasses.

The drainage facilities consist of a gutter leading from the slaughtering floor to the outside, where, in some cases, a tub is provided to catch the blood and other fluids, and this receptacle is only occasionally emptied. In other instances the blood, etc., is conducted twenty or more feet from the killing floor and then allowed to permeate into the surrounding soil or into a nearby swamp or pond, where it collects and soon makes a breeding place for flies and in some cases becomes a nuisance to the immediate neighborhood.

Another objectionable feature is that no provisions can be made for antemortem inspection, the objects of which are:

First—To protect the public health by rejecting animals whose flesh might prove dangerous to health.

Second—To protect the butcher from infection in cases of such diseases as charbon, etc.

Third—For economical reasons, by rejecting animals in advanced pregnancy and immature animals, which if killed would be condemned. Whereas, if not rejected they could be sold.

Fourth—For correct judgment, animals are liable to be slaughtered when affected with a disease of such a nature that it could be detected with certainty only before slaughter, particularly in certain septic diseases, the inspector not being present when the carcass is being dressed.

Butchers are able to practice certain fraudulent manipulations whereby they remove lesions which should act as a guide to the inspector in making his decisions as to the fitness of the carcass for food. Especially is this the case in reference to the removal of lesions from tubercular cattle.

Then again we must consider the manner of transporting the dressed meat from these small slaughter houses to the city market. We often find it is placed in an open wagon that is but partially

cleansed. The meat is then more or less completely covered, and in many instances the cover consists of burlap, canvass, or oil cloth that is only laundered at long intervals and then in a very careless manner. The journey to town is begun with a temperature of possibly 90 degrees F. accompanied by great humidity. The travel occupies one hour or more, and the road may be covered with several inches of fine dust which the revolving wheels cause to roll up in a dense cloud and to settle back upon the cover and gradually percolate to the meat. I have seen meat arriving at the meat market after a trip of this kind, and it presented a very undesirable appearance.

It not infrequently happens that the owners of these small slaughter houses are men of very limited means and so cannot make the necessary corrections at their plants recommended by the inspector, and, therefore, his only recourse is to close them up, and it is only a matter of time until some one else opens up another which is equally as objectionable.

Gentlemen, what is the reason for the continuance of many of these unsatisfactory conditions? We cannot attribute them all to lack of the necessary regulation upon the subject, for the State Sanitary Code covers most of them. If we attribute them to financial inability of the butchers, this certainly cannot be considered a legitimate reason, for we must not endanger the public health to save the pocketbook of the butcher.

Is not one of the causes for the continuance of some of the unsatisfactory conditions that exist relative to the proper inspection of meats due to the fact that health officers are erroneously under the impression that political influences would be brought to bear upon them if they attempted to raise the sanitary standard in their respective districts?

I have investigated cases of this kind and found that such is true.

Occasionally the continuance of these conditions may be due to the incompetency of the meat inspector. For instance, during a trip I made at the request of the Louisiana State Board of Health while making an inspection of a city meat supply, accompanied by the city meat inspector, he asked me to visit with him a slaughter house, stating that same was well equipped and in a sanitary condition. I found the plant to be a fair structure, but very poorly equipped, very inadequate water supply obtained from a nearby stagnant pond. In the slaughter house was a tierce half full of water giving off a

very offensive odor, same water having been used to wash carcasses on a previous occasion, and at the time of my visit was again being used for that purpose.

The drainage facilities consisted of a half barrel just outside of the killing trough, which evidently had not been emptied for a long time, and its condition is better imagined than described.

This same inspector later requested me to visit and score his brother's meat market after he had first made an inspection of it. Opening the refrigerator I was confronted with a very strong, disagreeable odor due to the putrefying meats within. The brother advised me he would soon fix the odor by putting the meat into preservatives, which he stated was his usual custom.

I would suggest the following remedies to correct some of the unfortunate conditions referred to above:

First—A law making it obligatory that each parish, etc., be provided with suitably located slaughtering plants which shall meet the requirements of the sanitary code and be provided with competent inspection. While preferable that the parish own and run these establishments, it is not absolutely necessary so long as they regulate the inspection and sanitation. Provision might be made whereby private individuals could be permitted to build and operate these plants, provided the location, buildings, equipment, sanitation and meat inspection meet the requirements of the sanitary code. Another provision might be that the parish build and equip the building and private individuals be permitted to do their own slaughtering, sanitation and inspection to be under supervision of the parish. A law of this kind should also include authority for health officers to obtain the necessary money to build, equip or run the plant and furnish inspection. This might be done by selling long-time bonds and charging a fee for slaughtering sufficient to cover the expense of inspection, pay the interest on the bonds and provide a sinking fund. The matter not being a revenue-producing measure, but one of protecting the public health, financial considerations should be given but second place.

I would suggest that all health matters, including meat inspection, whether parish or city, be under the supervision of one central body, and I think this should be the State Board of Health, who should have the authority to remove all incompetent employees and make all new appointments; also to issue all regulations governing the sanitation and inspection of the meat supply. This, I feel, is

necessary, as it has been found that where so many different heads exist there will not be that uniformity of regulation, equipment and inspection that is necessary for efficient work. This, I believe, has been the experience of most authorities along this line.

I would also suggest that a law be enacted placing all health officers having supervision of the meat supply under civil service, providing that inspectors be duly qualified before being admitted to office, and that they retain their offices so long as they perform their duties properly.

This would insure that only competent persons were employed and that they would not be hampered in the performance of their duties by political influence, whether real or imaginary. The inspector being assured of his continuance in office would have an incentive to make himself as proficient in his profession as possible.

SUMMARY.—1. For the effective and economical carrying out of meat inspection, location of slaughtering plants is of primary importance.

2. The ownership by the State, parish, etc., of all slaughtering establishments is desirable.

3. Health officers, including meat inspectors, should be appointed under civil service, and not by political preference.

4. All matters regulating the inspection of the meat supply should be controlled by one central body, preferably the State Board of Health, who should have power to appoint all new employees and discharge all who are incompetent, negligent, etc.

5. That all persons appointed to supervise the sanitary regulations governing the meat supply be competent and courageous.

THE CHAIRMAN: We appreciate the remarks of Dr. Tuck, and shall be glad to hear further on this important subject. DR. W. H. DALRYMPLE, of Baton Rouge, who also has had much experience along this line, will give us the benefit of his work.

[See NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for May, 1914.]

[Proceedings to be Continued in July JOURNAL.]

Bulletin of the Clinical Society of the Medical Staff of the Touro Infirmary.

MEETING OF APRIL 1, 1914.

DR. J. N. ROUSSEL, Presiding.

MINUTES.

The first speaker was Dr. J. D. Weis, whose cases were discussed by Drs. I. I. Lemann, Charles Eshleman, Wm. M. Perkins (after which Dr. Weis entered into the discussion), Randolph Lyons, and Charles Eshleman, Dr. Weis himself bringing the discussion to a close. Dr. J. N. Roussel was the second speaker, Drs. R. M. Van Wart and Shlenker following. Dr. Ernest Samuel showed X-Ray pictures of one of Dr. Shlenker's cases. Dr. Matas next spoke, after which Dr. Samuel showed and spoke of an X-Ray picture of a case which Dr. Matas is investigating at present. Then Dr. A. I. Weil discussed Dr. Shlenker's case. Dr. Cohn spoke next, and his case of Congenital Anomaly of Ovary and Tube was discussed by Dr. Shlenker, who wondered at it; in reply Dr. Cohn stated that Dr. Bean of Tulane would explain the occurrence. Dr. Lanford showed slides under the microscope of these cases, and he gave an explanation of them. Dr. Charles Eshleman presented his cases next, followed by Dr. R. M. Van Wart, who was the last speaker.

PROCEEDINGS.

REPORT OF CASES.

DR. J. D. WEIS: I have three cases which I want to show, each of which as something rather unusual and very interesting. The *first case* is the man in the chair; here we have the story of a *rheumatic etiology for an endocarditis*. His family history is negative. (At this point history was read by intern.) This is now the tenth month that he has been in the hospital. He has been practically unable to walk at all. The only reason that I brought him down is to show the promptness with which he responds to medication. After twenty-four hours administration of the tincture of digitalis all of the symptoms disappear, but the moment he attempts to do anything they reappear. This is an extraordinary thing. He is a young man. During the last ten months he has had one acute attack of acute arthritis. He was quite ill. The greatest effort that he has been able to make is to move to and from the bath room. I have shown this case for you to see what a heart will do. I have never seen a case that could not hold his compensation and yet respond to treatment as this patient does.

CASE 2. Here is a problem that I am unable to solve entirely. I

would like three men to give an idea of the age of this boy (three men have volunteered the suggestion of 13, 10 and 12). He will be 17 on his next birthday. He came from the clinic with the story that he had a pain in his left side and with supposed swelling of the face. He has been here in the hospital three weeks to-day. I must say that I cannot substantiate the swelling of the face. He is absolutely undeveloped. We have gone through every possible cause of his undevelopment, and the general physical examination of him shows nothing abnormal except that he appears to be a boy of 10 years old. He is bright mentally and practically a normal child. No family history except that he was a premature baby. His brothers and sisters are all big children. The pain in his side has disappeared since he came into the hospital.

CASE 3. This is an extraordinary result. This man has a history of having been ill (coughing bloody pus) for two months previous to the hospital entrance. He started off with chills, high temperature, and spitting of blood, followed by a persistent cough, night and day, since the 13th of November. First noticed an enormous amount of expectoration, and the sputum had a very suggestive appearance—it looked like chocolate and was liver pus. The X-ray examination showed abscess of the liver. Dr. Matas looked at him and thought best to operate. The abscess was draining beautifully through the lung. In waiting for Dr. Matas' decision as to where to make the incision for drainage direct, I gave him hypodermically a grain of emetine for three days, and on the night of the third day his cough disappeared. The sputum in the last twenty-four hours before the cessation of the cough turned perfectly white, and since then he has been well. No cough—no sputum. His temperature has stopped. He had a certain amount of inflammatory pneumonia on entrance. This promptly disappeared. He has gained six pounds, never coughs and sleeps all night. I have never seen anything therapeutic which has been as specific in action as this. I know of no other specific that acts as quickly, except perhaps quinin in tertian malaria.

DR. I. I. LEMANN (Discussion of Dr. Weis' Cases): I should like to relate three cases, each of which bears on Dr. Weis' case from a different angle. The first case was a man whom I saw about ten years ago. He complained only of pain in the right shoulder, slight temperature and cough. We were very much worried for

fear he had tuberculosis. This was in the early days of the X-ray, and after some months of observation I had Dr. Guthrie look at him with the fluoroscope and he said that the diaphragm was very high on the right side, the liver extending up. There was no leucocytosis. While I was temporarily out of town the patient was taken with a great fit of coughing and at that time Dr. Perkins saw him. He spat a pint of chocolate-colored pus. There was no reaction on the part of the lung and the patient made an uneventful recovery. I mention this case because of *the not infrequent rupture of abscess of the liver* through the lung without serious consequences.

The second case was that of a man who had an enlarged liver, fever, etc. There was a history of amebic dysentery and an abscess of the liver was suspected, but there was nothing to indicate where a puncture should be made. While waiting we gave him massive doses of ipecac. He *recovered promptly*. Perhaps this was a case of *hepatitis without actual abscess formation*.

The third case was a recent one in our ward at the Charity Hospital. The heart was much enlarged to the left and the patient was edematous, had a great big liver and a large area of flatness in the back which we took to be a *hydro-thorax* due to the loss of compensation. I told the intern to explore that side of the chest. He told me the next day that aspiration yielded a peculiar looking fluid. This case turned out in the end to be a *liver abscess* which had ruptured into the pleura. The empyema of the right side had pushed the heart over to the left. There was no fever and the picture was that of a decompensated heart case. I throw this out as indicative of one of the ways in which we may err in the diagnosis of abscess of the liver.

DR. CHARLES ESHLEMAN (Discussion of Dr. Weis' Case): Referring to the first case, I want to mention that we may use leeches to the liver, which are effective combined with rest and purgatives, and we get good results. This is sometimes a good way to get rid of the passive congestion of the liver resulting from mitral valve disease.

Referring to the second case, this boy was originally Dr. Leake's case. He sent him to me to find out if I thought his condition good enough to permit a tonsilotomy. In the course of my examination I discovered his age, curious appearance and swelling of his face and I suspected an acute nephritis secondary to one of the acute infectious fever, but this was not confirmed by the urine

examinations. It turned out that we were unable to discover anything abnormal to account for his appearance of dropsy and anemia.

The third case was in the Charity Hospital about November, 1913, with hemoptysis, and stayed there two or three weeks. He seemed to have had a period in which he got better and then he came to my clinic. Our physical examination showed that he was a very well-nourished individual, and my impression was that it was not tuberculosis on account of the history, the physical signs and the location at the right base. Specimens of sputum were negative. At that time I had an X-ray picture taken, thinking that I might find out in that way whether it was tuberculosis of the lung or not. The thought occurred to me when I saw the picture that it was abscess of the liver. Dr. Weis cured him very admirably with the emetine treatment.

DR. W. M. PERKINS (Discussion of Dr. Weis' Cases): One of the cases related by Dr. Lemann was seen by me when the liver abscess ruptured into the lung. Dr. Kohlman saw the case in consultation and advised against operative interference. The patient's temperature, which had been about 99 1-2 for some days before the rupture, rose to about 102 1-2 for about a day or less, and remained about normal thereafter. The patient made a rapid and satisfactory recovery. One of the most striking features of all these cases of liver abscess draining through the lung is the absence of persistent bronchitis after the pus ceases to flow through the lung. It would seem that with such material pouring through the bronchial tubes, which are exposed to the dangers of air and dust contamination, that culture tube conditions would exist. I do not understand why there is not more irritation and persistent inflammation. In two cases which I have in mind where liver pus was discharging through the lung the cough stopped immediately after the draining of the abscess through the thoracic wall by incision. One of these patients had been sent out of the Charity Hospital as tuberculous, and this diagnosis had been confirmed by about half a dozen physicians. He was coughing about every five minutes, and expectorating large quantities. The cough stopped the same day that the abscess was drained by operation. Dr. E. O. Trahan recognized the condition as one of abscess and insisted on operation.

DR. RANDOLPH LYONS (Discussion of Dr. Weis' Cases): I don't see why there should be any quarrel between internists and surgeons about emetine. The surgeons whom I have seen treating liver

abscesses have used it. I think everybody agrees that where it is used in liver abscesses the results have been far better than they were in the past. Here in the city I know at least half a dozen cases where it was used with remarkably good results. It is very harmless itself and never killed anybody, as Dr. Perkins suggests, in moderate doses. I think there are a few things to be considered about the administration of emetine. I have given it by mouth and found that it has had not much effect. It goes through the intestinal canal too rapidly. We had the occasion of seeing a man who was being cured and killed by it, as it were. The man complained of the injections in his arms. They gave the drug to him by mouth (simply breaking an ampoule in water). He was in bed and kept it down, but began to get worse and worse and almost died. We examined the stools, found no amebæ, stopped the emetine and he got well again. I think that all will agree with me that in most cases the combination is an excellent one.

DR. ESHLEMAN (Discussion on the use of emetine, following Dr. Weis' Cases): I recall one case in the ward of a man who had amebic dysentery. He was given a grain in the morning and again in the afternoon by hypo for five or six days. We cured his dysentery, but there developed a curious eruption all over his body, arms and legs, which I can attribute to nothing but the emetine. Each lesion was a dark red color, purpuric in character, discrete and with no tendency to become confluent. It persisted for six weeks at least and gradually faded. At the same time he had a terrific multiple peripheral neuritis, involving his legs chiefly, his arm slightly. There was great pain and tenderness along the nerve trunks, numbness and tingling in the legs and feet, some edema of the legs and absent patellar reflexes. The neuritis gradually subsided.

I looked up the literature and can find no other similar case. The United States Pharmacopeia mentions the fact that the alkaloids of ipecac have been known to produce degenerative changes in the spinal cord.

DR. J. D. WEIS (Closing discussion): At the Charity Hospital I had that experience twice, two cases of peripheral neuritis. The reasons we get the nerve lesions is because we use too much emetine. One-third of a grain once a day is sufficient. This is where the mistake is. I am sure, in giving too large doses.

DR. J. N. ROUSSEL: I want to show you a *result of carbon dioxide snow on an epithelioma of the lip.* It was about the size of a marble. Snow was applied for a minute and then for a minute and a half at second sitting ten days later. The infiltration has all gone. I think we are warranted to use the snow in these cases. The X-ray has no effect except in the erosive type. Under the X-ray the hard types absolutely grow, while under the snow they disappear. I think in these cases of epithelioma of the lip, considering the fact that the operations are so disfiguring, we are warranted in using the snow on the lip, so as not to disfigure the patient. It has given a beautiful result in this case.

DR. MILTON A. SILENKER:

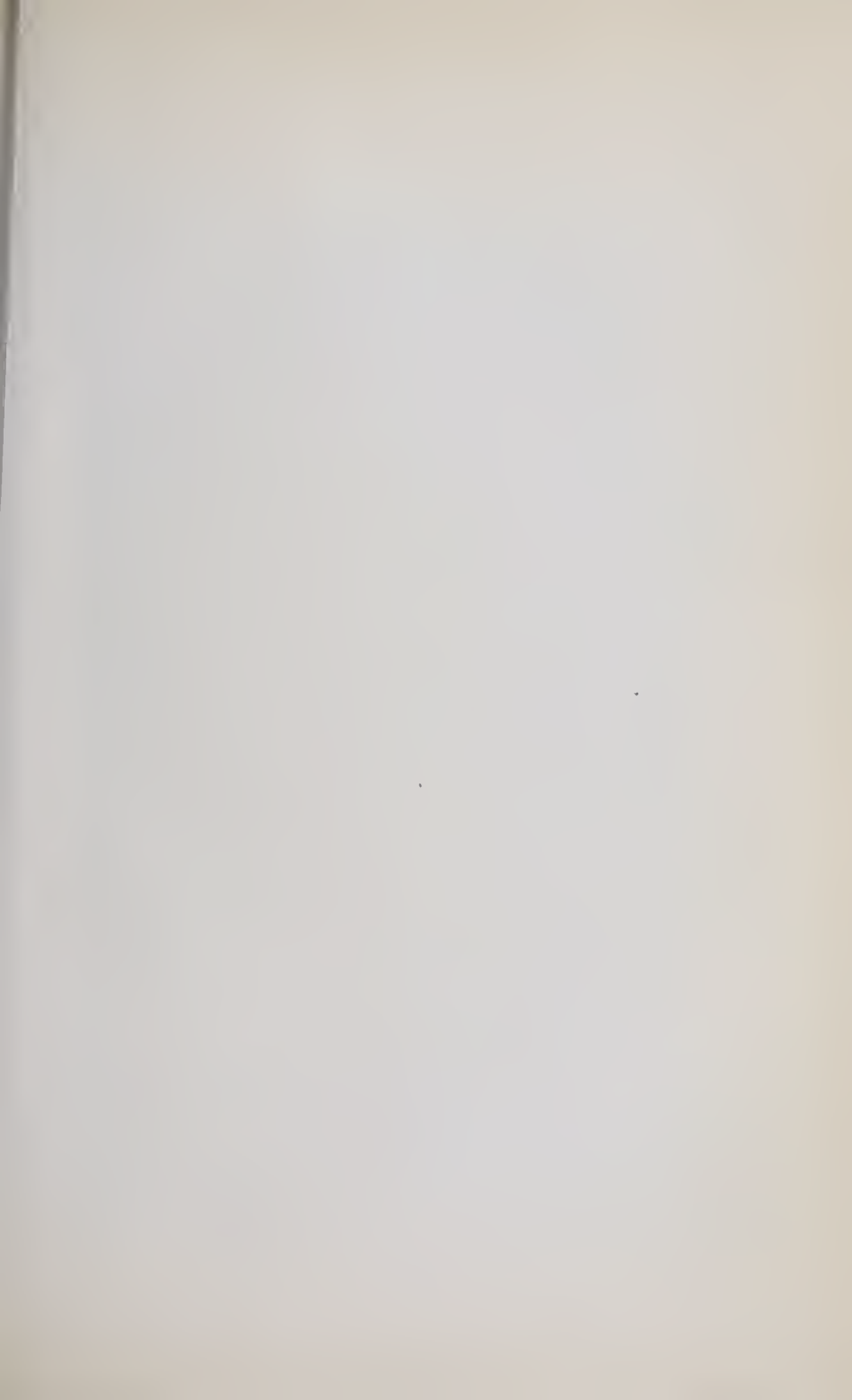
CASE I—MULTIPLE MYOMA (Specimen).

Pending the arrival of our patient, I want to present to you an interesting specimen of multiple myoma of the uterus. You will observe that in this specimen there is contained every form of myoma that occurs in the uterus. My object in presenting this specimen is to impress upon you that hemorrhage is not necessarily a symptom of myomata, as you will observe from a brief history of the case.

Patient was forty-two years of age, married twenty years, had one child. Her menstrual periods were of the **twenty-eight-day** type and the duration from four to five days and the quantity usually normal. Her symptoms were digestive disturbances and distention of the abdomen from gases. She had an occasional abdominal pain and could sometimes feel a lump in her abdomen, which caused her to consult me. Diagnosing the condition as one of multiple myoma. I advised operation, to which she readily consented.

CASE II—TUBAL MOLE.

Another interesting case which I desire to present is spoken of by the German authors as a tubal mole. Unfortunately the specimen itself has been misplaced in the laboratory, but I have a photograph of same, which hardly does credit to the specimen. A history, briefly stated, is as follows: General health always good; menstrual established at the age of fourteen, and, as a rule, regular and not associated with pain, duration from five to six days. She says that she is married and has three children. The last menses was July





DR. SCHILENKER'S CASE OF TUBAL MOLE.

19, 1912. Present illness began about two months ago, manifesting itself by pain in the lower abdomen, which was more marked on the left side and which were cramp-like in character. These pains lasted one-half hour to an hour at a time. She also vomited quite a bit during these attacks and the attacks were always followed by weakness and dizzy spells. Since the last attack her health has been fairly good and she states positively that she has menstruated regularly since then.

Abdominal examination revealed a small palpable mass in the left iliac fossa, vaginal examination; uterus lateral verted to the left and a mass closely associated with the uterus apparently the size of an orange and of a solid consistency.

OPERATION: Median incision. Free blood in the pelvic cavity. Uterus somewhat enlarged and lies to the left, being pushed to the side by a round tumor, which is adherent to the left lateral portion of the uterus. Left salpingo-oophorectomy was performed and the uterus was suspended by its round ligaments after Bumm's method. Patient made an uneventful recovery.

On section of the tumor it presents a picture of a laminated blood tumor. Microscopically decidual cells were found.

DR. MILTON A. SHLENKER and DR. A. E. FICKLEN present the following cases:

CASE I—CERVICAL POLYP.

Miss G., aged 59. Family history has no bearing on the case. First menstruation appeared at fourteen, normal in quantity and duration. No serious illness during maturity. Menopause at fifty-one. Has had, at intervals, a slight leucorrhœa. For the past eight years, up to the beginning of the present illness, has had no hemorrhage from the vagina. Eight months ago she had a profuse hemorrhage, lasting fifteen days. Since then she has had two or three more, but none as severe as the first. She was told that the uterus was small and inverted. Three weeks before coming to the clinic she noticed a small tumor presenting at the vulva; this she supposed to be the uterus. She complains only of vague pains distributed all over the body.

Examination shows her to be healthy in other respects. The genitals are those of a multipara. The uterus is retrodisplaced. A small polyp is visible, and examination shows it to be attached to the cervix. The vault of the vagina is atresic, the anterior and

posterior fornices obliterated by adhesions. The tumor is friable and bleeds readily on palpation and is inserted by a pedicle within the cervical canal.

Dr. Shlenker stated that his object in presenting this case was that she had been referred to the clinic by a reputable physician with a diagnosis of an "Infantile inverted uterus."

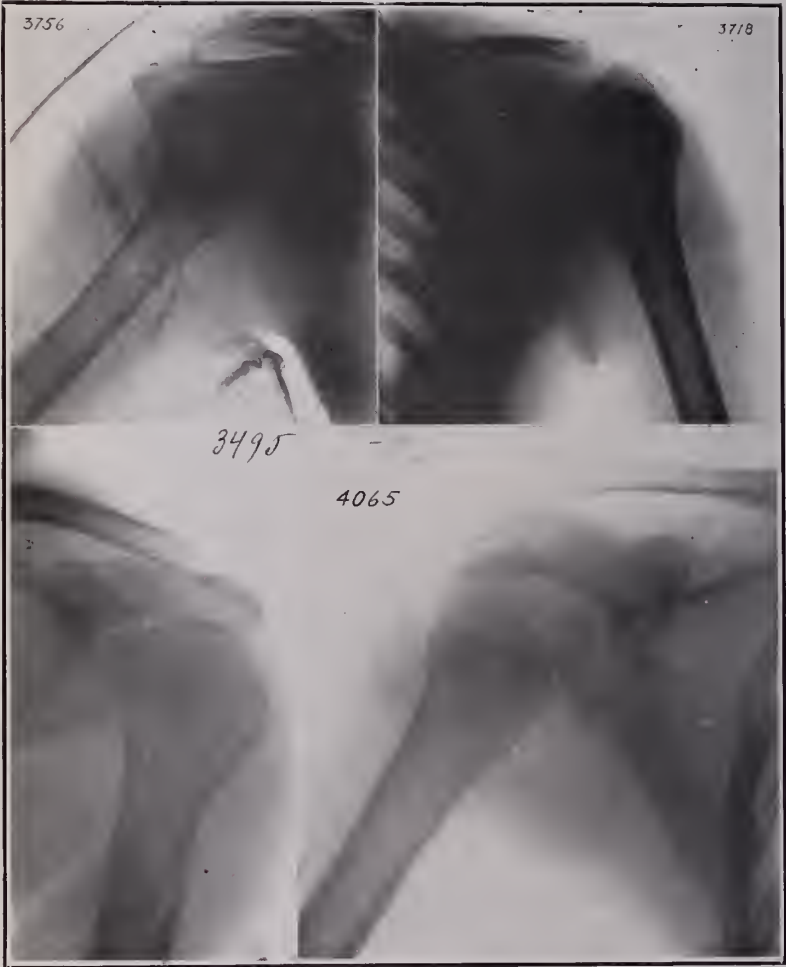
CASE II—VICARIOUS MENSTRUATION.

Miss L., aged 19. Family history negative. Patient has never been seriously ill in her life, but has always been of a very nervous disposition. This excessive nervous irritability is apparent on the most superficial examination. Her menstruation began at sixteen, but manifested itself entirely by bleeding from the nose. After three of these periods, which appeared at regular monthly intervals and persisted for three or four days, she consulted physicians at the Charity Hospital. She says that she was given an anesthetic and some kind of an operation performed, and since that time her menstruation has been normal, with the exception that she suffers from a great deal of abdominal discomfort. She says that she has two or three attacks of epistaxis since, but that they have had no connection with her periods. This case was presented as suggesting a neurotic element in vicarious menstruation. There are no genital abnormalities.

Dr. Shlenker, remarking, says that this case is one typical of this condition. She is an exceedingly neurotic individual. I doubt very much if any operation whatever was performed at the Charity Hospital other than perhaps a dilatation of the cervix, though her hymen is intact, and there is no evidence that she had been operated. She claims to have consulted Dr. Weil some two years ago in reference to her epistaxis. Dr. Weil was kind enough to examine her nose for me, and reports that at present there is nothing abnormal.

DR. A. I. WEIL (Discussion of Dr. Shlenker's Cases): I examined the nose of this patient about two years ago, but I do not remember just what the condition was at that time. I find at present that the nose is apparently normal. These cases of so-called vicarious menstruation are not at all uncommon, but in my opinion the only connection they have with the menstruation is due to the fact that the blood pressure is increased just before and during menstruation, and on that account hemorrhage is likely to occur on any of the





3756. Fracture Anatomical Neck of Humerus. 3718. Fracture Acromion Process of Scapula.
3495. Fracture Surgical Neck of Humerus. 4065. Fracture Surgical Neck of Humerus.
ILLUSTRATING ARTICLE OF DR. COHN.

membranes or surfaces where there are superficial blood vessels. Such a surface especially is the nasal mucous membrane and, moreover, the little blood vessels towards the anterior part of the septum are often eroded by superficial ulcers or other conditions in this region. These little blood vessels are ready to bleed at the slightest provocation of any sort, and naturally the increased blood pressure incident to a suppressed menstruation will have a tendency to cause nosebleed. Hence it is that the nose is so often the seat of a so-called vicarious menstruation.

DR. SILLENKER (replying to Dr. Weil's statement that he doubted the existence of the condition of vicarious menstruation) referred to the work by Messrs. Mayer and Brettauer, of New York, on the treatment of dysmenorrhoea by eauterization of the genital spot on the turbinated bones, showing a direct relation between the genital function and the nasal mucous membrane.

DR. ISIDORE COHN:

SOME INTERESTING SHOULDER INJURIES.

CASE 1. *Fracture of the Anatomic Neck of Humerus.*

J. C. M., age 55, white, male. Clinic No. 7291. X-ray 3756. March 10, 1913. Two days ago he was attempting to open a blind, when the blind gave way and he fell backward on his outstretched arm.

Examination: When seen there was marked swelling of the shoulder. The contour of both clavicles were normal; shoulders were in the same plane; the left arm was rotated outward; there was complete loss of function; pain on pressure over upper end of humerus; abnormal mobility; head did not rotate with shaft.

Radiograph shows the line of fracture to be in the anatomic neck of the humerus. Result: Perfect function, without deformity.

CASE 2. *Fracture of Surgical Neck of Humerus.*

A. S., about 24, negro, male. Clinic No. 7167. X-ray 3495. Fell from wagon on shoulder. Loss of function. Pain when passive motion is made greatest. When arm is abducted crepitus along surgical neck of humerus. Abnormal mobility. After two weeks' treatment passive motion was not painful; there was no deformity. He was then lost sight of.

CASE 3. *Fracture of Acromion process of Scapula.*

D. G., age 15. Clinic No. 7188. X-ray 3718. February 28, 1913. History: While running yesterday he fell and struck his

shoulder. Immediately there was loss of function and pain in right arm. The right shoulder is on a lower plane than the left, the right arm hangs by his side. Pressure over the clavicle causes great pain. Subsequent history, March 17, all movements of shoulder are performed without pain. Last seen on April 17, at which time there was neither deformity nor *limitation of motion*.

Treatment: Second and third rolls of Desault, narrow sling.

CASE 4. *Dislocation of Acromial End of Clavicle.*

Negro, male, age 58. Clinic No. 7452. Fell and struck tip of shoulder on March 30. Examination: Loss of function, pain. Step-like deformity due to outer end of clavicle rising above acromion process. Reduced—Stimson's Figure 8 adhesive dressing.

CASE 5. *Fracture of Surgical Neck of Humerus.*

A. T., Clinic No. 8028. June 11, 1913. Monday he fell from a tree about 12 feet from the ground, striking his left shoulder. Examination: Swelling of left shoulder and arm. Left infra-clavicular space is obliterated. The arm hangs by the side; he is unable to raise the arm or to put on opposite shoulder. Forearm is negative. X-ray No. 4065 Fracture of Surgical Neck of Humerus; good position. July 7, motions of shoulder joint perfect, no pain, no deformity. July 10, discharged; well.

CASE 6. *Fracture of Surgical Neck.*

Mrs. F. N., Clinic No. 8554. X-ray 4327. August 25, 1913. She fell last Thursday from the kitchen steps to the ground, striking the left shoulder. She was unconscious for half an hour. She states that she has been unable to move arm since the accident. Pain has been constant. Loss of abduction. We met with great difficulty in the reduction. March 1, 1914, at present she has all of the motions of the joint.

The treatment in all of these cases of fractures of the upper end of the humerus was the same: an axillary triangle, which extended from axilla to the internal condyle, shoulder cap and a light plaster cast of the elbow.

CASE 7. *Mikulicz Disease.*

E. R., Clinic No. 7729. During January, 1913, she first noticed painless "knots" developing in her neck, under the jaw. About the same time she noticed a diminution of salivary secretion and what saliva there was was thick and tenacious. Examination: Hard painless mass in the location of the left submaxillary salivary gland. There was no lesion of any kind on the lip or tongue. No glandu-





Top—Case 9, reported by DR. COHN.
Lower—Anomalous Fallopian Tube.

lar enlargement anywhere else. Treatment—Exeision. Dr. Duval (S-13-397) reported Mikulicz Disease. Subsequent history.

CASE 8. *Temporo-Maxillary Ankylosis.*

A. T., Clinic No. 8145, referred by Miss N. June 27, 1913. Seven months ago she had an abortion (3 months), following which she had fever. An "abscess" formed in her mouth. One month after delivery she was unable to open mouth. When examined the teeth overlapped, and she was unable to separate them. She was not able to take anything except liquid food, and this had been made possible by having several teeth extracted. She had no pain. There was no swelling.

Operation at I. C. Hospital, assisted by Drs. A. I. Weil and M. Wolf. Ether anesthesia. A vertical incision of left side $\frac{1}{2}$ -inch anterior to tragus with zygoma at middle point of incision. The zygoma was cut and reflected forward. The temporal muscle was next detached from the coronoid, the neck of the maxilla was then cut through and a flap of temporal fascia interposed to make a new joint. No motion resulted from these proceedings. An incision was then made along the under surface of the angle of the jaw and the internal pterygoid and masseters were stripped from the jaw with no resultant movement of the jaw. We then attacked the other side in a similar manner. This time we were able to notice a slight range of motion, but not enough to justify a discontinuance of our efforts. Believing that possibly we could get a greater range of motion by rounding the edges of the ascending ramus on the left, we again opened the left side. This was all that was needed, as we could then open the mouth of the patient with fair degree of motion. Convalescence was uneventful. The last time she was seen she could chew any kind of food. (Pictures.)

CASE 9. *Acute Perforating Gastric Ulcer—Sero-purulent diffuse peritonitis.*

E. P., aged 22. February 16, 1914. Called in consultation by Dr. E. S. Scharff. Had had "indigestion" for three weeks. Yesterday he had some abdominal pain, which he thought was indigestion. This A. M. he took a dose of salts. Bowels acted within an hour. The pain persisted in the abdomen localized more particularly around the umbilicus. Not feeling satisfied he took 5 grains calomel. No vomiting, except a glass of water which returned clear. Seen by Dr. Scharff, 5 P. M. Abdomen rigid. Pain diffuse. Sent

to Touro in taxicab. Examination: Temperature, 99; pulse, 102. *Good volume.* Not particularly uncomfortable. Pain in abdomen on pressure all over abdomen, particularly right iliac region, umbilicus, epigastrium (median line) and left iliac region. Rigidity both recti from level of umbilicus up; right rectus rigid as well in its lower segment. Leucocyte count 17,000. Polymorphonuclears 94. Right rectus incision—appendix covered with flakes of fibrin, but not ruptured. Appendectomy. Large quantity of sero-purulent exudate continually came into the field. Further exploration revealed a perforated ulcer of the anterior wall of the stomach, about the size of a ten-cent piece. All of the surrounding anterior stomach wall (diameter $1\frac{1}{2}$ inches) very friable, would not hold sutures. Ulcer inverted and the anterior wall of the stomach plicated over the ulcer. This did not interfere with the pylorus, as we could feel the patulous pylorus when the perforation had been closed. A drainage tube was placed in the lower angle of the wound. Convalescence was uneventful. He left Touro three weeks after operation.

CASE 10. The following case came under my observation April 22, 1913: Mrs. C. C., aged 29. Family history is of no importance. Past history: She has had the ordinary disease of childhood. Influenza, four years ago. Menstrual History: Began to menstruate when 14 years of age. She has never suffered pain during menstrual epochs. Each period lasted seven days; the flow always being profuse. Married, no abortions; no children. Constipated. At times she has complained of pains in the "pit of the stomach." She has never had nausea nor vomiting. May 1, she complained of pain on pressure around the umbilicus, and in both iliac fossæ. Heart and lungs normal. Glands palpable everywhere. Right kidney slightly moveable. Liver not enlarged. Pain on pressure in both iliac fossæ. Vagina examination: Displaced small uterus. Painful adnexa. Operation was advised, and on May 15 I operated at Touro Infirmary. The following is what was found: Preliminary curettage, followed by median abdominal section. The most striking fact was the amount of fibrinous deposit which was found covering the intestines. When the intestines had been walled off a small intra-ligamentary cast was found on the right. Ovarian stroma formed part of the cyst wall. The cyst was multilocular. The uterus was small, almost of the infantile type. On the left of the uterus there was a peculiar looking elongated gray mass, which

occupied the position of the ovary. When I tried to identify the Fallopian tube, on the left, I found that the only structure which was attached to left cornua was the round ligament. Further search revealed the fimbriated extremity of a tube attached to the distal end of the ovary. The ovary and the fimbriated end of the tube were removed. I found after removing the mass that all there was of a Fallopian tube was the fimbriated extremity, which apparently had its "origin" in the ovary.

Sections by Drs. Lanford and Mann.

March 1, 1914, the patient menstruates regularly. She has gained twenty pounds in weight.

DR. M. A. SHLENKER (Discussion of Dr. Cohn's case): I am at a loss to understand how a tube could be developed at the outer extremity of the ovary without presenting any relation whatsoever to the uterus. (Dr. S. illustrated on the blackboard the embryological development of the Fallopian tubes.)

DR. JOHN A. LANGFORD (Discussion of Case No. 7, Mikulicz Disease): With reference to the case of Mikulicz's Disease, the microscopic section shows the specimen to be the salivary gland. The normal relations of the parts are very much disturbed. The lobules are well marked and are widely separated from each other by bands of connective tissue stroma, which is infiltrated with lymphoid plasma cells, endothelial cells and fibroblasts; the glandular acini are few in number and are pressed together by new connective tissue and inflammatory cells. Some of the lobules are almost entirely replaced by new tissue. Here and there throughout the lobules and stroma are groups of lymphoid cells. These cells are quite numerous everywhere. The ducts appear as strands of distorted epithelial cells. No areas of necrosis are noted. Diagnosis: Chronic inflammation and lymphoid infiltration of salivary gland (Mikulicz disease).

DR. ROBERT BENNETT BEAN:

NOTES ON THE DEVELOPMENT OF THE MÜLLERIAN DUCT.

Chapter Nineteen of Keibel and Mall's compendious work on human anatomy is written by W. Felix, of Zurich, on the development of the urino-genital organs, in which Felix states: "That it has been possible to base this entire chapter on my own observations, I am indebted to colleagues who have placed at my disposal

specimens from their private collections and from institute collections." He mentions Grasser, Hertwig, His, Hochstetter, Keibel, Meyer, Pfannenstiel, Stoerck, Zukerkandl, Baltischwiler, Krönlein, Wyder and Wyss as having helped him. He states further that the Müllerian duct is formed in both sexes, on either side of the body, in the secondary summit of the uro-genital fold, lateral to the primary excretory duct. It is seen first in embryos of 10 m.m. greatest length as a circumscribed thickening of the epithelium at the summit of the uro-genital fold, called the "funnel area," on a level with the third thoracic segment. The funnel area is situated immediately below the dorsal limb of the pleuro-peritoneal membrane, at the opening of the pleuro-peritoneal duct into the abdominal cavity. As soon as this funnel is formed the lower end grows downward along the primary excretory duct until it comes into contact with its fellow of the opposite side and together they grow down the uro-genital sinus (20-30 m.m. embryos). The blind ends of the ducts first bore into the stratified epithelium of the sinus in embryos of 45 m.m., but the actual breaking through of the duct into the sinus does not occur until the embryos have reached the length of 70 m.m. from head to foot.

Should the Müllerian duct fail to reach the sinus, or should the duct fail to bore into the sinus, then the Fallopian tube and the uterus would not be united in the adult.

DR. CHARLES ESHLEMAN:

PREPATELLAR BURSITIS.

I hope I am not presuming on either the orthopedic or the surgical services. I show this case as a curiosity. This man has been a calciminer all his life and has had these growths just below the kneecaps for eighteen to twenty years. They are hard, and feel like fibrous masses. A small amount of fluid is at times excreted from them. They are very much smaller than when I saw him several months ago. They do not give him any trouble, except when fluid accumulates. Then they swell and become fluctuating and tense, sometimes inflamed and tender. After the sero-purulent fluid is discharged through a sinus opening he is relieved and the sinus closes.

It is a case of double housemaid's kneec, otherwise known as a prepatellar bursitis. The irritation caused by continually kneeling down has produced proliferative changes and hence the hard fibrous masses with occasionally fluid accumulating.

Louisiana Parish Society Meetings.

THE BI-PARISH MEDICAL SOCIETY.

At a regular meeting of the Bi-Parish Medical Society, held in Coushatta, on April 8, 1914, the following answered to roll-call: C. E. Edgerton, W. L. Davis, E. R. Harrington, A. C. McLemore, W. W. Gahagan, W. H. Boylston.

Dr. C. E. Edgerton, president, called the meeting to order. The minutes of the last meeting read and adopted. Dr. N. M. Brian made application, and was elected to membership. Dr. E. R. Harrington read a paper on "*Medical Ethics*," which received unanimous approval, and on which he was commended.

Upon information from physicians from Natchitoches Parish, the following resolution was offered and adopted: "Whereas, the State Normal School, located at Natchitoches, La., has in its employ a nurse who has charge of its infirmary; said nurse seeming to exercise too much authority pertaining to the diagnosis and treatment of disease, without the aid or assistance of a physician; therefore, this Society asks that the president of the Louisiana State Board of Health be notified by the secretary of this Society, and have him investigate and take what action, in his opinion, is necessary to have such practice stopped, which, in the judgment of this Society, places the health and even the lives of the students in jeopardy."

The following were elected officers for the ensuing year: E. R. Harrington, president; N. M. Brian and A. C. McLemore, vice-presidents; E. W. Breazeale, secretary and treasurer. Drs. C. E. Edgerton and E. W. Breazeale were appointed delegates to the State Medical Society; Drs. W. L. Davis and W. H. Huckabay, alternates.

The following were named to read papers at the next meeting: "Surgery," W. L. Davis; "Practice," J. B. Pratt; "Obstetrics," Z. T. Gallion; "Gynecology," W. H. Huckabay. There being no further business, the Society adjourned to meet in Natchitoches on Wednesday, October 14, 1914.

(Signed) E. W. BREAZEALE, M. D.,

Campti, La., May 4, 1914.

Secretary and Treasurer.

IBERVILLE PARISH MEDICAL SOCIETY.

At the annual election of the Iberville Parish Medical Society, held at Whitecastle, May 7, 1914, the following officers were elected to serve during 1914: Dr. E. O. Trahan, Whitecastle, president; Dr. R. D. Martinez, Whitecastle, vice-president; Dr. G. A. Darcantel, Whitecastle, secretary; Dr. A. A. Allain, Bayou Goula, delegate to Louisiana State Medical Society; Dr. A. A. Landry, Plaquemine, alternate delegate.

(Signed) GUY A. DARCANTEL,
Whitecastle, La., May 13, 1914. Secretary.

FRANKLIN PARISH MEDICAL SOCIETY.

The Franklin Parish Medical Society met in regular session Monday, May 11, in Winnsboro, La. The following physicians were present: Dr. R. L. Segrest, Dr. W. A. Mecom, Dr. D. D. Gill, Dr. H. B. Womble, Dr. A. J. Reynolds, Dr. C. L. Guice, Dr. E. S. Little, Dr. L. F. Robinson, Dr. C. L. Ramage, Dr. C. S. Wilson and Dr. C. D. Powell.

Program as follows: A concise and very instructive paper on *Leucorrhœa*, was read by Dr. W. A. Mecom, and was received by a thorough discussion by members present.

Dr. C. M. Jarrell was unable to be present to read his paper on *Medical Ethics*, which was quite a disappointment to the Society.

Dr. C. S. Wilson read a paper on *The Medical Society* and its accomplishments, which was an appeal for co-operation in the building up a strong local organization.

The general discussion of fees ended in the adoption of a fee bill to conform with that of thirty-six States on the average.

Some very interesting clinical cases were reported and discussed by the Society; this feature alone is considered worth a great deal to each individual.

The Society is making progress, having received a new member at each of the last two meetings.

(Signed) C. S. WILSON, M. D.,
Winnsboro, La., May 13, 1914. Secretary.

TANGIPAHOA PARISH MEDICAL SOCIETY.

The regular quarterly meeting of the Tangipahoa Parish Medical Society was held at the school auditorium, Independence, April

8, with the following members present. Drs. C. M. Abbott, E. J. Kevlin, E. L. McGehee, Sr., J. L. LeNoir, J. R. Johnson, J. H. McClendon, E. L. McGehee, Jr., J. M. Bamber, A. J. Strange, F. Stafford, W. T. Newman and J. M. Adams. Guests: Drs. R. E. Stone, T. J. Dimitry and Wm. Perkins, of New Orleans. Program: "Fractures of the Elbow and Forearm," by Dr. R. E. Stone; "An Outline of the Fitting of Glasses," by Dr. T. J. Dimitry; "Therapeutic Uses of Pituitrin," by Dr. J. L. LeNoir; "Blood Pressure in General Practice," by Dr. W. T. Newman. Rebuttal: The present undesirable plan of collecting vital statistics through lay hands; the very limited and unsatisfactory services obtained through parish health officers, under the present system of selecting and compensating.

COMMUNICATIONS.

HOSPITAL NURSING.

"With the exception—if it is an exception—that hospitals can best cope with emergency cases, the prime reason for sending a patient to the hospital is that he may have good nursing. Drugs can be given and operations done at home, but the cost of home nursing is considerable."

While we may not agree with the first postulate in the above quotation from an editorial in a recent number of the *New York Medical Journal*, the statement gives rise to some thought as to present management of the nursing department in our New Orleans hospitals and the need for some reform.

As a matter of fact the entire cost to an inmate in any of our private hospitals is almost prohibitive, made so by the cost of nursing if the case is a surgical one or one of any very serious malady, for, in such cases in addition to the cost of a room, as a rule two special nurses are absolutely required if proper attention is to be given.

With the large corps of nurses in training at our different institutions it would seem that some arrangement could be made whereby constant attention could be had by the patient without the necessity of employing special day and special night nurses (at a minimum cost of eight dollars per day) when the work could be so allotted as to have such service performed by the resident nurses.

Wherefore, if the cost of "home nursing is considerable," how much more costly is hospital nursing.

It is within the experience of all of us who have had cases in private hospitals that our patients (except when they have special nurses) are often left for hours alone in their rooms, and, as has at times happened in the writer's experience, even the call bell does not bring a nurse to the patient's bedside.

It may often happen—and has happened—that a sudden change in the patient's condition, or an emergency of some kind, requires immediate attention, and unless there is a special nurse at the bedside such attention is not forthcoming. Again, a patient may become faint or delirious and unable to push the call button, with the possibility of very serious or even fatal consequences before being seen by the hospital nurse.

If the patient is at home there is always someone at the bedside and such calamity could not occur.

Therefore, on the whole, even with the advantage of good nursing as quoted, it would seem that a patient could and would receive better attention at home, while the cost of a private room at a hospital would cover the cost of a nurse at home.

This is written not so much in a spirit of criticism or fault-finding, but rather with the thought that the management of our private hospitals may give the matter consideration to the end that the individual in moderate circumstances could receive the benefits of hospital treatment as well as the individual of large means.

Limited space forbids entering further into all the extensive details of the subject under consideration, but it is hoped that enough has been said to lead to a betterment of the conditions mentioned.

LUCIEN F. SALOMON, M. D.

WHITE CASTLE, May 18, 1914.

Editors New Orleans Medical and Surgical Journal:

GENTLEMEN—Does the possession of a commission in the Medical Reserve Corps of the U. S. Army or Navy entitle its owner to practice medicine in any State without appearing before the State Board for examination?

WHYTE GLENDOWER OWEN.

The above communication was referred to Dr. E. L. Leckert, Secretary of the Louisiana State Board of Medical Examiners, who submitted the matter to the attorney of the Board. The opinion of the State Board's attorney follows:

*E. L. Leckert, M. D., Secretary State Board Medical Examiners,
New Orleans, La.*

DEAR DOCTOR—I acknowledge receipt of your letter of the 19th inst., enclosing copy of the following question :

“Does the possession of a commission in the Medical Reserve Corps of the U. S. Army or Navy entitle its owner to practice medicine in this State without appearing before the State Board for examination?”

Section 17 of the Medical Law of this State provides that this act “shall not apply to any commissioned surgeon of the United States Army, Navy or Marine Hospital Service; to physicians or surgeons from other States or Territories in actual consultation with a registered physician of this State.” * * *

There is no verbal restriction on the practicing of a commissioned surgeon of the U. S. Army, Navy or Marine Hospital Service. That no such restriction was intended, I think fairly results from the restriction that is in the next clause of the sentence which applies to physicians or surgeons from other States or Territories.

It is a fair rule of construction that, where there are two clauses in a statutory provision, one general and without restriction and the next with a restriction, the difference in phraseology was intentional, and that the general exemption without verbal restriction was intended to be unrestricted.

I would, therefore, conclude that any commissioned surgeon of the U. S. Army, Navy or Marine Hospital Service can practice medicine generally in this State.

The exemption exists, however, only so long as such physician is actually in the service of the United States—that is to say, that the exemption, though a general one, while it exists belongs to him only in his official capacity, and that if he shall cease to retain his commission in the United States service the exemption automatically ends. To make myself perhaps clearer: The nature and extent of the practice does not affect the right of a commissioned physician of the United States to practice medicine in Louisiana. The termination of the official relations between such physician and the United States Government terminates the right of such physician to practice at all in Louisiana.

The character of the diploma held by a physician in the service of the United States Government is not to be taken into consideration. The possession of a commission as a surgeon in the service of the United States exempts such surgeon from the provisions of the Medical Law of Louisiana.

Yours very truly,

(Signed) ERNEST T. FLORANCE.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

VITAL STATISTICS IN THE SOUTH.

At the recent meeting of the Louisiana State Medical Society resolutions were adopted covering the intention of a protest to the Census Bureau against the record of deaths in which whites and blacks are listed as a whole and without discrimination. The usual mortality of blacks is nearly twice that of whites, and the mean death is, therefore, proportionately high. It is evidently unfair to the cities of the South not to consider the element of greater morbidity as well as mortality among the blacks, who live under conditions which tend to keep that record much the same for some time to come.

For some years past the Census Bureau has complained largely of the apathy of the South in the matter of vital statistics, and though conditions in this regard have improved, they are far from satisfactory. There is apt to be a continued indifference, if not worse than indifference, if there is not some amendment in the disposition of the relative mortality in whites and blacks. When the population of the Gulf States shows a relative proportion of blacks and whites as more than one to two, the importance of discrimination is apparent. No tabular statement can carry conviction with such a proportion of blacks with a normal death rate of something over three per cent against a white death rate ranging from 1.3 to 1.6 per cent. If all things were equal the relative death rate should be nearly the same for both races. As all things are not equal, the statistics are not representing true conditions, and there should be a correction, by a proper qualification at least.

We are stimulating all sorts of public health activity in the South and co-operation with the Federal government is desirable, but there must be a co-operation for defense of the South as well.

DISAMINIZATION: A NEW FUNCTION OF THE THYROID.

The subject of the internal secretions opened a new chapter in the history of medicine. The story is one that is constantly growing in importance. The latest contribution to the subject is contained in a preliminary communication by Dr. A. Slosse, professor in the University of Brussels.

Urinary analysis is an indispensable adjunct in the investigation of disease. Not only can we discover abnormal constituents in the renal excretion, but we can, also, by comparative analysis of the normal nitrogen eliminated, determine the degree of the catabolism of the proteids. The excretion of uric acid throws some light on the metabolism of the molluscs, and the chlorine excreted indicates the intensity of the saline interchanges. It is not enough, however, to determine merely the end-products of catabolism: we can by appropriate tests surprise nature in the course of the downward steps of retrograde metamorphosis, and follow, step by step, the retrogressive evolution of the body substances. In order to make any progress in this field of clinical work, it is necessary to know not only the *totality* of the end-products, but also the *modality* of the operations of nutrition.

The proteid molecule undergoes a complex and profound evolution during its transformation in the economy. They are not destroyed all at once, like an explosive which liberates all of its energy in an instant, but it slowly and progressively undergoes a kind of degradation, giving out some of its energy at each step. In fact, the degradation of the proteid sets free the aminoacids it contains. In the course of this evolution the amino-acids lose their characteristic radical: they become *disaminized*. The thyroid gland plays an important part in this process of disaminization, and any interference with this function is bound to bring about more or less profound disturbances in the economy.

The nitrogen in the proteid molecule appears in ammoniacal combinations, chiefly under the forms of carbamate and carbonate. These are carried to the liver, where they are transformed into urea, which is eliminated with the urine. The relative quantities of the various nitrogenous constituents of the urine enable us to judge of the quality of the intestinal metabolism of the proteids.

Dr. Slosse studied the urine of gouty and arthritic subjects, and

patients suffering from "retarded nutrition." It is needless even to summarize the results of his numerous analyses. They show that the intermediate nitrogenous products (animo-compounds), instead of being reduced in the liver, accumulate in the tissues and give rise to various disorders. It is a function of the thyroid to prepare the splitting proteids for the action of the liver, which reduces the carbamates and carbonates to urea. Slosse first observed this in a case of myxedema, twenty years ago, in which he administered thyroid extract. In one month the analysis of the urine showed that the retrograde metamorphosis of the albuminoids had become normal.

In summarizing his work Slosse says that the thyroid gland pours into the system a specific hormone which promotes the disamination of proteid substances, and of their derivatives, the amino-acids. Slosse lays down the following propositions:

1. Gout is a disturbance of nucleinic metabolism. The catabolism of the proteins is not influenced by this morbid state.

2. Certain forms of "arthritis" are characterized by a disturbance in protein catabolism. This disorder consists in a diminution of the "disaminizing" capacity, and, as a consequence, a smaller production of the immediate precursors of urea.

3. Not all cases of arthritis are characterized by a disturbance of proteid metabolism. There seems also to be a hydrocarbon arthritis.

4. Proteic arthritis seems to be due to a deficiency in the internal secretion of the thyroid gland.

5. The thyroidean action on proteinic metabolism is that of a hormone, the hormone of disamination.

THE PUBLIC SERVICE OF THE NEW ORLEANS CHARITY HOSPITAL.

The analysis of the annual report of the Board of Administrators of the Charity Hospital of New Orleans to the General Assembly would show many arguments for its commendation by all of the people of Louisiana.

With a bed capacity of 1,053 in all of its buildings, the hospital in 1913 cared for a total of 15,056 indoor patients; in the out-clinics 27,644 patients were treated and 107,196 consultations were given. Including the ambulance service, there were 58,938 patients treated altogether.

The gross death rate for the year was 11.72 per cent; deducting those patients who died within thirty-six hours after admission, the net death rate was 7.9 per cent for the year. The percentage of the total deaths among those dying from tuberculosis, Bright's disease, organic heart disease, poison, violence, etc., was 48.19.

There were 523 obstetrical cases, with 536 births. There were 5,656 surgical operations performed (3,423 with ether anesthesia; 16 under chloroform; 13 under other anesthetics, and 239 under spinal analgesia; there were 499 local anesthesia cases). In the Pasteur clinic, 252 cases were treated, and in the pathological department, 18,132 examinations of all kinds of specimens were made.

There were 63,297 prescriptions filled in the hospital pharmacy and 4,277 packages of serum distributed.

Under the new regime in the pathological department much of the serums and vaccins employed will be made within the hospital. Already the antitetanic and antimeningococcic sera are established, and before long will be ready for distribution outside the hospital. The serum for tetanus prepared by the hospital pathological department gives a titration nearly twice as strong as the serum formerly procured from stock supplies. The hospital has also announced that as soon as containers may be obtained, it will supply typhoid vaccin, prepared from the same strains as that used by the Federal Government. The laboratories now in operation at the Charity Hospital are in other respects much improved, enlarged and equipped for various usefulness to the public.

The hospital in this regard has reached out after public interest in its work, and by such service as preventive remedies free to the physicians of the State, in the effort at stopping prevalent and likely contagious and infectious diseases, there will very soon come the time when the hospital will have satisfied its purposes.

Taken altogether the effort at reorganization of the hospital has resulted only in good. The patient is better served by the visiting staff, now held absolutely responsible for individual care of assignments in the wards and outclinics.

The readjustment of the hospital has permitted provisions for contagious diseases, so that the different diseases of measles, scarlatina, etc., may be segregated and not be placed in a single ward as was once the practice at the hospital.

The hospital stands in every community for public service, and by and by the Charity Hospital of New Orleans may prove its claim to such provision.

THE SANITARIAN IN THE ARMY.

There is much to commend in the wholesale newspaper agitation of the dangers from disease in Mexico. The great loss of life in camps during and before the Spanish-American war will stand as an example of what inexperience may bring in its train.

Since that time, however, the Japanese have demonstrated the great asset in a properly organized sanitary force in an army, and most civilized countries have materially profited. In our own army typhoid has become a negligible factor, and other diseases have never been of very great importance.

The greatest emphasis latterly has been laid on the dangers from typhus, or spotted, fever, with which the army has had no practical experience. The investigation of Rocky Mountain fever in this country has gone on for several years, and only recently the Public Health Service has rather clearly demonstrated (Anderson and Goldberger) that the disease is one of altitude, and that it is not found in the low countries.

With the new Surgeon General, W. C. Gorgas, in control, the provisions for ample sanitary precautions will doubtless be made so that the apprehensions of the press may be discounted in advance.

THE AMERICAN SOCIETY FOR PHYSICIANS' STUDY TRAVEL.

The various groups of surgical and medical specialists have for several years arranged annual tours in this country and abroad. Within the year, however, a less clannish organization has come into being, the Physicians' Study Travel Society, the membership in which is open to any respectable physician. The committee in charge of the business and arrangements of the Society is altogether representative and its membership is derived from all sections of the country.

The first annual tour of the Society is announced to take place just after the adjournment of the A. M. A. meeting at Atlantic City. For \$180 a member may go from June 26 to July 16, visiting a number of cities and resorts in Eastern Canada and the United States.

The itinerary includes Montreal, Quebec, Saranac Lake and Saratoga Springs, besides a number of other places.

Lectures, clinics, excursions and other features are planned to make the travel both interesting and instructive.

HOUSE BILL 11,887—FOR THE STUDY OF MAN!

What chance? In this twentieth century a bill has been introduced in the House of Representatives at Washington for the study of man, and as much as \$13,600 is proposed as the initial outlay for the purpose.

The detail considers a bureau for the study of such sociological entities as the criminal, pauper, and defective classes, under the Department of Justice.

The human animal is long in coming into his own. Millions of lives have been sacrificed already to civilization, but until now no step for proper investigation ever has been taken as a national obligation. Perhaps it is *only* a dream of those who have temerity enough to have opened the subject.

The several States in late years have been busy with such questions. Private organizations have advanced far in the study of reforms, and the recent agitation of psychological questions of society has resulted in provisions in many States for authoritative commissions engaged in public work for the betterment of the submerged classes.

Will the National Congress, however, see the point? Until now the human being has not appealed to the Congress as a subject for study, while such large questions as animal industry are prompt of solution.

We have discussed the Owen bill until our angles are awry; we have engaged almost every point of view and for some months we have marked time with the rest of the profession, waiting for the Owen bill to become an actual question in Congress.

It seems useless to waste ammunition in so small a field as House Bill 11887, when it could be made a part, a very small part, of the Owen bill, which purposes to cover all questions of national health.

Now that malaria, cancer, tuberculosis, leprosy and minor diseases are of general public interest, there may be some reflex in the craniums of the representatives from the various States, with enough force to make for a discussion, at least, of the Owen bill.

Man is a subject for study—even when he is a criminal or a mis-carriage of the intention with which he was born, but the question is just now too academic to be put on the docket of a busy Congress.

THE DISPOSITION OF THE SURGEON GENERAL'S LIBRARY.

Secretary Garrison has requested the committee in charge of the military bill in Congress to eliminate the section covering the removal of the library of the Surgeon General to the Congressional Library.

We voice the grateful relief of many medical men in expressing satisfaction at this action of Secretary Garrison, and we trust that this will end the matter.

The library of the Surgeon General has served the students of medical subjects for many years, and while a new location might not interfere, the traditions of a long service and a great usefulness would argue that the present location should not be disturbed.

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

SEROPHYLAXIS TO CONTROL DIPHTHERIA.—(*Journal de Médecine et de Chirurgie Pratiques*, March, 1914, p. 215.) Elie Montoux writes that, in the early days of the triumph of antitoxin, it was hoped diphtheria would soon disappear as smallpox practically did under the control of immunization. But the opposite has occurred: outbreaks of diphtheria are becoming just as frequent as ever before. So the question of immunization by means of antitoxin for the control of diphtheria—since practical active immunizing vaccines are still in the experimental stage—must again be considered and again agitated. Antitoxin given for immunization against possible infection with diphtheria is absolutely justifiable; and the statements regarding immunization with antitoxin are so convincing that it does seem a duty to protest vigorously

against the dread of a chance anaphylactic shock which has taken such a deep hold of the mind of the public and of many practitioners, surely an exaggerated idea, responsible for the persistence of diphtheria and the death of a large number of children.

In school hygiene (details omitted) the fact, based on accurate statistics, must be accepted that antitoxin immunization as a measure of control is far superior to school closing only, and that both measures combined—namely, school closing plus antitoxin immunization before disbanding the children—will infallibly control a persistent outbreak in a district. Simple disbanding without immunization spreads the disease. In hospital hygiene (details omitted) it is known that the clearing and disinfection of a ward following an outbreak of diphtheria in the ward are inefficient. The infected ward remains so; new cases break out afterwards, and nothing but antitoxin immunization of all patients and nurses in the ward, repeated at three weeks' intervals if need be, will end the ward infection.

In private practice (details omitted), where prophylactic injections are now generally abandoned, as soon as serious household outbreaks occur they are resorted to with the usual good results of final control.

Outbreaks in small towns (details omitted) have been ended only after all the children, including infants, had been immunized by means of antitoxin. Objections to antitoxin on account of serum sickness, or by-effects of serum, are worthless when the latter are compared with all the good it does. Then ill effects occur only in 14 per cent. of cases; rashes and other practically trivial phenomena do not amount to anything. Reported fatalities are exceedingly rare, and it is doubtful whether the serum only was to blame. The anaphylactic shock, anyhow (addendum from *Modern Medicine*, 1913, p. 731), "is probably prevented by atropin, and possibly by adrenalin given at once, and is benefited by these drugs when it occurs. By giving a small non-fatal dose of serum to a susceptible person, and after fifteen minutes or so giving a larger dose, the refractory stage may be attained in which any dose may be given. It does not seem necessary to apply such precautions as a routine."

The logical conclusions of Elie Montoux's thesis lead to the use of a flood of serum to control diphtheria. The purpose to be attained is worth the money. Until Dr. Schiötz's discovery proves

decidedly successful in treating chronic carriers, chiefly of the nasal type, only then, with an active vaccine and serum, can we hope to see diphtheria banished.

Miscellaneous.

MEGATOMY.—(Dr. J. P. Bouchon, in "*Archives de Doyen*," reproduced in *La Escuela de Medicina*, of Guatemala, October, 1913.)—Dr. Doyen, in the course of his numerous surgical operations, has often remarked that the real anatomical operations so often differs from that taught in the books that a new surgeon may be led into serious errors. With a view to remedying that, he devised a practical method of studying surgical anatomy, the anatomy of organs *in situ*, such as they are found in the operating room.

The actual teaching of anatomy is in two dimensions only; that is, in surface only, the dimensions being inexact on account of the displacement of the organs during operative manipulations.

In regard to the third dimension—that is, depth—this is completely changed by dissection, and by the cutting of collapsible organs.

Doyen believes that he has found a new method of fixation, which enables him to harden all the organs in their normal positions, and, at the same time, to retain their color; furthermore, he has invented an apparatus for making sections in all regions along different planes.

After solving the problem of fixation of the human tissues, Doyen devised a band-saw, very powerful and of a special size, operated by an electric motor of six horsepower; also a table provided with parallel guides, that could be so adjusted as to make sections with the utmost precision.

Until recently, sections were made only of frozen subjects. These sections were very defective, and began to lose their appearance as soon as they melted; by Doyen's method, it is feasible to obtain clear, exact sections, capable of retaining their color for several years. In these sections precise surgical anatomy can be studied.

TECHNIC.—Topographical anatomy should consist not only in the study of the relations of the organs to one another, but also, and

chiefly, in the determination of the situation of an organ with regard to the three dimensions of the human body.

Thus, the study of the topographical anatomy of the liver, in order to be complete, should consist of the systematic study of sagittal and frontal sections, and transverse sections extending through the body and passing through the liver.

The basis of such topographical anatomy demands a precise technique, which embraces:

1. Fixation of the subjects, while preserving the normal color of the tissues.
2. Sectioning them with mathematical precision.
3. Preserving them for a certain time.

FIRST FIXATION.—Fixation consists in the intravascular and intrasplanchnic (parenchymatous) injection of antiseptic liquids.

Intravascular Injection.—The following formula is the one that has given the best results:

Denatured alcohol	6 liters.
Formol.	2 liters.
Hydrochloric acid	1 liter.
Glycerin.	1 liter.

This liquid is injected either the common carotid artery, or the femoral, by means of an apparatus operated by compressed air.

Intrasplanchnic (parenchymatous injections).—It is easy to introduce into the stomach, through an esophageal tube, two liters of muriated formol: that is, 1800 c. c. of formol to 200 c. c. of hydrochloric acid.

Then one liter and a half of the same liquid is introduced into the rectum through a rectal tube.

Umbilical Puncture.—The fixation is completed by passing a fine trocar through the umbilicus and injecting 300 grams of formol into the peritoneal cavity.

When the subject has been thus injected, it is laid on a bed of fine sand, which preserves the normal contour of the back. The head is then fixed straight, or in normal flexion, or in hyperflexion, in order to study the relations of the cervical organs in different attitudes. If it be desired to make sagittal sections of the axillary space, it is necessary to place the upper extremity at right angle, in midway abduction. In order to study the relations of the uterus in the erect posture or in dorsal decubitus (gynecological position) it is necessary to suspend the female subject, in the first case, from a

large hook by means of an occipito-mental clasp, and in the second case, in the gynecological position. The position chosen should be maintained for a period varying from two to six months. In female subjects and obese male subjects, the period of fixation should last six months. In this way, a veritable scientific mummification is obtained.

SECOND, MAKING THE SECTIONS.—The *megatome* is an instrument designed to do for topographical anatomy what the *microtome* does for histology. It consists of a band-saw and a movable carrier. The saw is operated by an electric motor of six horsepower; this force is not excessive, but is really necessary to section rapidly the spine and the cranium, which are as hard as ivory. The saw is five meters long, three centimeters wide, and three or four millimeters thick. Thanks to a new and special type of teeth, this saw cuts through bones and soft tissues with equal accuracy. The movable car, working on rails, renders it possible to make sections along strictly parallel planes.

Mounting the Sections.—Doyen conceived the idea of mounting these sections in paraffine, just as is done with microscopic sections. Sections thus obtained can be preserved in the following solution:

Alcohol.	2 liters.
Formol.	1 liter.
Glycerin.	1 liter.
Hydrochloric acid	5 liters.

The sections are dehydrated by immersion in 90 per cent. alcohol for one week; the container, hermetically sealed, is kept in the oven at a temperature of 37° C. (98 1-2° Fah.)

Restoring the Colors.—First stage: After removing the sections from the alcohol, they are submerged in the following solution:

Salicylated glycerin (40 per cent.)..	700 c. c.
Alcohol	200 c. c.
Acetic acid.	100 c. c.

The sections are again put into the oven, and kept for eight days at a temperature of 37° C. The natural colors reappear: the fat takes on a yellowish tinge, and the muscles become brownish. The nerves become sharply distinguished from the perineural tissue. The aponeuroses have a brilliant aspect, the muscular interstitial tissue and the tendons stand out plainly, and the empty spaces become clearer. Second stage: The bath containing the anatomical pieces is raised to a temperature of 50° C. for half an

hour. Care should be taken not to raise the temperature above that point, because the tissues would become cooked and the tendons would shrivel up.

Inclusion in Gelatin.—Mother-solution of gelatin: 150 grams of gelatin are soaked in 1240 c. c. of cold water. When the gelatin has swelled up, it is heated on a water bath to 60° C. This gives a clear, syrupy-like mass.

At the moment of enclosing the section, the following mixture is heated over a water bath: First, 300 grams of mother-solution of gelatin; second, 50 grams of salicylated glycerin; third, 5 grams of pure formol. In this manner a very transparent mounting fluid is obtained which hardens on cooling, and preserves itself perfectly.

Enclosing.—The anatomical pieces are removed from the oven and carefully drained off. They are placed in suitable glass containers with perfectly flat bottoms, and the preserving fluid is poured in until the section is completely submerged. Air-bubbles should be carefully excluded.

Formolizing the Gelatin.—Twenty-four hours after inclusion of the specimen the mass is submerged in 20 per cent. formol, where it is kept for eight days. In this way the gelatin is hardened completely, and is no longer putrescible.

McSHANE.

SERUM-THERAPY IN NEPHRITIS.—The treatment of nephritis with serum from the renal vein is based, according to Teissier and Thévenot, on the old idea that the blood leaving the kidneys contains the products secreted by the tubuli contorti; these cells, in fact, have a double role; first, they withdraw from the blood the excretory products that constitute the urine, and, second, they pour into the circulation the internal secretion of the kidney.

This internal secretion has become well established since the work of Brown-Séguard, Meyer, Ajello and Parascandallo. But it is Turburc, of Bucharest, who deserves the credit of having first, in 1896, successfully injected, in a case of chronic nephritis, defibrinated blood from the renal vein. In 1898 Teissier, encouraged by this attempt, undertook to treat, by serum from the renal vein, a young man suffering from grave scarlatinal albuminuria; the patient was cured after a few injections. Subsequent researches have proven the utility of serum-therapy in nephritis.

Speaking in a general way, the serum relieves the troubles arising from auto-intoxication and suppression of the renal excretion. The

ammoniacal odor of the breath ceases, the dyspnea is relieved; sometimes the phenomena of congestion, broncho-pneumonia, and even hydrothorax rapidly become attenuated. The serum lowers arterial pressure, and sometimes checks hemorrhages. The serous effusions often improve, and the gastro-intestinal disorders yield promptly to serum-therapy.

The urine is considerably increased in amount, from one pint to three or four quarts in twenty-four hours. The amount of albumen rapidly diminishes.

The excretion of salts differs in different cases. Most frequently there is a large excretion of urea, without any change in the chlorides. In other cases, the urea does not vary, and there is hyperchloruria. The toxicity of the urine diminishes rapidly.

What are the indications for serum-therapy? Teissier and Thévenot formulated them as follows:

1. Uremia from abrupt suppression of the renal functions (as in scarlatina or pneumonia), or from a violent congestive exacerbation in the course of a chronic nephritis, or from obliteration of a ureter.

2. Toxemia developing during the course of a chronic nephritis, under the influence of indiscretions of diet, or of a sudden hypertension, or a renal congestion.

3. Acute nephritis from exposure and infections; acute nephritis without true uremic symptoms, but with headaches, dyspnea, oliguria.

4. Cardiac kidney.

5. Albuminuria of pregnancy and eclampsia.—*Le Progrès Médical*, April 18, 1914.

McSHANE.

SURGICAL RELIEF FOR SCIATICA.—In a most interesting paper Heile (*Berliner klinische Wochenschrift*, March, 1914) discusses the operation of choice for relief of pain from pressure or traction on the sciatic nerve, after the futility of internal measures. In the experience of the writer acute sciatica, especially the sciatica following accidents, yields more readily to treatment than moderate sciatica in patients of rheumatic tendencies. If persistent internal treatment proves of no avail Heile injects 100 or 200 c. c. saline solution directly into the nerve. This relaxes the fibers and may rupture adhesions that have formed between the fibers and the sheath. The site of the injection is just at that point where the

nerve emerges from the sacro-sciatic foramen at the center of a line extending from the superior posterior spine to the tuberosity of the ischium. Four very severe cases have been operated on by Heile; the end results were excellent. The technic of the operation is as follows: The nerve is exposed where it pierces the pelvis, the outer sheath opened and the network of adhesions on the inside completely broken up. The operator never fails to introduce his finger into the foramen to determine if there is any pressure beyond. In one instance in order to relieve pressure he found it necessary to excise the pyriform muscle, as it seemed to bear heavily on the nerve. The inaccessible parts of the nerve are subjected to a second saline injection. The nerve is now carefully isolated and buried between the fibers of the gluteal muscle, which have previously been drawn apart for the purpose. If a preliminary injection afforded relief, even temporarily, it was looked upon as diagnostic of mechanical disturbance and a case suitable for surgical intervention. The same operative technic is applicable to other nerves. There was no post-operative impairment of nerve function in any of the cases. In all of the cases the outer sheath was entirely removed and denuded of as much as possible of the tissue holding the fibers together. This causes the separate bundles of nerve fibers to stand out prominently. Only such parts of the membranes as could be stripped off readily were removed.

As a result of cadaveric experimentation, Heile concludes that this skeletonizing of the nerves, as he expresses it (*Skeltettierung*), is a simple procedure, the perineurium stripping off easily.

HOWARD D. KING.

AUTOGENOUS VACCIN FOR SCIATICA.—From a throat coccus Greely (*New York State Journal of Medicine*, April, 1914), prepared a vaccin and immediately administered to the patient a dose of 100 million, killed within an hour at 60° C. No reaction of any kind followed, not even at the site of puncture. At the end of seven days, during which there was no increase of temperature, Greely doubled the dose. The second dose increased the pain and was followed by slight elevation of temperature. In another day or so both temperature and pain disappeared. Within three days the condition was greatly improved; on the eleventh day patient was up and about. At the end of a fortnight patient was given the third dose, 400 million. The third dose was followed by slight reaction,

but within the next week all pain had ceased. At the end of the third week, as a purely precautionary measure, there was administered a final dose of 800 million. The third dose was not followed by any reaction, and the patient has remained absolutely free of sciatica for the past five months.

H. D. K.

TANGO FOOT.—Quite a few of the votaries of Terpsichore have consulted Boehme (*New York Medical Record*, April 25, 1914), complaining of "pain in front of the foot," and in every case he has discovered the same symptom-complex, and on inquiry found the cause-invariable—the modern dance. On arising in the morning the patient generally complains of a slight dull pain in the outer anterior aspect of the lower third of the leg. In the beginning but slight attention is paid to the aching sensation, the patient usually regarding the pain as due to a bruise or a "little rheumatism." Within a few days the pain increases in severity and a stiffness in flexion and extension of the foot is noted. The ascending and descending of stairs is very painful, especially the latter. Pressure over the region of the *tibialis anticus* produces a slight degree of tenderness. If the hand is placed directly over the painful area and extension and flexion of the ankle is made the typical crackling sensation of a tenosynovitis is experienced. The modern dances, especially the "tango" and "the maxixe," and, to a certain extent, the intricate figures of the "hesitation waltz" demand excessive flexibility of the ankle, with increased mobility at this point throughout the various complicated steps. The usual movements are those of extension, flexion and adduction of the foot. The effect of all of this is a constant strain on the extensor muscle of the foot, namely, the *tibialis anticus*, the *extensor longus digitorum* and the *extensor proprius hallucis*, which eventually produces a tenosynovitis in this muscle group. The *tibialis anticus* is the most frequently involved tendon.

For the severe cases absolute rest and complete cessation of dancing is the only treatment. The simpler cases yield readily to massage with alcohol or some simple soap liniment. Boehme also advocates the use of a mixture of aconite and belladonna tincture, one part each, and iodine two parts.

H. D. K.

PROLONGED ENDOCARDITIS.—This condition, according to Stadler (*Medizinische Klinik*, March 29, 1914), always ends in death, notwithstanding its comparatively mild course. The one and only

chance seems to be in combatting the disease in its early stage with serum and vaccin. Influenza, tonsillitis, bronchitis, a miscarriage or difficult delivery is usually the forerunner. Mild arthralgia and general lassitude are the initial symptoms, and the rapid enlargement of the spleen are of evil portent. In the case reported eight months elapsed between the first symptoms and death. The *Streptococcus viridans* was cultivated from the blood during life. From day to day there is an ever-changing clinical picture, one day increased temperature with pulmonary and cerebral symptoms, and the next day splenomegaly and anemia, but always constant an old valvular defect. The sufferers of endocarditis lenta are generally conspicuous through their extreme optimism, like the euphoria of phthisics, which considerably lightens the physician's burden. H. D. K.

GREAT ALTITUDES AND HEART DISEASE.—Schrumpf (*Deutsches Archiv. für klinische Medizin*, April 4, 1914) takes into account altitudes not exceeding 7,000 feet. It is commonly believed that it is dangerous to send patients of a cardiopathic type to a great altitude, and this is based on the belief that blood pressure is increased at such elevations. Schrumpf, through a series of tabulated findings in a number of cases, argues to the contrary, claiming that pathologic blood pressures are benefited—that is, high pressures are diminished and low ones increased. The author states that an increased elevation is positively indicated in some forms of heart disturbance; for example, anemia, sclerosis, too rapid growth in adolescence, general asthenia, toxemias, uric acid diathesis, mild arterio-sclerosis, fatty heart, nervous arhythmia and vaso-motor neuroses. Compensated valvular lesions and mild myocardial cases were, in Schrumpf's opinion, also improved by high altitudes. The mountains are particularly contra-indicated in uncompensated valvular lesions and in coronary sclerosis. In changing from a low altitude to a greater altitude, the change should be gradual, with intervals of rest. H. D. K.

THE ARMY MEDICAL CORPS—(Baketel—*N. Y. Med. Jnl.*, XCIX No. 17, April 25, 1914; p. 831-34.)

The study of the constituted Medical Corps of the Army shows a total of 445; of these 113 hold academic degrees and 333 are graduates of the Army Medical School. There are additionally 89 to be included from the Medical Reserve Corps on active duty, most likely soon to be materially increased from the inactive list.

There are 41 medical colleges represented, the University of Pennsylvania heading the list in number, having 54 in all. Of Southern Schools the University of Virginia has 28; University of Maryland, 20; Johns Hopkins and Tulane, 11 each; Vanderbilt, 8; Medical College of Virginia, 6; P. & S., of Baltimore, 5; University College of Richmond and Louisville Medical, 4 each; University of Texas, University of Louisville and Atlanta College of P. & S., 3 each; South Carolina, Kentucky School of Medicine and University of Nashville, 2 each; Maryland Medical, Birmingham, Memphis Hospital, Universities of Georgia, Kentucky, Arkansas Tennessee and the University of the South, 1 each. These total 120 from Southern Schools, or about 27 per cent. D.

MEDICAL HUMOR: A Boston doctor is out in a warning against the general use of radium by the masses. And yet it is said doctors have no sense of humor.—*Baltimore Star*.

RADIUM IN BLASTOMYCOSIS.—A case of blastomycosis, clinically and microscopically diagnosed, in which the radium treatment was used with brilliant success, is reported by F. E. Simpson, Chicago (*Journal A. M. A.*, March 14). The lesion, which was of three months' duration, involved both lids of the left eye. A radium varnish applicator, one-quarter strength, containing 0.04 gm. of radium barium salt, was applied for a total of three hours in fractional doses during the course of three weeks and caused the painless disappearance of the lesion. Two-minute points appeared after a few weeks, but disappeared after fifteen minutes' exposure to the radium. The healing was accomplished with no tendency to ectropion and the scar of the lesion is almost invisible.

Medical News Items.

BEXAR COUNTY MEDICAL SOCIETY MEETS.—A social meeting of the Bexar County Medical Society was held in San Antonio on April 30. Among the matters discussed at the meeting was the question of the protection of bats. Resolutions were passed requesting the Board of Health of the City of San Antonio to recommend to the City Council that it immediately pass an ordinance protecting bats, the most useful destroyer of mosquitoes. It is the first

time that any such resolution has ever been brought up for the consideration of medical men at any place in the United States and is the result of extensive experimentations of Dr. R. L. Campbell, of San Antonio.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE held its eleventh annual meeting in the Administration Building of Harvard Medical School, Boston, on May 29, 30, 1914. Drs. Maurice Courret, Charles W. Duval, John A. Lanford, Joseph D. Weis, C. C. Bass and Isadore Dyer, of New Orleans, were among those present at the meeting.

THE AMERICAN PROCTOLOGIC SOCIETY will hold its sixteenth annual meeting in Atlantic City, New Jersey, on June 22 and 23, 1914. The headquarters and place of meeting will be the Hotel Chalfonte. A preliminary program has been furnished which promises to give much benefit and enjoyment to the medical profession. The profession is cordially invited to attend the meeting.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION will meet at the Marlborough-Blenheim Hotel, Atlantic City, N. J., under the presidency of Dr. E. A. VanderVeer, of Albany, N. Y., on June 22. An attractive program is being prepared. A cordial invitation is extended to the profession to be present.

THE ALABAMA STATE MEDICAL ASSOCIATION held its annual meeting in Montgomery on April 21-25, 1914. The following officers were elected for the ensuing year: Dr. B. B. Sims, of Talladega, president; Dr. F. A. Webb, of Calvert, first vice-president; Dr. J. U. Ray, of Woodstock, second vice-president; Dr. James N. Baker and Dr. Henry Gaithe Perry, of Montgomery, secretary and treasurer, respectively, and Dr. Wm. H. Sanders, of Montgomery, State Health Officer.

THE AMERICAN ASSOCIATION OF MEDICAL JURISPRUDENCE held its annual meeting on May 2, in New York. Many interesting papers were read and a banquet was tendered to the visiting members and guests by the resident members at the conclusion of the meeting. The following officers were elected: President, Charles A. Boston, of New York; vice-president, Oscar W. Ehrhorn, of New York, and Dr. D. Percy Hickling, of Washington; secretary, Charles P. Blaney, of New York; treasurer, John C. West, of New

York; councillors for five years, Dr. Philip Coombs Knapp, of Boston, and Harold Hirsch, of Atlanta, Ga.

HARVARD CLUB OF LOUISIANA.—The twenty-first annual banquet and reunion of the Harvard Club of Louisiana was held on May 3, 1914. Dr. Robert Sharp, President of Tulane, was the guest of honor. The officers of the club are: Carleton Hunt, president; E. C. Palmer, first vice-president; M. A. Aldrich, second vice-president; R. B. Montgomery, secretary. The banquet was in the nature of a tribute of loyalty to Harvard and of love to Dr. Sharp.

CHARITY HOSPITAL (*New Orleans*) NOTES: The admissions, during April, were 1,377; deaths, during April, were 147; death-rate, during April, were 5.9 per cent.; died within 36 hours, during April, were 39; consultations in Out-door Clinics, 11,312.

ARMY SURGEONS TO CLEAN UP VERA CRUZ.—A campaign at Vera Cruz is planned against sanitary infections—and provisions are to be made to clean up. The officers detailed are Major T. C. Lyster and Major Robert A. Noble. Both have had experience in Panama.

THE HOME FOR INCURABLES, in New Orleans, has been compelled to reject applications because of lack of accommodation. A new dormitory is planned to meet the increased demand of desiring applicants.

NEW ORLEANS COLLEGE OF PHARMACY COMMENCEMENT.—At the recent closing exercises of the New Orleans College of Pharmacy (affiliated with Loyola University) the following were graduates: E. H. Beaucoudray, S. Berendsohn, C. R. Breaux, E. F. Buckley, E. J. Burvant, A. P. Comeaux, H. P. Drumm, W. H. Grebe, R. R. Higgason, P. J. Liuzza, A. B. McArthur, T. McGowan, A. H. Moore, A. E. Quesada, E. Rodes, J. M. Shea, Jr., L. P. Schertz, M. J. Skiffington, M. W. Stewart and E. B. White.

The alumni gold medal was awarded to Ernest F. Buckley, of Slidell, La.; the Louisiana State Pharmaceutical Association medal to the student standing second in the class, was awarded by Anthony Di Trapini to Pascal J. Liuzza; membership in the American Pharmaceutical Association, given by the dean, presented to Emile J. Burvant, of New Orleans. The faculty medal to the junior student making the highest average in the class was presented to P. H.

Corbett, of Colfax, La. The valedictory was given by Marion W. Stewart, of Amite, La.

THE NEW ORLEANS FREE DISPENSARY FOR WOMEN AND CHILDREN for April showed 252 new cases and 937 old cases treated. The clinic patients for the year numbered 13,453.

Miss Elizabeth Pincard was elected president of the Board for the coming year, and Dr. Sara T. Mayo was made treasurer.

SUCCESSFUL CANDIDATES BEFORE THE LOUISIANA STATE PHARMACY BOARD.—Secretary Joseph T. Baltar announces the result of the examination held in New Orleans, May 1 and 2, at the Hutchinson Memorial of the College of Medicine of Tulane University. Thirty-one in all presented themselves for examination, of whom eight were successful as registered pharmacists and five as qualified assistant.

The successful registered pharmacists are E. H. Beaucoudray, Mrs. L. J. Maloney, B. Q. Roberts, A. C. Flemmings, of New Orleans; R. J. Higgason, Donaldsonville; W. J. Headrick, Jr., Logansport, La.; H. C. Richards, Sulphur, La.; E. F. Buckley, Slidell, La. The successful qualified assistants were Rene Bienvenu, of St. Martinsville; Victor Fortinberry, of Kentwood, La.; J. P. McNulty, John S. Morvant, Geo. P. Welsh, of New Orleans.

THE LOUISIANA STATE PHARMACEUTICAL ASSOCIATION met in Shreveport, May 12-14.

TWENTY-FIVE THOUSAND DOLLARS ASKED FOR HOG CHOLERA.—Representative Murdoch, at the present session of the Louisiana State Legislature, will ask for \$25,000 to be expended for hog cholera serum.

THE NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS met in Washington early in May. Dr. George M. Kober, Washington, D. C., was elected president.

NEW ORLEANS PEST HOUSE FOR SALE.—The former pest house in New Orleans, administered under contract with Dr. J. C. Beard, with its grounds, is advertised for sale. The decrease in smallpox cases has made the business of their care unprofitable, hence the abandonment and sale of the premises.

FREE DENTAL CLINIC.—The dentists of the city will establish a free clinic at the Charity Hospital, which will be opened June 15. They believe that there are many persons who require dental service for which they are unable to pay. An equipment worth \$2,000 will be given the Hospital by the dentists, of whom forty-eight are in the plan. At present, the only free clinic for dentistry is at the Tulane University School of Dentistry.

CHARITY HOSPITAL OPEN AIR WARD.—The Charity Hospital Board of Administrators has asked permission of the City Council to erect a tuberculosis ward on the roof of one of the Hospital buildings. The plan includes constructing a wooden floor on the roof of the building, with walls on the east and west sides, made of frame, covered with asbestos shingles, and on the south and north triple sash windows between posts are to be constructed, which may be thrown wide open at any season.

SICKLES FUND A BENEFIT.—According to the reports from the secretary of the Sickles Fund, there is a growing appreciation among the poor of the city of the opportunity to get free medicine. The total number of prescriptions filled for about a month was 1,742. The Charity Hospital dispensary reported that 21,538 prescriptions had been filled there since the fund was put into operation.

ADD TO COLLEGE ENDOWMENT.—The Mississippi College Endowment Fund, of Clinton, was considerably increased recently when subscriptions were made of \$1,500 from students and faculty and Clinton residents. It is desired to raise \$200,000. At the beginning of the endowment movement, a year ago, the college and town gave nearly \$20,000.

HOG SERUM AT HOSPITAL.—Announcement has been made that the serum for the prevention of hog cholera and charbon in cattle will be manufactured in large quantities at the Charity Hospital and will be furnished free to live stock breeders in Louisiana upon application. The cost of the serum has prevented a great many farmers from inoculating their cattle and, as a result, heavy losses have occurred. A supply of the serum will be furnished to the State Department of Agriculture, which will use it in an effort to eliminate the epidemics that have been so fatal to cattle and hogs in Louisiana in the past.

CANCER HOSPITAL FOR NEW YORK.—Announcement has been made that the plans are under way for the establishment of an institution in New York for research into the causes and treatment of cancer. The General Memorial Hospital is to be used for the exclusive treatment of cancer patients and the work will be under the control of Cornell Medical College. More than \$1,000,000 is in hand, in addition to the hospital buildings, and there will also be a large supply of radium for the hospital. Dr. Wm. M. Polk, Dean of the Medical Faculty, and Dr. James Ewing, Professor of Pathology, will have the direction of the institution. Only those cases which are open to treatment or of interest in study will be admitted.

SURGEON GENERAL GORGAS AWARDED GOLD MEDAL.—Brigadier General William C. Gorgas, surgeon general of the United States Army, has been awarded the gold medal of the National Academy of Sciences, in recognition of the work done by him in connection with the building of the Panama Canal. The medal was presented at the annual banquet of the Academy, held in Washington, D. C., on April 22, 1914.

PERSONALS.—Dr. Dowling, President Board of Health, recently delivered an address at the meeting of the Ohio State Medical Society.

Dr. J. A. O'Hara is in Boston, where he is taking a course in the Massachusetts General Hospital.

Dr. Frank W. Leipsner, of Kansas City, has succeeded Dr. W. J. McGehee, of New Orleans, as chemist in the Department of Agriculture in this city. Dr. McGehee has been ordered to Washington to take charge of the big branch laboratory there.

Dr. J. H. White, surgeon of the United States Public Health Service, has left for Central America on his first assignment from the Rockefeller Commission.

Col. G. D. Deshon, of the Medical Corps of the United States Army, arrived in New Orleans during the month, from Berkeley, Cal., on his way to fill an important post on the Isthmus of Panama.

New Orleans was represented at the Texas Medicine Association meeting at Houston, May 11-14, by Drs. A. C. King, H. B. Gessner, C. C. Bass, S. M. D. Clark, C. J. Miller and Isadore Dyer.

REMOVALS.—Dr. Oliver S. Ormsby, from 1317 Marshall Field & Co. Annex Building, Chicago, to 25 E. Washington street, Chicago.

Dr. W. S. Hartsell, from Draughton, Ark., to Rison, Ark.

Dr. M. S. Picard, from New Orleans, La., to Shreveport, La.

Dr. Paul T. Landry, from New Iberia, La., to Charity Hospital, New Orleans, La.

Dr. R. B. Leavell, from Jones, La., to Gallion, La.

Surgery, Gynecology and Obstetrics, from 103 State St., to 1308-30 N. Michigan Avenue, Chicago.

Dr. Gaston G. Griel, to Bell Building, Montgomery, Ala.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligations to review.

A Synopsis of Medical Treatment, by George Cheever Shattuck, M. D. Second edition. W. M. Leonard, Boston, 1914.

As indicated by the title, this booklet is only a synopsis, but it is a very good one. It should be of value, if properly used, to undergraduate students, and, as it gives in very small compass a good resumé of the rationale of the treatment of a number of very common and important conditions and diseases, it may perhaps be of value to the busy practitioner who wishes to brush up his general ideas on treatment.

J. T. H.

Materia Medica: Pharmacology: Therapeutics: Prescription Writing: For Students and Practitioners, by Walter A. Bastedo, Ph. G., M. D. W. B. Saunders Company, Philadelphia and London, 1913.

This book deserves particular mention and commendation for at least one reason, namely, the very excellent article on digitalis, which distinguishes this book from any other at present available. This article alone is more than worth the price of the book.

While it shares with other works covering so large a field, the necessary defects resulting from an attempt to cover the four subjects enumerated in the title, it is a good book which will be useful alike to undergraduate and post graduate students, which latter term is intended to indicate physicians or surgeons who are continuing their efforts to learn their art. The section of the work dealing with the various drugs acting chiefly on the circulation is of unusual excellence, taking sufficient notice of and laying proper stress on the recent extremely valuable additions to our knowledge of the extent and also the limitations of their actions, especially of those actions exerted on the human being in the sick room.

The section on Prescription Writing is an improvement on that in many of the other works of similar scope. The therapeutic comments and suggestions are made by one evidently familiar with both the theoretical and the clinical action of drugs. To sum up, this is a good book, which will help many a doctor to better understanding and more successful use of his drugs, if, and this is a big if, he will study the actions of drugs not only as discussed in this work, but also as they are manifested in his own patients.

J. T. H.

Theorie und Praxis der Blutentziehung (The Theory and Practice of Bloodletting), by Prof. Heinrich Stern. Curt Kabit sch., Wuerzburg, 1914.

The much-neglected practice of venesection is covered in this book in a fairly brief compass with that thoroughness which we are accustomed to expect in German works. Both the theoretical and the practical side of the subject receive proper attention, and the reviewer can testify that he has profited by refreshing and amplifying his own knowledge of this important method of treatment as set forth in Dr. Stern's monograph.

J. T. H.

Diet in Health and Disease: Friedenwald and Ruhrah. Fourth edition. W. B. Saunders Company, Philadelphia and London, 1913.

The earlier editions of this work have been reviewed in this department on several occasions. It is consequently unnecessary to do much more than repeat that in this work is gathered what is known of the important subject treated. The newer views of diet in various conditions receive proper attention and are sanely, although conservatively, discussed. The reviewer thinks that idiosyncrasies to various articles of food are met with often enough and are of sufficient practical importance to justify more than one-half page being devoted to their consideration in a book containing over eight hundred pages. Anaphylactic reactions to certain articles of diet appears to be by no means rare, but the reviewer finds no reference thereto in the index or in certain sections where he would have expected to find them discussed.

J. T. H.

The Diagnosis and Treatment of Digestive Diseases, by George M. Niles, M. D. P. Blakiston & Co., Philadelphia, 1914.

Dr. Niles has written a readable and compact book. He has managed in a reasonable compass, 597 pages, including the index, to present his subject comprehensively without being prolix. We rather like the lack of bulkiness in this volume. The work, here and there, shows the influence of that master, Cohnheim, to whom acknowledgment is made, as also to the following for various courtesies: Dr. Max Einhorn, Dr. George Roe Lockwood, Dr. Robert Coleman Kemp, Dr. Anthony Bassler, Dr. C. D. Aaron, Dr. A. B. Jamison, Dr. J. D. Albright and Dr. J. W. Weinstein. All are well-known practitioners, and some of them are Nestors in the branch of practice of which this volume treats. The book is properly and profusely illustrated. The chapter on X-ray examination gives a fair exposition of work along these lines as applicable to the diseases with which the volume is concerned. In the chapter devoted to examination of stomach contents we see no mention of Congo red as a reagent to be used in detecting the presence of free mineral acid. We regret this omission, as, in our experience, this reagent is of considerable value. As to duodenal alimentation, we think it has been given more attention than it deserves at present; and that in ulcer at or near the pylorus, the condition in which the originator claims it to be of value, we have found this procedure objectionable. In the article on amebic dysentery, in writing about emitin hydrochlorid, no mention is made of relapses. It is now our experience that, while emitin hydrochlorid at first apparently rids the subject of *Entameba h.* recurrence may take place, and this

often in the face of the fact that ipecacuanha has been used, in conjunction by the mouth. The use of copper in the treatment of amebic colitis has proved very beneficial in my hands; i. e., the taking of copper arsenite by mouth, and the use of hot copper sulphate instillations by rectum, together with the use of emetin by needle and pulverized ipecacuanha by mouth.

We make all comments on this work in a spirit of the best of good fellowship. We are pleased to review this excellent book by a fellow-Southerner, and we desire to congratulate Dr. Niles on his achievement.

STORCK.

Modern Medicine, edited by Sir William Osler, M. D., and Thomas McCrow, M. D. Vol. II. Second edition, thoroughly revised. Lea & Febiger, Philadelphia and New York, 1914.

The contents of this volume are divided in six parts: Part I, protozoan infections; Part II, diseases caused by animal parasites exclusive of protozoan infections; Part III, diseases caused by physical agents; Part IV, diseases due to chemical and organic agents; Part V, diseases of metabolism; Part VI, diseases of the respiratory tract.

This volume bears the characteristic mark of the first, which very likely will be that of the whole set of volumes to be, namely, a wealth of classical information with remarkable neatness and conciseness.

DUPAQUIER.

The International Medical Annual, 1914. E. B. Treat & Company, New York.

The thirty-second issue of this excellent year book of treatment and practitioners' index, with the usual profusion of plates and illustrations, is worthy of its predecessors and of the reputation the editor, contributors and publishers have earned for the work, in the medical world, year after year.

The same conciseness and extent of the reports and references, so apparent in the former issues, with an addition of one hundred extra pages, this year, will assure its success still more than ever before.

We sincerely recommend it; once you know the book, you will like it and look for it, impatiently, every year.

DUPAQUIER.

International Clinics, Vol. I, Twenty-fourth series, 1914. J. B. Lippincott Company, Philadelphia and London.

The contents of this volume are: Under the head of treatment and therapeutics: treatment of nephritis; cardio-vascular renal regulation by other means than drugs; prophylactic treatment of rheumatism, "immediate" treatment; treatment of the common poisons; Rabbi Hisda's treatment of constipation; inhalation treatment by a new method.

Under the head of medicine: importance of frequent and thorough medical examination of all citizens; the ulcer suspect; alimentary toxemia and skin diseases; thrombosis and embolism; a series of unusual circulatory accidents—occurring in acute infections.

Under the head of surgery: surgical treatment of infantile paralysis; interesting surgical cases.

The volume closes after thirty-five pages are devoted to a review of the progress of medicine during the year, 1913.

DUPAQUIER.

Reference Handbook of the Medical Sciences. Vol. III, CHL-EMB. Published by William Wood and Company, New York, 1914.

This work, a medical dictionary and cyclopedia, embraces the entire range of scientific and practical medicine and allied science by various

writers, and makes, now, its reappearance in a third edition, completely revised and rewritten. It will be complete in eight volumes.

Volume three is illustrated by numerous chromolithographs and six hundred and sixty-five half-tone and wood engravings.

The whole work will form a condensed library, handy for consultation, giving quick reference and reliable information, biographies included.

DUPAQUIER.

A Treatise on the Diseases of Women, by Palmer Findley, B. S., M. D.
Lea & Febiger, Philadelphia and New York, 1915.

The author of this new work on gynecology is already well known to the profession through his excellent text on "Gynecological Diagnosis," published some years ago. The present work is the natural outgrowth of his former effort which appears reclassified together with the addition of more than an equal amount of text and illustrations. It is a book of 950 pages, well classified and arranged, profusely illustrated with excellent drawings and, while complete, is not provided with unnecessary details.

The author has attempted throughout the text to give full scope to the discussion of conservative methods of treatment, such as douches, baths, exercise, diet, dress, etc., and one of the special features constantly emphasized is the value of a thorough knowledge of pathology as a requisite to the successful practice of gynecology.

The chapters on inflammatory conditions of the uterus, diseases of the ovaries, tuberculosis of the genital organs and fibromyoma of the uterus are worthy of special mention.

A spirit of conservatism prevails throughout the entire text. The author very correctly contends that in no field of medicine is conservative treatment of greater value, especially when combined with a knowledge of the relation of normal and pathological genital functions to the general physical and psychic health of woman.

The chapter on constipation reveals the author's method of discussing pelvic disease from every angle. In the preparation of this chapter he has solicited the assistance of Dr. Geo. Mannheim, whose methods of treating constipation are already well known to the profession.

Dr. Findley has had the assistance of competent authorities in the preparation of certain chapters of his book and an especially accomplished illustrator. The book deserves to share the same popularity accorded his previous work on "Gynecological Diagnosis," and will no doubt be added to the list of standard text-books for use in medical schools.

MILLER.

Surgical Clinics, by John B. Murphy, M. D.

This, the sixth number of Volume II, is the last of the 1913 series. We will make special mention of the following subjects presented by the author in his usual mastery.

The much-talked-of treatment of Pulmonary Tuberculosis by the production of artificial pneumothorax by injection of nitrogen. Murphy's method is described, and, although he was the first to put the treatment into active use, he gives priority to Carson of Liverpool (1821), and mentions Forlanini of Italy, who, in 1886, published a paper in an Italian journal.

We note an error on page 932; Dr. Mary E. Lapham practices at Highlands, North Carolina and not South Carolina.

A somewhat rare case of Bone Cyst of the Radius—Pyonephrosis with pertinent practical remarks—a case of ununited fracture of radius with a dissertation on non-union and bone transplantation—Cholelithiasis, stones

in common duct, with intense jaundice and a talk on cholelithiasis and cholecystitis.

A Student's Clinic, illustrating Dr. Murphy's method of student instructions, with preliminary remarks. LARUE.

Transactions of the American Surgical Association.

Volume XXXI, for the year 1913, appears in its usual elegant form. The papers are all of high-grade. It is unfortunate the neatness of the book is marred by misplaced duplicate pages of the preliminary report of the committee on fractures. The report of the committee on necrology includes the names of the illustrious Lister, of our well known Dr. John S. B. Billings, and of others who have left their surgical mark.

Fibromatosis of the stomach and its relationship to ulcer and cancer, by Alexis Thompson, Professor of Surgery in the University of Edinburgh, with the assistance of Dr. James Graham, of the same institution, proved to be one of the most interesting papers presented. Many participated in the discussions and related their experience with gastric tumors. Matas gavé lucidly and in extenso his views on the pathology of fibromatosis gastrica, laying stress on the analogy of this condition and elephantiasis or fibromatosis of the subdermal connective tissue.

Murphy's arthroplasty for ankylosed joints, with beautiful skiagrams and photographs. Estes' analytical study of 724 major amputations; his conclusions are fraught with sound advice. Hemostasis, a sepsis or anti-sepsis, as the case may be, and when to operate, prove a safe tripod. Discriminating when to operate may be practically determined, as Estes remarks, by the blood pressure. A systolic pressure below 80 should contraindicate immediate amputation. Our friend, Dr. F. W. Parham, in favoring spinal analgesia in such cases, expresses his views with his usual weight of experience and keen observation.

Five cases of cardiorrhaphy, by Francis T. Stewart, with important practical facts. Crile's excellent and comforting paper on Laryngectomy for Cancer. Willy Meyer's article on the Surgery of the Pulmonary Artery. Mears' historical presentation of the evolution of the study of anatomy and its important relation to the development of surgical knowledge, with some appropriate illustrations. Last, but not least, the conclusions, drawn by Dr. Matas and his capable collaborator, Dr. Carroll W. Allen, from an experimental investigation into the practicability of reducing the caliber of the thoracic aorta by a method of plication.

Infections of the Hand, by Allen B. Kanavel, M. D. Lea & Febiger, New York.

The second edition, thoroughly revised, like its predecessor, is a valuable contribution to the study of the infections of this region, the information which it contains is invaluable to the well informed surgeon.

Dealing with all forms of infection, from the simple felon or superficial abscess to the more serious forms of lymphangitis, teno-synovitis or deep palmar abscess, it shows, in a clear, convincing and irrefutable way, that ordinary anatomical knowledge is of little avail in treating the infections of these parts.

In a large number of illustrations of careful anatomic and experimental studies the location and route of progress of infections is clearly shown and the diagnosis, differential diagnosis and methods of treatment thoroughly discussed.

The prevention and treatment of the various sequelæ of infections (contractures and ankyloses) is ably presented.

Following many of the chapters is a resume, for hasty reference,

which covers the essential points in diagnosis and treatment and forms a valuable part of the work.

A study of the blood findings, their significance and prognostic value, is ably and clearly presented.

The type of the infecting organism, staphylococci and streptococci, in their different forms, and their significance, as well as the allied infections, erysipelas, erysipeloid, gas-bacillus and anthrax, are also thoroughly discussed.

The novelty and ingenuity of a work of this kind makes its study both fascinating as well as instructive, and it should be regarded a valuable acquisition to every surgeon's library.

C. W. ALLEN.

Sterility in the Male and Female, by Max Hühner, M. D. Rebman Co., New York.

At the outset we must state how satisfactory it was to note during the reading that the author stuck to his text. The book deals with sterility alone and does not jumble up the subject with that of impotence which, though related, is totally different. It was refreshing, too, as the reading went on to realize that the author has some original ideas; has done some original and interesting research work, and, especially is logical in applying the results of his investigations.

The diagnosis, of course, is the thing, according to Hühner. He tells us how to go about making the differential diagnosis, that is, first, whether the fault in barren unions is to be placed on the male or on the female; then what to do in determining why the trouble exists on either side. After all this is settled it becomes comparatively easy to decide what to do in the way of treatment if the condition is curable, or whether it seems impossible to correct the condition because the reason for it is irremediable.

Dr. Hühner is to be congratulated upon having written this book, and the reading of it is recommended earnestly to all those who expect to advise anyone on the subject.

C. C.

Publications Received.

P. BLAKISTON'S SON & COMPANY, Philadelphia, 1914.

The Diagnosis and Treatment of Digestive Diseases, by George M. Niles, M. D.

Biochemic Drug Assay, by Paul S. Pittenger, Ph. G., Phar. D., edited by F. E. Stewart, M. D., Ph. G.

PAUL B. HOEBER, New York, 1914.

Lectures on Dietetics, by Max Einhorn.

Man's Redemption of Man; A Way of Life, by William Osler, M. D.

F. A. DAVIS COMPANY, Philadelphia, 1914.

A Manual on Infantile Paralysis, by Henry W. Frauenthal, A. C., M. D., and Jacobyn Van Vliet Manning, M. D.

Asthma and Its Radical Treatment, by James Adam, M. A., M. D., F. R. F. P. S.

LEA & FEBIGER, Philadelphia and New York, 1914.

The Junior Nurse, by Charlotte A. Brown, R. N.

History of Laryngology and Rhinology, by Jonathan Wright, M. D. Second edition, revised and enlarged.

Surgery—Its Principles and Practice, by Astley Paston Cooper Ashhurst, A. B., M. D., F. A. C. S.

MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans for April, 1914.

CAUSE.	White	Colored	Total
Typhoid Fever	2	—	2
Intermittent Fever (Malarial Cachexia)	1	3	4
Smallpox	—	—	—
Measles	3	—	3
Scarlet Fever	—	—	—
Whooping Cough	1	1	2
Diphtheria and Croup	2	4	6
Influenza	12	9	21
Cholera Nostras	—	—	—
Pyemia and Septicemia	—	—	—
Tuberculosis	34	47	81
Cancer	17	8	25
Rheumatism and Gout	—	1	1
Diabetes	2	—	2
Alcoholism	—	—	—
Encephalitis and Meningitis	7	3	10
Locomotor Ataxia	—	—	—
Congestion, Hemorrhage and Softening of Brain	19	12	31
Paralysis	2	1	3
Convulsions of Infancy	—	—	—
Other Diseases of Infancy	13	5	18
Tetanus	—	2	2
Other Nervous Diseases	5	—	5
Heart Diseases	58	40	98
Bronchitis	1	1	2
Pneumonia and Broncho Pneumonia	27	38	65
Other Respiratory Diseases	4	2	6
Ulcer of Stomach	1	—	1
Other Diseases of the Stomach	3	3	6
Diarrhea, Dysentery and Enteritis	18	18	36
Hernia, Intestinal Obstruction	2	4	6
Cirrhosis of Liver	4	5	9
Other Diseases of the Liver	3	—	3
Simple Peritonitis	2	—	2
Appendicitis	1	—	1
Bright's Disease	27	21	48
Other Genito-Urinary Diseases	6	5	11
Puerperal Diseases	10	—	10
Senile Debility	6	1	7
Suicide	1	—	1
Injuries	18	15	33
All Other Causes	25	18	43
TOTAL	337	267	604

Still-born children—White, 19; colored, 21. Total, 40.

Population of City (estimated)—White, 272,000; colored, 101,000
Total, 373,000.

Death Rate per 1,000 per Annum for Month—White, 14.8; colored, 31.72. Total, 19.43.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure. 30.03
 Mean temperature. 69.
 Total precipitation. 5.34 inches
 Prevailing direction of wind, southeast.

Paullum sepultæ distat inertæ Celata virtus.

New Orleans Medical and Surgical Journal

ESTABLISHED 1844

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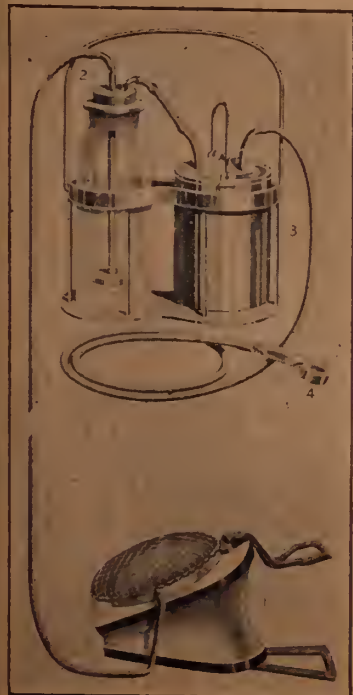
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and *Urginea Scilla (Squill)*

Eliminates Effused Serum

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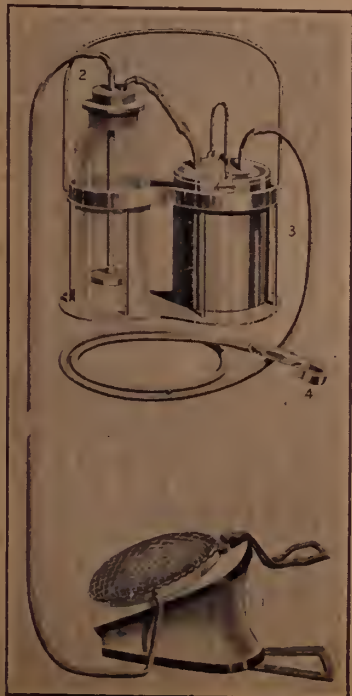
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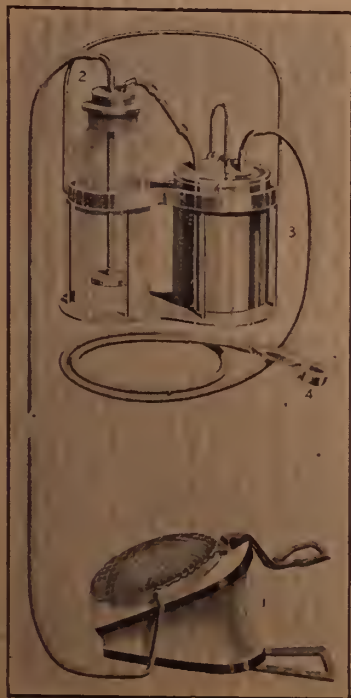
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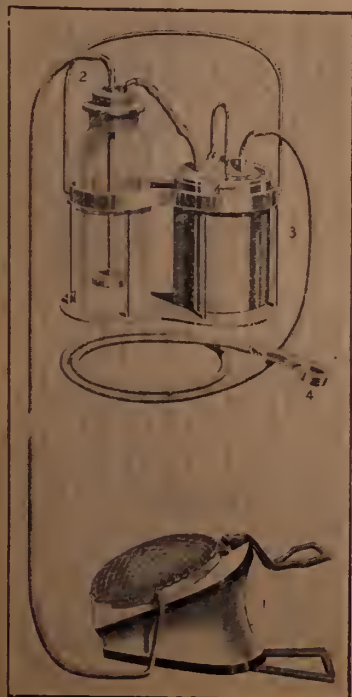
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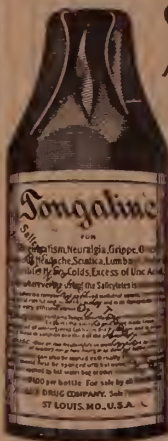
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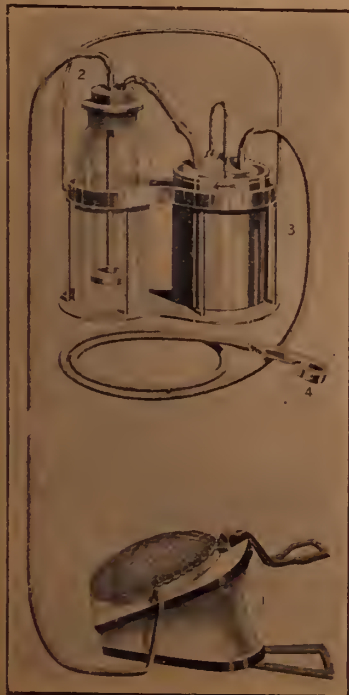
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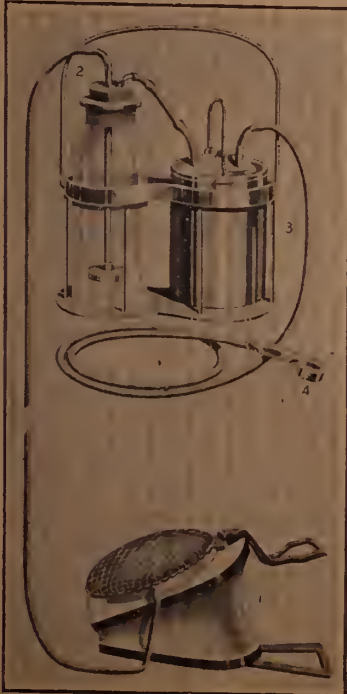
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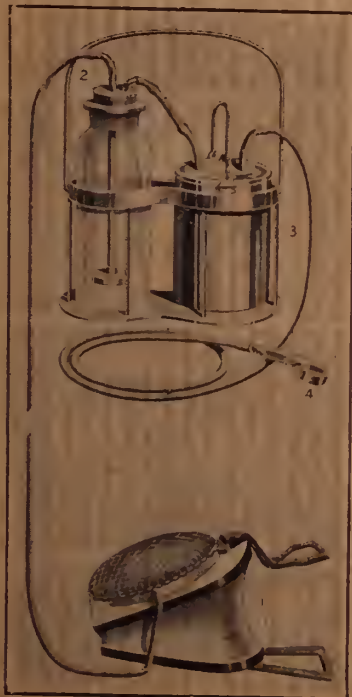
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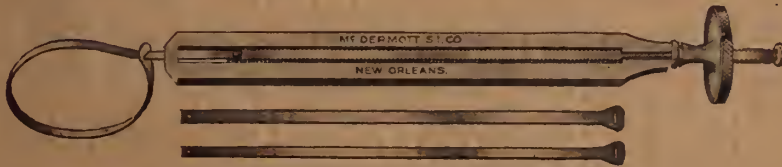
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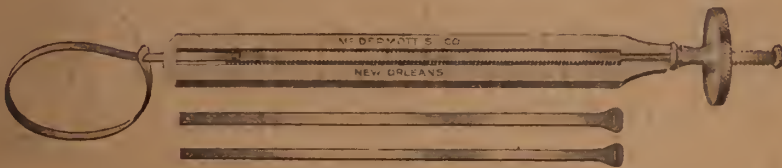
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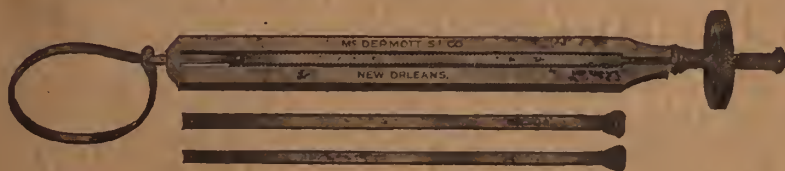
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